

DOCUMENT TYPE: LIST

DOCUMENT TITLE:

## LINE LIST

4							
3							
2	Apr..2015	A.Sadafzadeh	Z.Shokoohi	M. Rastegar	GISD	-	Issue for Construction
1	Feb.2015	A.Sadafzadeh	Z.Shokoohi	M. Rastegar	GISD	-	Issue for Approval
REV.	DATE	PRE.	CHK.	APP.	Client	Description	Purpose of Issue
		CONTRACTOR					

PROJECT TITLE :

## KOWSAR GISD MEGA MODULE PROJECT

Client :



contractor:





MINES & METAL TECHNOLOGICAL  
ENGINEERING CO.

Client 'S Project	Project Code	Main Contractor	Area Code	Plant Group	Equipment Code	Document Type	Eng. Discipline	Serial No.	
GISD	7-2	119	1000	7	PS	10	Q	001	
	NAME		DATE		MMTE No.			SHEET	REV.
PREPARED	A.Sadafzadeh		Apr.2015		KGMMUG00L1001			112	02
CHECKED	Z.Shokoohi		Apr.2015						
APPROVED	M. Rastegar		Apr.2015		Contract No. : 92/5499				

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**Note: This Table is use for External Comments.**

	<p style="text-align: center;"><b>KOWSAR GISD</b> <b>MEGA MODULE PROJECT</b></p>		
<p style="text-align: center;"><b>DOCUMENT TITLE</b></p>	<p style="text-align: center;"><b>Document No:</b></p>		<p style="text-align: center;"><b>Rev.</b>      <b>DATE: Apr.2015</b></p>
<p style="text-align: center;">Line List</p>	<p>Client Document NO:</p>	<p style="text-align: center;">GISD7-211910007PS10Q001</p>	<p style="text-align: center;">02      Page: 1 of 112</p>
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#### **PRESSURE TEST ABBREVIATIONS:**

PL - PNEUMATIC LEAK TESTING

HL - HYDROSTATIC LEAK TESTING

HP - HYDROSTATIC PRESSURE TESTING

OP-OPPERATING PRESSURE TESTING



NOTE.01 : Zinc Ethyl Silicate Primer (P-05) With 75-80µm Thickness

#### **REFERENCE SPECIFICATIONS:**

PIPING MATERIAL SPECIFICATION - KGMMUG00PP01S

INSULATION WORK – KGMMPG00P1301

PAINTING WORK - KGMMPG00P1300

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P&ID Sheet No.: M5-001											
Line No.	Service	From	To	Des. Flow Rate(Nm3 ,m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
40-PWS-00101-C1	P.W.S	PU-E08	FURNACE CHARGE HOPPER(TK-F98.1)	5.00	72.8	66.1	6.80	6.00	OP/HL	WINTERIZE/F	NOTE.01
2608-TG-00102-C3	TOP GAS	RF-A01	TOP GAS SCRUBBER(SR-A45)	462038.00	800	410.00	0.674	0.328	OP/PL	-	no.5/7001

# KOWSAR GISD



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P&ID Sheet No.: M5-002

Line No.	Service	From	To	Des. Flow Rate(Nm3 ,m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
500-TGF-00201-C2	TOP GAS FUEL	VENT WATER SEAL TANK(TK-A46)	VENT TO TOP OF FURNACE	60000.00	60	39	0.588	0.234	OP/PL	-	no.2/1021
200-TGF-00202-C2	TOP GAS FUEL	500-TGF-00401-C2	500-TGF-00401-C2	10000.00	60	39	0.588	0.234	OP/PL	-	no.2/1021
40-MWS-00203-C1	M.W.S	BURDEN FEEDER TANK (TK-M05)	VENT WATER SEAL TANK(TK-A46)	9.00	56	51	5.2	4.5	OP/HL	WINTERIZE / F	NOTE.01
300-MWS-00204-C1	M.W.S	BURDEN FEEDER TANK (TK-M05)	PU-M03.1	561.00	56	51	5.2	4.5	OP/HL	-	NO.2/6021
300-MWS-00205-C1	M.W.S	PU-M03.1	300-MWS-00207-C1	561.00	56	51	5.9	5.0	OP/HL	-	NO.2/6021
300-MWS-00206-C1	M.W.S	300-MWS-00204-C1	PU-M03.2	561.00	56	51	5.2	4.5	OP/HL	-	NO.2/6021
300-MWS-00207-C1	M.W.S	PU-M03.2	HEADER (Blind)	561.00	56	51	5.9	5.0	OP/HL	-	NO.2/6021
50-MWS-00209-C1	M.W.S	300-MWS-00207-C1	VENT	16.00	56	51	5.9	5.0	OP/HL	-	NO.2/6021
100-MWS-00210-C1	M.W.S	300-MWS-00207-C1	FURNACE FLOW AID INSERT (RF-H01)	100.00	56	51	5.2	4.8	OP/HL	WINTERIZE / F	NOTE.01
150-MWS-00211-C1	M.W.S	300-MWS-00205-C1	MIDDLE & LOWER BURDENFEEDERS	95.00	56	51	5.2	4.6	OP/HL	WINTERIZE / F	NOTE.01
100-MWS-00212-C1	M.W.S	150-MWS-00211-C1	PDC	66.00	56	51	5.2	4.6	OP/HL	WINTERIZE / F	NOTE.01
150-MWR-00213-C1	M.W.R	100-MWR-04001-C1	BURDEN FEEDER TANK (TK-M05)	81.00	59.1	53	5.2	4.8	OP/HL	WINTERIZE / F	NOTE.01
450-MWR-00214-C1	M.W.R	BURDEN FEEDER TANK (TK-M05)	250-MWR-09602-C1	106.50	60	55	0	0	OP/HL	-	NO.2/6021
100-MWS-00215-C1	M.W.S	300-MWS-00207-C1	UPPER BURDEN FEEDER (HS-H03.1A)	100.00	56	51	5.2	4	OP/HL	WINTERIZE / F	NOTE.01
100-MWS-00216-C1	M.W.S	300-MWS-00207-C1	UPPER BURDEN FEEDER (HS-H03.2A)	100.00	56	51	5.2	4	OP/HL	WINTERIZE / F	NOTE.01
100-MWS-00217-C1	M.W.S	300-MWS-00207-C1	UPPER BURDEN FEEDER (HS-H03.3A)	100.00	56	51	5.2	4	OP/HL	WINTERIZE / F	NOTE.01
100-MWR-00218-C1	M.W.R	UPPER BURDEN FEEDER (HS-H03.1B)	BURDEN FEEDER TANK(TK-M05)	100.00	61	56	5.2	3.7	OP/HL	WINTERIZE / F	NOTE.01
100-MWR-00219-C1	M.W.R	UPPER BURDEN FEEDER (HS-H03.2B)	BURDEN FEEDER TANK(TK-M05)	100.00	61	56	5.2	3.7	OP/HL	WINTERIZE / F	NOTE.01
100-MWR-00220-C1	M.W.R	UPPER BURDEN FEEDER (HS-H03.3B)	BURDEN FEEDER TANK(TK-M05)	100.00	61	56	5.2	3.7	OP/HL	WINTERIZE / F	NOTE.01
100-MWR-00221-C1	M.W.R	FURNACE FLOW AID INSERT (RF-H01)	BURDEN FEEDER TANK(TK-M05)	100.00	61	56	5.2	4.5	OP/HL	WINTERIZE / F	NOTE.01
25-MWS-00222-C1	M.W.S	300-MWS-00205-C1	300-MWS-00205-C1	5.00	56	51	5.9	5.0	OP/HL	WINTERIZE / F/ET	NOTE.01
25-MWS-00223-C1	M.W.S	300-MWS-00207-C1	300-MWS-00207-C1	5.00	56	51	5.9	5.0	OP/HL	WINTERIZE / F/ET	NOTE.01

	<h1 style="text-align: center;">KOWSAR GISD</h1> <h2 style="text-align: center;">MEGA MODULE PROJECT</h2>			
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P&ID Sheet No.: M5-003											
Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
150-MWR-00301-C1	M.W.R	50-MWR-00307/308/309-C1 (MIDDLE BURDEN FEEDER)	BURDEN FEEDER TANK(TK-M05)	80.00	61	56	5.2	4.1	OP/HL	WINTERIZE / F	NOTE.01
50-MWR-00302-C1	M.W.R	LOWER BURDEN FEEDER(BF-H08)	150-MWR-00213-C1	15.00	59	53	5.2	4.3	OP/HL	WINTERIZE / F	NOTE.01
50-MWS-00303-C1	M.W.S	150-MWS-00211-C1	MIDDLE BURDEN FEEDER(HS-H07.1A)	27.00	56	51	5.2	4.4	OP/HL	WINTERIZE / F	NOTE.01
50-MWS-00304-C1	M.W.S	150-MWS-00211-C1	MIDDLE BURDEN FEEDER(HS-H07.2A)	27.00	56	51	5.2	4.4	OP/HL	WINTERIZE / F	NOTE.01
50-MWS-00305-C1	M.W.S	150-MWS-00211-C1	MIDDLE BURDEN FEEDER(HS-H07.3A)	27.00	56	51	5.2	4.4	OP/HL	WINTERIZE / F	NOTE.01
50-MWS-00306-C1	M.W.S	150-MWS-00211-C1	LOWER BURDEN FEEDER(HS-H08.A)	15.00	56	51	5.2	4.6	OP/HL	WINTERIZE / F	NOTE.01
50-MWR-00307-C1	M.W.R	MIDDLE BURDEN FEEDER(HS-H07.3B)	150-MWR-00301-C1	27.00	61	56	5.2	4.1	OP/HL	WINTERIZE / F	NOTE.01
50-MWR-00308-C1	M.W.R	MIDDLE BURDEN FEEDER(HS-H07.2B)	150-MWR-00301-C1	27.00	61	56	5.2	4.1	OP/HL	WINTERIZE / F	NOTE.01
50-MWR-00309-C1	M.W.R	MIDDLE BURDEN FEEDER(HS-H07.1B)	150-MWR-00301-C1	27.00	61	56	5.2	4.1	OP/HL	WINTERIZE / F	NOTE.01
50-NG-00310-C6	NATURAL GAS	80-NG-02802-C6	REDUCTION FURNACE RAPID COOLING NOZZLE	235.50	35.00	25.00	3.100	1.655	10 BAR/HP	-	NO.2/1021
40-SG-00311-C6	SEAL GAS	200-SG-06903-C6	PDC FEED LEG SHUT OFF VALVE (SV-D85.3)	110.00	15.00	5.00	2.200	1.920	OP/PL	-	no.2/7032
50-NG-00313-C6	NATURAL GAS	80-NG-02802-C6	REDUCTION FURNACE RAPID COOLING NOZZLE	235.50	35.00	25.00	3.100	1.655	10 BAR/HP	-	NO.2/1021

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P&ID Sheet No.: M5-004											
Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
500-TGF-00401-C2	TOP GAS FUEL	1150-TGF-00402-C2	VENT WATER SEAL TANK(TK-A46)	70588.00	60	39	0.588	0.234	OP/PL	-	NO.2/1021
1600-PRG-00403-C2	PROCESS GAS	TOP GAS SCRUBBER(SR-A45)	1200-PRG-00404-C2	25913.00	58	51.60	0.588	0.234	OP/PL	-	NO.2/1021
1200-PRG-00404-C2	PROCESS GAS	1600-PRG-00403-C2	1200-PRG-00820-C2	25913.00	58	51.60	0.588	0.234	OP/PL	-	NO.2/1021
1600-PRG-00405-C2	PROCESS GAS	1600-PRG-00403-C2	900-PRG-00442/00443-C2 PROCESS GAS COMPRESSORS(CP-A48.1&2)	173009.00	58	51.60	0.588	0.234	OP/PL	-	NO.2/1021
1200-PRG-00406-C2	PROCESS GAS	1600-PRG-00403-C2	PROCESS GAS COMPRESSORS (CP-A48.3)	86504.00	58	51.60	0.588	0.234	OP/PL	-	NO.2/1021
1150-TGF-00402-C2	TOP GAS FUEL	TOP GAS SCRUBBER(SR-A45)	TOP GAS FUEL MIXER(MX-B10)	142796.00	60	39.00	0.588	0.109	OP/PL	-	NO.2/1021
450-PWS-00407-C1	P.W.S	500-PWR-00408-C1	PU-E17	900.00	66	29	1.46	1.4	OP/HL	-	NO.2/6021
500-PWR-00408-C1	P.W.R	800-PWR-00444-C1	800-PWR-00445-C1	3000.00	73	69	0.68	0.5	OP/HL	WINTERIZ/F	NOTE.01
400-PWS-00409-C1	P.W.S	PU-E17	450-PWS-08402-C1	900.00	72	29	4.4	2.5	OP/HL	-	NO.2/6021
1050-PWR-00411-C1	P.W.R	TOP GAS SCRUBBER(SR-A45)	800-PWR-00444-C1	3000.00	73	69	0.68	0.5	OP/HL	WINTERIZ/F	NOTE.01
900-PWR-00412-C1	P.W.R	1050-PWR-00446-C1	1300-PWR-08100-C1	3000.00	73	69	0.68	0.5	OP/HL	-	NO.2/6021
1050-PWR-00413-C1	P.W.R	1050-PWR-00446-C1	VENT	3000.00	73	69	0.68	0.5	OP/HL	-	NO.2/6021
80-PWS-00414-C1	P.W.S	150-PWS-00439-C1	TOP GAS SCRUBBER VENTURI THROAT SPRAY	65.80	31	29	5.46	2.83	OP/HL	-	NOTE.01
250-PWS-00415-C1	P.W.S	400-PWS-08503-C1	150-PWS-00426/447-C1 (TOP GAS SCRUBBER VENTURI NOZZLES)	329.00	72.8	66.1	1.2	0.9	OP/HL	-	NO.2/6021
750-PWR-00417-C1	P.W.R	1050-PWR-00411-C1	VENT	3000.00	73	69	0.68	0.5	OP/HL	WINTERIZ/F	NOTE.01
250-SL-00418-C7	SLURRY	TOP GAS SCRUBBER(SR-A45)	250-SL-00419-C7	6.50	73	69	1.46	1.2	OP/HL	-	NO.2/9005(HEAVY)
250-SL-00419-C7	SLURRY	250-SL-00418-C7	SCRUBBER BLOWDOWN SUMP(TK-E93)	6.50	73	66.00	1.46	1.2	OP/HL	-	NO.2/6021(LIGHT)
150-SL-00420-C7	SLURRY	250-SL-00418-C7	450-SL-00421-C7	6.50	73	66.00	1.46	1.2	OP/HL	-	NO.2/9005(HEAVY)
450-SL-00421-C7	SLURRY	150-SL-00420-C7	200-SL-00422-C7	6.50	73	66.00	1.46	1.2	OP/HL	-	NO.2/9005(HEAVY)
200-SL-00422-C7	SLURRY	450-SL-00421-C7	250-SL-08001-C7	6.50	73	66.00	1.46	1.2	OP/HL	-	NO.2/9005(HEAVY)

# KOWSAR GISD

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Line No.	Service	From	To	Des. Flow Rate(Nm3 ,m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
150-SL-00423-C7	SLURRY	450-SL-00421-C7	VENT	6.50	73	69.00	1.46	1.2	OP/HL	-	NO.2/9005(HEAVY )
40-PWS-00425-C1	P.W.S	50-PWS-08408-C1	HOSE CONNECTION	5.00	31.00	29.00	9.000	8.000	OP/HL	WINTERIZ/F	NOTE.01
40-PWS-00426-C1	P.W.S	50-PWS-08408-C1	HOSE CONNECTION	5.00	31.00	29.00	9.000	8.000	OP/HL	WINTERIZ/F	NOTE.01
25-PWS-00424-C1	P.W.S	50-PWS-08408-C1	250-SL-00418-C7	3.00	31.00	29.00	9.000	8.000	OP/HL	ET	NOTE.01
150-PWS-00428-C1	P.W.S	250-PWS-00415-C1	80-PWS-00429/430/431/432-C1	164.50	72.8	66.1	1.2	0.9	OP/HL	-	NO.2/6021
80-PWS-00429-C1	P.W.S	150-PWS-00428-C1	TOP GAS SCRUBBER VENTURI SWRIL NOZZLE	41.10	72.8	66.1	1.2	0.9	OP/HL	-	NO.2/6021
80-PWS-00430-C1	P.W.S	150-PWS-00428-C1	TOP GAS SCRUBBER VENTURI SWRIL NOZZLE	41.10	72.8	66.1	1.2	0.9	OP/HL	-	NO.2/6021
80-PWS-00431-C1	P.W.S	150-PWS-00428-C1	TOP GAS SCRUBBER VENTURI SWRIL NOZZLE	41.10	72.8	66.1	1.2	0.9	OP/HL	-	NO.2/6021
80-PWS-00432-C1	P.W.S	150-PWS-00428-C1	TOP GAS SCRUBBER VENTURI SWRIL NOZZLE	41.10	72.8	66.1	1.2	0.9	OP/HL	-	NO.2/6021
80-PWS-00433-C1	P.W.S	150-PWS-00447-C1	TOP GAS SCRUBBER VENTURI SWRIL NOZZLE	41.10	72.8	66.1	1.2	0.9	OP/HL	-	NO.2/6021
80-PWS-00434-C1	P.W.S	150-PWS-00447-C1	TOP GAS SCRUBBER VENTURI SWRIL NOZZLE	41.10	72.8	66.1	1.2	0.9	OP/HL	-	NO.2/6021
80-PWS-00435-C1	P.W.S	150-PWS-00447-C1	TOP GAS SCRUBBER VENTURI SWRIL NOZZLE	41.10	72.8	66.1	1.2	0.9	OP/HL	-	NO.2/6021
150-PWS-00436-C1	P.W.S	250-PWS-08407-C1	80-PWS-00437/438-C1	131.60	31	29	5.46	2.83	OP/HL	-	NO.2/6021
80-PWS-00437-C1	P.W.S	150-PWS-00436-C1	TOP GAS SCRUBBER VENTURI THROAT SPRAY	65.80	31	29	5.46	2.83	OP/HL	-	NO.2/6021
80-PWS-00438-C1	P.W.S	150-PWS-00436-C1	TOP GAS SCRUBBER VENTURI THROAT SPRAY	65.80	31	29	5.46	2.83	OP/HL	-	NO.2/6021
150-PWS-00439-C1	P.W.S	250-PWS-08407-C1	80-PWS-00414/440/441-C1	197.40	31	29	5.46	2.83	OP/HL	-	NO.2/6021
80-PWS-00440-C1	P.W.S	150-PWS-00439-C1	TOP GAS SCRUBBER VENTURI THROAT SPRAY	65.80	31	29	5.46	2.83	OP/HL	-	NO.2/6021
80-PWS-00441-C1	P.W.S	150-PWS-00439-C1	TOP GAS SCRUBBER VENTURI THROAT SPRAY	65.80	31	29	5.46	2.83	OP/HL	-	NO.2/6021
1200-PRG-00442-C2	PROCESS GAS	1300-PRG-00405-C2	PROCESS GAS COMPRESSORS (CP-A48.1)	86504.00	58	51.60	0.588	0.234	OP/HL	-	NO.2/1021
1200-PRG-00443-C2	PROCESS GAS	1300-PRG-00405-C2	PROCESS GAS COMPRESSORS (CP-A48.2)	86504.00	58	51.60	0.588	0.234	OP/HL	-	NO.2/1021



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P&ID Sheet No.: M5-004											
Line No.	Service	From	To	Des. Flow Rate(Nm3 ,m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
800-PWR-00444-C1	P.W.R	1050-PWR-00411-C1	500-PWR-00408-C1	3000.00	73	69	0.68	0.5	OP/PL	WINTERIZE / F	NOTE.01
800-PWR-00445-C1	P.W.R	500-PWR-00408-C1	1050-PWR-00446-C1	3000.00	73	69	0.68	0.5	OP/PL	WINTERIZE / F	NOTE.01
1050-PWR-00446-C1	P.W.R	800-PWR-00445-C1	900-PWR-00412-C1	3000.00	73	69	0.68	0.5	OP/HL	WINTERIZE / F	NOTE.01
25-PWR-00427-C1	P.W.R	HV-E05	250-SL-00419-C7	3.00	31.00	29.00	9.000	8.000	OP/HL	ET	NOTE.01
80-PWS-00416-C1	P.W.S	150-PWS-00447-C1	TOP GAS SCRUBBER VENTURI SWRIL NOZZLE	41.10	72.8	66.1	1.2	0.9	OP/HL	-	NO.2/6021
150-PWS-00447-C1	P.W.S	250-PWS-00415-C1	80-PWS-00416-C1	164.50	72.8	6	1.2	0.9	OP/HL	-	NO.2/6021
250-SG-00448-C2	SEAL GAS	250-SG-06707-C6	1600-PRG-00403-C2	5882.00	43.00	41.00	0.59	0.38	OP/PL	-	no.2/7032

	<p style="text-align: center;"><b>KOWSAR GISD</b> <b>MEGA MODULE PROJECT</b></p>			
<b>DOCUMENT TITLE</b>	<b>Document No:</b>		<b>Rev.</b>	<b>DATE: Apr.2015</b>
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P&ID Sheet No.: M5-005											
Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
250-PRG-00505-C2	PROCESS GAS	1050-PRG-00506-C2	1200-PRG-00442-C2	6000.00	75	69.50	1.45	1.139	OP/PL	-	NO.2/1021
1050-PRG-00506-C2	PROCESS GAS	PULSTAION DAMPERNER (PD-A49.1)	PROCESS GAS COMPRESSOR CP-A51.1	91209.00	75	69.50	1.45	1.139	OP/PL	-	NO.2/1021
50-PWR-00507-C1	P.W.R	PROCESS GAS COMPRESSORS CP-A48.1	50-PWR-08801-C1	4.50	76	69.2	1.45	1.153	OP/PL	-	NO.2/6021
40-PWR-00508-C1	P.W.R	CP-A48.1 CYLINDER DRAIN	SEAL LEG NO. 2	4.50	76	69.2	1.45	1.153	OP/PL	-	NO.2/6021
50-PWR-00509-C1	P.W.R	CP-A48.1 SEAL FLUSH DRAIN	SEAL LEG NO.2	4.50	76	69.2	1.45	1.153	OP/PL	-	NO.2/6021
50-PWR-00510-C1	P.W.R	PD-A49.1 PULSATION DAMPNER	50-PWR-00511-C1	4.50	76	69.2	1.45	1.139	OP/PL	-	NO.2/6021
5-PWR-00511-C1	P.W.R	PD-A49.1 DAMPNER DRAIN	SEAL LEG NO.2	4.50	76	69.2	1.45	1.139	OP/HL	-	NO.2/6021
50-PWR-00512-C1	P.W.R	900-PRG-00506-C2	SEAL LEG NO.2	4.50	76	69.2	1.45	1.139	OP/HL	-	NO.2/6021
50-PWR-00513-C1	P.W.R	1200-PRG-00442-C2	SEAL LEG NO.2	4.50	58	51.6	0.588	0.234	OP/HL	-	NO.2/6021
50-MWR-00514-C1	M.W.R	PU-A48.1A/B	65-MWR-09533-C1	7.00	45	41	4.2	3.5	OP/HL	WINTERIZE / F	NOTE.01
40-MWS-00516-C1	M.W.S	40-MWS-09540-C1	40-MWS-09540-C1	7.00	34.00	32.00	4.20	3.80	OP/HL	WINTERIZE / F	NOTE.01
40-PG-00517-C6	PURGE GAS	65-MWS-09541-C1	CP-A48.1	70.00	45.00	38	1.2	0.470	OP/PL	-	NO.2/7032



# KOWSAR GISD MEGA MODULE PROJECT





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P&ID Sheet No.: M5-006

Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
250-PRG-00605-C2	PROCESS GAS	1050-PRG-00606-C2	1200-PRG-00443-C2	6000.00	75	69.50	1.45	1.139	OP/PL	-	NO.2/1021
1050-PRG-00606-C2	PROCESS GAS	PULSTAION DAMPERNER (PD-A49.2)	PROCESS GAS COMPRESSOR CP-A51.2	91209.00	75	69.50	1.45	1.139	OP/PL	-	NO.2/1021
50-PWR-00607-C1	P.W.R	CP-A48..2 HEAD VENT DRAIN	50-PWR-08801-C1	4.50	76	69.2	1.45	1.153	OP/HL	-	NO.2/6021
40-PWR-00608-C1	P.W.R	CP-A48.2 CYLINDER DRAIN	SEAL LEG NO.2	4.50	76	69.2	1.45	1.153	OP/HL	-	NO.2/6021
50-PWR-00609-C1	P.W.R	CP-A48.2 SEAL FLUSH DRAIN	SEAL LEG NO.2	4.50	76	69.2	1.45	1.153	OP/HL	-	NO.2/6021
50-PWR-00610-C1	P.W.R	PULSATION DAMPNER (PD-A49.2)	50-PWR-00611-C1	4.50	76	69.2	1.45	1.139	OP/HL	-	NOTE.01
50-PWR-00611-C1	P.W.R	PULSATION DAMPNER (PD-A49.2)	SEAL LEG NO.2	4.50	76	69.2	1.45	1.139	OP/HL	-	NO.2/6021
50-PWR-00612-C1	P.W.R	900-PRG-00606-C2	SEAL LEG NO.2	4.50	76	69.2	1.45	1.139	OP/HL	-	NO.2/6021
50-PWR-00613-C1	P.W.R	900-PRG-00443-C2	SEAL LEG NO.2	4.50	58	51.6	0.588	0.234	OP/HL	-	NO.2/6021
50-MWR-00614-C1	M.W.R	PU-A48..2A/B	65-MWR-09534-C1	7.00	45	41	4.2	3.5	OP/HL	WINTERIZE / F	NOTE.01
40-MWS-00616-C1	M.W.S	40-MWS-09542-C1	40-MWS-09542-C2	7.00	34.00	32.00	4.20	3.80	OP/HL	WINTERIZE / F	NOTE.01
40-PG-00617-C6	PURGE GAS	40-PG-07415-C6	CP-A51.2	70.00	45	38	1.2	0.470	OP/PL	-	NO.2/7032

	<p style="text-align: center;"><b>KOWSAR GISD</b> <b>MEGA MODULE PROJECT</b></p>			
<b>DOCUMENT TITLE</b>	<b>Document No:</b>		<b>Rev.</b>	<b>DATE: Apr.2015</b>
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P&ID Sheet No.: M5-007											
Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
250-PRG-00705-C2	PROCESS GAS	900-PRG-00706-C2	1200-PRG-00406-C2	6000.00	75	69.50	1.450	1.139	OP/PL	-	NO.2/1021
1050-PRG-00706-C2	PROCESS GAS	PULSATION DAMPNER (PD-A49.3)	1200-PRG-00819-C2	91209.00	75	69.50	1.450	1.139	OP/PL	-	NO.2/1021
50-PWR-00707-C1	P.W.R	CP-A48.3 HEAD VENT DRAIN	50-PWR-08801-C1	4.50	76	69.2	1.45	1.153	OP/HL	-	NO.2/6021
40-PWR-00708-C1	P.W.R	CP-A48.3 CYLINDER DRAIN	SEAL LEG NO.2	4.50	76	69.2	1.45	1.153	OP/HL	-	NO.2/6021
50-PWR-00709-C1	P.W.R	CP-A48.3 SEAL FLUSH DRAIN	SEAL LEG NO.2	4.50	76	69.2	1.45	1.153	OP/HL	-	NO.2/6021
50-PWR-00710-C1	P.W.R	PULSATION DAMPNER (PD-A49.3)	50-PWR-00711-C1	4.50	76	69.2	1.45	1.139	OP/HL	-	NO.2/6021
50-PWR-00711-C1	P.W.R	PULSATION DAMPNER (PD-A49.3)	SEAL LEG NO.2	4.50	76	69.2	1.45	1.139	OP/HL	-	NO.2/6021
50-PWR-00712-C1	P.W.R	900-PRG-00706-C2	SEAL LEG NO.2	4.50	76	69.2	1.45	1.139	OP/HL	-	NO.2/6021
50-PWR-00713-C1	P.W.R	900-PRG-00406-C2	SEAL LEG NO.2	4.50	58	51.6	0.588	0.234	OP/HL	-	NO.2/6021
50-MWR-00714-C1	M.W.R	PU-A48.3A/B	80-MWR-09555-C1	7.00	45	41	4.2	3.5	OP/HL	WINTERIZE / F	NOTE.01
40-MWS-00716-C1	M.W.S	40-MWS-09544-C1	40-MWS-09544-C2	7.00	34.00	32.00	4.20	3.80	OP/HL	WINTERIZE / F	NOTE.01
40-PG-00717-C6	PURGE GAS	65-MWS-09545-C1	CP-A48.3	70.00	45	38	1.2	0.470	OP/PL	-	NO.2/7032

	<h1 style="text-align: center;">KOWSAR GISD</h1> <h2 style="text-align: center;">MEGA MODULE PROJECT</h2>			
<b>DOCUMENT TITLE</b>	<b>Document No:</b>		<b>Rev.</b>	<b>DATE: Apr.2015</b>
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P&ID Sheet No.: M5-008											
Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
250-PRG-00805-C2	PROCESS GAS	1100-PRG-00806-C2	1050-PRG-00506-C2	7354.00	90	80.60	2.43	2.044	OP/PL	-	NO.2/1021
1100-PRG-00806-C2	PROCESS GAS	PULSATION DAMPNER (PD-A52.1)	1200-PRG-01002-C2	142380.00	90	80.60	2.43	2.044	OP/PL	HEAT CONSERVATION / HC1	NOTE.01
50-PWR-00807-C1	P.W.R	CP-A51.1 HEAD VENT DRAIN	50-PWR-08801-C1	6.00	87	80.6	2.43	2.063	OP/HL	-	NO.2/6021
40-PWR-00808-C1	P.W.R	CP-A51.1 CYLINDER DRAIN	SEAL LEG NO.1	6.00	87	80.6	2.43	2.063	OP/HL	-	NO.2/6021
50-PWR-00809-C1	P.W.R	CP-A51.1 SEAL FLUSH DRAIN	SEAL LEG NO.1	6.00	87	80.6	2.43	2.063	OP/HL	-	NO.2/6021
50-PWR-00810-C1	P.W.R	PULSATION DAMPNER (PD-A52.1)	50-PWR-00811-C1	6.00	87	80.6	2.43	2.044	OP/HL	-	NO.2/6021
50-PWR-00811-C1	P.W.R	PULSATION DAMPNER (PD-A52.1)	SEAL LEG NO.1	6.00	87	80.6	2.43	2.044	OP/HL	-	NO.2/6021
50-PWR-00813-C1	P.W.R	900-PRG-00506-C2	SEAL LEG NO.2	6.00	75	69.4	1.45	1.139	OP/HL	-	NO.2/6021
50-MWR-00814-C1	M.W.R	PU-A51.1A/B	65-MWR-09510-C1	7.00	45	41	4.2	3.5	OP/HL	WINTERIZE / F	NOTE.01
40-MWS-00816-C1	M.W.S	40-MWS-09546-C1	40-MWS-09546-C1	8.00	34.00	32.00	4.20	3.80	OP/HL	WINTERIZE / F	NOTE.01
40-PG-00817-C6	PURGE GAS	40-PG-07419-C2	900-PRG-00506-C2	70.00	45.00	38.00	1.20	0.47	OP/PL	-	NO.2/7032
1200-PRG-00819-C2	PROCESS GAS	1050-PRG-00506-C2	900-PRG-00606-C2	259513.00	58.00	51.60	0.59	0.23	OP/PL	-	NO.2/1021
1200-PRG-00820-C2	PROCESS GAS	1050-PRG-00506-C2	1200-PRG-01002-C2	259513.00	58.00	51.60	0.59	0.23	OP/PL	-	NO.2/1021
300-PRG-00821-C2	PROCESS GAS	1200-PRG-00820-C2	1200-PRG-00820-C2	16220	58.00	51.60	0.59	0.23	OP/PL	-	NO.2/1021
300-PRG-00822-C2	PROCESS GAS	1200-PRG-00404-C2	1200-PRG-00404-C2	16220	58.00	51.60	0.59	0.23	OP/PL	-	NO.2/1021

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P&ID Sheet No.: M5-009

Line No.	Service	From	To	Des. Flow Rate(Nm3 m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
250-PRG-00905-C2	PROCESS GAS	900-PRG-00906-C2	1050-PRG-00606-C2	7354.00	90	80.60	2.43	2.044	OP/PL	-	NO.2/1021
1100-PRG-00906-C2	PROCESS GAS	PULSATION DAMPNER (PD-A52.2)	1200-PRG-01002-C2	142380	90	80.60	2.43	2.044	OP/PL	HEAT CONSERVATION / HC1	NOTE.01
50-PWR-00907-C1	P.W.R	CP-A51.2 HEAD VENT DRAIN	50-PWR-08801-C1	6.00	87	80.6	2.43	2.063	OP/HL	-	NO.2/6021
40-PWR-00908-C1	P.W.R	CP-A51.2 CYLINDER DRAIN	SEAL LEG NO.1	6.00	87	80.6	2.43	2.063	OP/HL	-	NO.2/6021
50-PWR-00909-C1	P.W.R	CP-A51.2 SEAL FLUSH DRAIN	SEAL LEG NO.1	6.00	87	80.6	2.43	2.063	OP/HL	-	NO.2/6021
50-PWR-00910-C1	P.W.R	PULSATION DAMPNER (PD-A52.2)	50-PWR-00911-C1	6.00	87	80.6	2.43	2.044	OP/HL	-	NO.2/6021
50-PWR-00911-C1	P.W.R	PULSATION DAMPNER (PD-A52.2)	SEAL LEG NO.1	6.00	87	80.6	2.43	2.044	OP/HL	-	NO.2/6021
50-PWR-00913-C1	P.W.R	900-PRG-00606-C2	SEAL LEG NO.2	6.00	75	69.4	1.45	1.139	OP/HL	-	NO.2/6021
50-MWR-00914-C1	M.W.R	PU-A51.2A/B	65-MWR-09535-C1	7.00	45	41	4.2	3.5	OP/HL	WINTERIZE / F	NOTE.01
40-MWS-00916-C1	M.W.S	40-MWS-09548-C1	40-MWS-09548-C2	8.00	34.00	32.00	4.20	3.80	OP/HL	WINTERIZE / F	NOTE.01
40-PG-00917-C6	PURGE GAS	40-PG-07420-C6	900-PRG-00606-C2	70.00	45.00	38.00	1.20	0.47	OP/PL	-	NO.2/7032

# KOWSAR GISD

## MEGA MODULE PROJECT



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P&ID Sheet No.: M5-010											
Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
600-PRG-01001-C2	PROCESS GAS	1200-PRG-01002-C2	FORCED COOLING NOZZLES(RF-A05 )	176471.00	90	80.6	2.43	2.000	OP/PL	-	NO.2/1021
1200-PRG-01002-C2	PROCESS GAS	1100-PRG-00806/906-C2	PROCESS GAS MIST ELIMINATOR SR-A60	263898.00	90	80.6	2.433	2.044	OP/PL	HEAT CONSERVATION/HC1	NOTE.01
1000-PRG-01004-C2	PROCESS GAS	1200-PRG-01002-C2	TOP GAS SCRUBBER(SR-A45)	284760.00	90	80.6	2.4	2.000	OP/PL	-	NO.2/1021
25-PG-01005-C6	PURGE GAS	25-PG-07421-C6	900-PRG-01001-C2	70.00	45.000	38.000	1.200	0.469	OP/PL	-	No.2/7032
25-DW-01006-C1	DRAIN WATER	1200-PRG-01002-C2	LOW POINT DRAIN	1.00	90.000	80.600	2.433	2.044	OP/HL	-	No.2/1021
40-PWR-01007-C1	P.W.R	1200-PRG-01002-C2	40-PWR-01008-C1	1.00	90.000	80.600	2.430	2.044	OP/HL	-	No.2/1021
40-PWR-01008-C1	P.W.R	1200-PRG-01002-C2	SEAL LEG NO.1	1.00	90.000	80.600	2.430	2.044	OP/HL	-	No.2/1021
25-PG-01009-C6	PURGE GAS	50-PG-07422-C6	1200-PRG-01002-C2	70.00	45.000	38.000	1.200	0.469	OP/PL	-	No.2/7032
80-PWR-01010-C1	P.W.R	P.G MIST ELIMINATOR SR-A60	SEAL LEG NO.1	3.00	90.000	80.600	2.430	2.000	OP/HL	-	No.2/6021
250-PRG-01011-C2	PROCESS GAS	1000-PRG-01004-C2	1000-PRG-01004-C2	18000.00	90.000	80.600	2.400	2.000	OP/PL	-	NO.2/1021
600-NG-01012-C8	NATURAL GAS	450-NG-01101/1201-CB	FEED GAS MIXER MX-A55	52875.00	400	370.00	3.000	2.000	10 BAR/HP	HEAT CONSERVATION/HC5	NOTE.01
1350-PRG-01013-C2	PROCESS GAS	P.G MIST ELIMINATOR SR-A60	FEED GAS MIXER MX-A55	263898.00	90	80.60	2.433	1.997	OP/PL	HEAT CONSERVATION/HC1	NOTE.01
1350-RF-01014-C8	REFORMED FEED GAS	FEED GAS MIXER MX-A55	1150-RF-01015/1016-C8	316773.00	152	148.00	2.400	2.000	OP/PL	HEAT CONSERVATION/HC1	NOTE.01
1150-RF-01015-C8	REFORMED FEED GAS	1350-RF-01014-C8	FEED GAS HEATER HE-A61.2	158396.50	152	148.00	2.400	2.000	OP/PL	HEAT CONSERVATION/HC1	NOTE.01
1150-RF-01016-C8	REFORMED FEED GAS	1350-RF-01014-C8	FEED GAS HEATER HE-A61.1	158396.00	152	148.00	2.400	2.000	OP/PL	HEAT CONSERVATION/HC1	NOTE.01
500-PRG-01017-C2	PROCESS GAS	900-PRG-01001-C2	P.G TO BUSTLE MIST ELIMINATOR SR-A61	35294.00	90	80.60	2.400	2.000	OP/PL	-	NO.2/1021
500-PRG-01018-C2	PROCESS GAS	P.G TO BUSTLE MIST ELIMINATOR SR-A61	750-RG-01903-C2	35294.00	90	80.60	2.400	2.000	OP/PL	-	NO.2/1021
100-PWR-01019-C1	P.W.R	P.G TO BUSTLE MIST ELIMINATOR SR-A61	SEAL LEG NO.1	3.00	90	80.6	2.4	2	OP/HL	-	No.2/6021
500-RF-01021-C8	REFORMED FEED GAS	1350-RF-01014-C8	1750-RF-01301-C8	43453	152	148.00	2.4	2.000	OP/PL	HEAT CONSERVATION/HC1	NOTE.01

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P&ID Sheet No.: M5-011

Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
450-NG-01101-C8	NATURAL GAS	NATURAL GAS PREHEATER HE-A62.1	600-NG-01012-C8	26437.50	400	370.00	3.000	2.000	10 BAR/HP	HEAT CONSERVATION /HC5	NO.4/1021
1250-RF-01102-C8	REFORMED FEED GAS	COLD C.A PREHEATER HE-A61.1	1750-RF-01301-C8	158386.50	600	340.00	2.400	1.94	OP/PL	HEAT CONSERVATION /HC5	NOTE.01
3000-FG-01103-C3	FLUE GAS	HEAT RECOVERY CASING TK-A04.1	EJECTOR STACK ST-C10	224116.00	530	280.00	0.005	-0.006	OP/PL	-	NO.5/7001
1350-RF-01104-S2	REFORMED FEED GAS	FEED GAS HEATER HE-A60.1	2030-RF-01804-C3	158386.50	600	565.00	2.400	1.900	OP/PL	HEAT CONSERVATION /HC8	NOTE.01
2280-CA-01105-C3	COMBUSTION AIR	HOT C.A PREHEATER HE-B05.1	2430-CA-23008-C3	189944.00	700	675.00	0.060	0.055	OP/PL	-	NO.5/7001
1300-CA-01106-C8	COMBUSTION AIR	COLD C.A PREHEATER HE-B04.1	HOT C.A PREHEATER HE-B05.1	94972.00	310	300.00	0.120	0.095	OP/PL	HEAT CONSERVATION /HC3	NOTE.01
1300-CA-01107-C8	COMBUSTION AIR	COLD C.A PREHEATER HE-B04.1	HOT C.A PREHEATER HE-B05.1	94972.00	310	300.00	0.120	0.095	OP/PL	HEAT CONSERVATION /HC3	NOTE.01
600-CA-01108-C4	COMBUSTION AIR	900-CA-03003-C4	1300-CA-01107-C8	25000.00	69	63.00	0.160	0.110	OP/PL	-	NO.2/5012
600-CA-01109-C4	COMBUSTION AIR	900-CA-03003-C4	1300-CA-01106-C8	25000.00	69	63.00	0.160	0.110	OP/PL	-	NO.2/5012
3800-FG-01110-C3	FLUE GAS	FLUE GAS MIXER MX-C20.1	HAET RECOVERY CASING TK-A04.1	224116.00	1150	1125.00	0.005	-0.002	OP/PL	-	NO.5/7001
500-DA-01111-C4	DILUTION AIR	750-DA-03017-C4	FLUE GAS MIXER MX-C20.2	25000.00	65	40.00	0.120	0.100	OP/PL	-	NO.2/5012



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Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
450-NG-01201-C8	NATURAL GAS	NATURAL GAS PREHEATER HE-A62.2	600-NG-01012-C8	26437.00	400	370.00	3.000	2.000	10 BAR/HP	HEAT CONSERVATION /HC5	NO.4/1021
1250-RF-01202-C8	REFORMED FEED GAS	COLD C.A PREHEATER HE-A61.2	1750-RF-01301-C8	158386.00	350	340.00	2.400	1.940	OP/PL	HEAT CONSERVATION /HC5	NOTE.01
3000-FG-01203-C3	FLUE GAS	HEAT RECOVERY CASING TK-A04.2	EJECTOR STACK ST-C10	224116.00	530	280.00	0.005	-0.006	OP/PL	-	NO.5/7001
1350-RF-01204-S2	REFORMED FEED GAS	FEED GAS HEATER HE-A60.2	2030-RF-01804-C3	158386.00	600	565.00	2.400	1.900	OP/PL	HEAT CONSERVATION /HC8	NOTE.01
2280-CA-01205-C3	COMBUSTION AIR	HOT C.A PREHEATER HE-B05.2	2430-CA-23008-C3	189944.00	700	675.00	0.060	0.055	OP/PL	-	NO.5/7001
1300-CA-01206-C8	COMBUSTION AIR	COLD C.A PREHEATER HE-B04.2	HOT C.A PREHEATER HE-B05.2	94972.00	310	300.00	0.120	0.095	OP/PL	HEAT CONSERVATION /HC3	NOTE.01
1300-CA-01207-C8	COMBUSTION AIR	COLD C.A PREHEATER HE-B04.2	HOT C.A PREHEATER HE-B05.2	94972.00	310	300.00	0.120	0.095	OP/PL	HEAT CONSERVATION /HC3	NOTE.01
600-CA-01208-C4	COMBUSTION AIR	900-CA-03006-C4	1300-CA-01207-C8	25000.00	69	63.00	0.160	0.110	OP/PL	-	NO.2/5012
600-CA-01209-C4	COMBUSTION AIR	900-CA-03006-C4	1300-CA-01206-C8	25000.00	69	63.00	0.160	0.110	OP/PL	-	NO.2/5012
3800-FG-01210-C3	FLUE GAS	FLUE GAS MIXER MX-C20.2	HAET RECOVERY CASING TK-A04.2	2242116.00	1150	1125.00	0.005	-0.002	OP/PL	-	NO.5/7001
500-DA-01211-C4	DILUTION AIR	750-DA-03018-C4	FLUE GAS MIXER MX-C20.2	25000.00	65	40.00	0.120	0.100	OP/PL	-	NO.2/5012

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Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
1250-RF-01303-C8	REFORMED FEED GAS	1750-RF-01301-C8	TK-A10.1	158386.50	350	340.00	2.433	1.940	10 BAR/HP	HEAT CONSERVATION /HCS	NOTE.01
1250-RF-01302-C8	REFORMED FEED GAS	1750-RF-01301-C8	TK-A10.2	158386.5	350	340	2.433	1.94	OP/PL	HEAT CONSERVATION /HCS	NOTE.01
1250-RF-01305-C8	REFORMED FEED GAS	TK-A10.1	1750-RF-01301-C8	158386.5	350	340	2.433	1.94	OP/PL	HEAT CONSERVATION /HCS	NOTE.01
1250-RF-01304-C8	REFORMED FEED GAS	TK-A10.2	1750-RF-01301-C8	158386.5	350	340	2.433	1.94	OP/PL	HEAT CONSERVATION /HCS	NOTE.01
1750-RF-01301-C8	REFORMED FEED GAS	HEADER OF 1250-RF-01102-C8 & 1250-RF-01202-C8	HEADER OF 1250-RF-01306-C8 & 1250-RF-01307-C8	316773	350	340	2.433	1.94	OP/PL	HEAT CONSERVATION /HCS	NOTE.01
1250-RF-01306-C8	REFORMED FEED GAS	1750-RF-01301-C8	PREHEATER BANK 1	158386.5	350	340	2.433	1.94	OP/PL	HEAT CONSERVATION /HCS	NOTE.01
1250-RF-01307-C8	REFORMED FEED GAS	1750-RF-01301-C8	PREHEATER BANK 2	158386.5	350	340	2.433	1.94	OP/PL	HEAT CONSERVATION /HCS	NOTE.01
500-RF-01308-C8	REFORMED FEED GAS	1750-RF-01301-C8	1750-RF-01301-C8	30000.00	350	340	2.433	1.94	OP/PL	HEAT CONSERVATION /HCS	NOTE.01
50-SG-01313-C8	SEAL GAS	TK-A10.2	VENT	50.00	15.00	5.00	2.200	1.920	OP/PL	-	NO.2/7032
50-SG-01314-C8	SEAL GAS	TK-A10.1	VENT	50.00	15.00	5.00	2.200	1.920	OP/PL	-	NO.2/7032
50-SG-01309-C6	SEAL GAS	50-SG-06902-C6	50-SG-01310-C8	50.00	15.00	5.00	2.200	1.920	OP/PL	-	NO.2/7032
50-SG-01310-C8	SEAL GAS	50-SG-01309-C6	TK-A10.2	50.00	15.00	5.00	2.200	1.920	OP/PL	-	NO.2/7032
50-SG-01311-C6	SEAL GAS	50-SG-06902-C6	50-SG-01312-C6	50.00	15.00	5.00	2.200	1.920	OP/PL	-	NO.2/7032
50-SG-01312-C6	SEAL GAS	50-SG-01311-C6	TK-A10.1	50.00	15.00	5.00	2.200	1.920	OP/PL	-	NO.2/7032

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150-NG-01501-C6	NATURAL GAS	250-NG-02806-C6	150-NG-01505-C8	1842.00	35.00	25.00	3.100	1.480	10 BAR/HP	-	NO.2/1021
150-NG-01502-C6	NATURAL GAS	250-NG-02806-C6	150-NG-01506-C8	1842.00	35.00	25.00	3.100	1.480	10 BAR/HP	-	NO.2/1021
150-NG-01503-C6	NATURAL GAS	250-NG-02806-C6	150-NG-01507-C8	1842.00	35.00	25.00	3.100	1.480	10 BAR/HP	-	NO.2/1021
150-NG-01505-C8	NATURAL GAS	150-NG-01501-C6	FURNACE WALL SOUTH	1842.00	450.00	25.00	3.100	1.480	10 BAR/HP	-	NO.4/7001
150-NG-01506-C8	NATURAL GAS	150-NG-01502-C6	FURNACE WALL EAST	1842.00	450.00	25.00	3.100	1.480	10 BAR/HP	-	NO.4/7001
150-NG-01507-C8	NATURAL GAS	150-NG-01503-C6	FURNACE WALL NORTH	1842.00	450.00	25.00	3.100	1.480	10 BAR/HP	-	NO.4/7001
150-NG-01508-C8	NATURAL GAS	150-NG-01504-C7	FURNACE WALL WEST	1842.00	450.00	25.00	3.100	1.480	10 BAR/HP	-	NO.4/7001
150-NG-01504-C6	NATURAL GAS	250-NG-02806-C6	150-NG-01508-C8	1842.00	35.00	25.00	3.100	1.480	10 BAR/HP	-	NO.2/1021



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Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
3600-FG-01801-C3	FLUE GAS	REFORMER RF-A40 (HEADER)	FLUE GAS MIXER MX-C20.1	224116.00	1150.00	1125.00	0.005	-0.002	OP/PL	-	NO.5/7001
3600-FG-01802-C3	FLUE GAS	REFORMER RF-A40 (HEADER)	FLUE GAS MIXER MX-C20.2	224116.00	1150.00	1125.00	0.005	-0.002	OP/PL	-	NO.5/7001
2030-RF-01804-C8	REFORMED FEED GAS	1350-RF-01104/1204-S2	2130-RF-02401-C3	316773.00	600.00	565.00	2.433	1.866	OP/PL	-	NO.5/7001
1570-RG-01805-C3	REFORMED GAS	REFORMER RF-A40 (HEADER)	2460-RG-01808-C3	141976.00	1000.00	940.00	2.033	1.533	OP/PL	-	NO.5/7001
1570-RG-01806-C3	REFORMED GAS	REFORMER RF-A40 (HEADER)	2460-RG-01808-C3	141976.00	1000.00	940.00	2.033	1.533	OP/PL	-	NO.5/7001
1570-RG-01807-C3	REFORMED GAS	REFORMER RF-A40 (HEADER)	2460-RG-01808-C3	141976.00	1000.00	940.00	2.033	1.533	OP/PL	-	NO.5/7001
2460-RG-01808-C3	REFORMED GAS	1570-RG-01805/1806/1807-C3	REFORMED GAS MIXER MX-A44	425928.00	1000.00	940.00	2.033	1.486	OP/PL	-	NO.5/7001
1612-FG-01809-C3	FLUE GAS	REFORMER RF-A40	SEAL GAS COOLER (SR-D01)	31542.00	1150.00	1125.00	0.000	-0.002	OP/PL	-	NO.5/7001

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Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
2460-RG-01901-C3	REFORMED GAS	REFORMED GAS MIXER MX-A44	REDUCTION FURNACE RF-XA01	445194.00	970.00	926.00	2.037	1.486	OP/PL	-	NO.5/7001
1150-RG-01902-C3	REFORMED GAS	2460-RG-01808-C3	REFORMED GAS COOLER SR-A42	71459.00	1000.00	940.00	2.033	1.533	OP/PL	-	NO.5/7001
750-RG-01903-C2	REFORMED GAS	REFORMED GAS COOLER SR-A42	REFORMED GAS MIXER MX-A44	68800.00	40.00	36.00	2.033	1.496	OP/PL	-	NO.2/1021
40-PWR-01904-C1	P.W.R	REFORMED GAS MIXER MX-A44	SEAL LEG NO.1	0.10	80.00	40.00	2.033	1.533	OP/HL	-	no.2/6021
40-PWS-01905-C1	P.W.S	300-PWS-08409-C1	HOSE STATION REFORMED GAS COOLER	5.00	31.00	29.00	7.000	9.000	OP/HL	WINTERIZE / F	NOTE.01
300-PWS-01906-C1	P.W.S	300-PWS-08409-C1	REFORMED GAS COOLER SR-A42	495.00	31.00	29.00	5.000	3.000	OP/HL	-	NO.2/6021
40-PWS-01907-C1	P.W.S	300-PWS-08409-C1	REFORMED GAS COOLER SEAL LEG	5.00	31.00	29.00	7.000	5.000	OP/HL	WINTERIZE / F	NOTE.01
350-PWR-01908-C1	P.W.R	REFORMED GAS COOLER SEAL LEG	350-PWR-01909-C1	496.80	80.00	58.00	1.600	1.000	OP/HL	-	NO.2/6021
350-PWR-01909-C1	P.W.R	350-PWR-01908-C1	500-PWR-8319-C1	496.80	80.00	58.00	1.600	1.000	OP/HL	-	NO.2/6021
650-PWR-01910-C1	P.W.R	REFORMED GAS COOLER SR-A42	REFORMED GAS COOLER SEAL LEG	496.80	80.00	58.00	1.600	1.000	OP/HL	-	NO.2/6021

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Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
200-NG-02201-C6	NATURAL GAS	200-NG-02810-C6	N.G HEADERS TO AUXILIARY BURNERS	5201.00	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
200-NG-02202-C6	NATURAL GAS	200-NG-02201-C6	AUXILIARY BURNERS	1300.00	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
200-NG-02203-C6	NATURAL GAS	200-NG-02201-C6	AUXILIARY BURNERS	1300.00	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
200-NG-02204-C6	NATURAL GAS	200-NG-02201-C6	AUXILIARY BURNERS	1300.00	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
200-NG-02205-C6	NATURAL GAS	200-NG-02201-C6	AUXILIARY BURNERS	1300.00	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
350-AA-02206-C4	AUXILIARY AIR	900-AA-03009-C4	AUXILIARY BURNERS	12500.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
350-AA-02207-C4	AUXILIARY AIR	900-AA-03009-C4	AUXILIARY BURNERS	12500.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
350-AA-02208-C4	AUXILIARY AIR	900-AA-03009-C4	AUXILIARY BURNERS	12500.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
350-AA-02209-C4	AUXILIARY AIR	900-AA-03009-C4	AUXILIARY BURNERS	12500.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
40-NG-02210-C6	NATURAL GAS	200-NG-02202-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02211-C6	NATURAL GAS	200-NG-02202-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02212-C6	NATURAL GAS	200-NG-02202-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02213-C6	NATURAL GAS	200-NG-02202-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02214-C6	NATURAL GAS	200-NG-02202-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02215-C6	NATURAL GAS	200-NG-02202-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02216-C6	NATURAL GAS	200-NG-02202-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02217-C6	NATURAL GAS	200-NG-02202-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02218-C6	NATURAL GAS	200-NG-02202-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02219-C6	NATURAL GAS	200-NG-02202-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02220-C6	NATURAL GAS	200-NG-02202-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02221-C6	NATURAL GAS	200-NG-02202-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02222-C6	NATURAL GAS	200-NG-02202-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02223-C6	NATURAL GAS	200-NG-02202-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02224-C6	NATURAL GAS	200-NG-02202-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02225-C6	NATURAL GAS	200-NG-02202-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021

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40-NG-02226-C6	NATURAL GAS	200-NG-02202-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02227-C6	NATURAL GAS	200-NG-02202-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02228-C6	NATURAL GAS	200-NG-02203-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02229-C6	NATURAL GAS	200-NG-02203-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02230-C6	NATURAL GAS	200-NG-02203-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02231-C6	NATURAL GAS	200-NG-02203-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02232-C6	NATURAL GAS	200-NG-02203-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02233-C6	NATURAL GAS	200-NG-02203-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02234-C6	NATURAL GAS	200-NG-02203-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02235-C6	NATURAL GAS	200-NG-02203-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02236-C6	NATURAL GAS	200-NG-02203-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02237-C6	NATURAL GAS	200-NG-02203-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02238-C6	NATURAL GAS	200-NG-02203-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02239-C6	NATURAL GAS	200-NG-02203-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02240-C6	NATURAL GAS	200-NG-02203-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02241-C6	NATURAL GAS	200-NG-02203-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02242-C6	NATURAL GAS	200-NG-02203-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02243-C6	NATURAL GAS	200-NG-02203-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02244-C6	NATURAL GAS	200-NG-02203-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02245-C6	NATURAL GAS	200-NG-02203-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02246-C6	NATURAL GAS	200-NG-02204-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02247-C6	NATURAL GAS	200-NG-02204-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02248-C6	NATURAL GAS	200-NG-02204-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02249-C6	NATURAL GAS	200-NG-02204-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02250-C6	NATURAL GAS	200-NG-02204-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021

# KOWSAR GISD MEGA MODULE PROJECT



DOCUMENT TITLE	Document No:		Rev.	DATE: Apr.2015
Line List	Client Document NO:	GISD7-211910007PS10Q001	02	Page: 22 of 112
	MMTE Document NO:	KGMMUG00L1001		

P&ID Sheet No.: M5-022

Line No.	Service	From	To	Des. Flow Rate(Nm3 m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
40-NG-02251-C6	NATURAL GAS	200-NG-02204-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02252-C6	NATURAL GAS	200-NG-02204-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02253-C6	NATURAL GAS	200-NG-02204-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02254-C6	NATURAL GAS	200-NG-02204-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02255-C6	NATURAL GAS	200-NG-02204-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02256-C6	NATURAL GAS	200-NG-02204-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02257-C6	NATURAL GAS	200-NG-02204-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02258-C6	NATURAL GAS	200-NG-02204-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02259-C6	NATURAL GAS	200-NG-02204-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02260-C6	NATURAL GAS	200-NG-02204-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02261-C6	NATURAL GAS	200-NG-02204-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02262-C6	NATURAL GAS	200-NG-02204-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02263-C6	NATURAL GAS	200-NG-02204-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02264-C6	NATURAL GAS	200-NG-02205-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02265-C6	NATURAL GAS	200-NG-02205-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02266-C6	NATURAL GAS	200-NG-02205-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02267-C6	NATURAL GAS	200-NG-02205-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02268-C6	NATURAL GAS	200-NG-02205-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02269-C6	NATURAL GAS	200-NG-02205-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02270-C6	NATURAL GAS	200-NG-02205-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02271-C6	NATURAL GAS	200-NG-02205-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02272-C6	NATURAL GAS	200-NG-02205-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02273-C6	NATURAL GAS	200-NG-02205-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02274-C6	NATURAL GAS	200-NG-02205-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02275-C6	NATURAL GAS	200-NG-02205-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021





# KOWSAR GISD

## MEGA MODULE PROJECT



DOCUMENT TITLE	Document No:		Rev.	DATE: Apr.2015
Line List	Client Document NO:	GISD7-211910007PS10Q001	02	Page: 23 of 112
	MMTE Document NO:	KGMMUG00L1001		

P&ID Sheet No.: M5-022											
Line No.	Service	From	To	Des. Flow Rate(Nm3 m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
40-NG-02276-C6	NATURAL GAS	200-NG-02205-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02277-C6	NATURAL GAS	200-NG-02205-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02278-C6	NATURAL GAS	200-NG-02205-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02279-C6	NATURAL GAS	200-NG-02205-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02280-C6	NATURAL GAS	200-NG-02205-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
40-NG-02281-C6	NATURAL GAS	200-NG-02205-C6	AUXILIARY BURNER	72.20	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
100-AA-02210-C4	AUXILIARY AIR	350-AA-02206-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02211-C4	AUXILIARY AIR	350-AA-02206-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02212-C4	AUXILIARY AIR	350-AA-02206-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02213-C4	AUXILIARY AIR	350-AA-02206-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02214-C4	AUXILIARY AIR	350-AA-02206-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02215-C4	AUXILIARY AIR	350-AA-02206-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02216-C4	AUXILIARY AIR	350-AA-02206-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02217-C4	AUXILIARY AIR	350-AA-02206-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02218-C4	AUXILIARY AIR	350-AA-02206-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02219-C4	AUXILIARY AIR	350-AA-02206-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02220-C4	AUXILIARY AIR	350-AA-02206-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02221-C4	AUXILIARY AIR	350-AA-02206-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02222-C4	AUXILIARY AIR	350-AA-02206-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02223-C4	AUXILIARY AIR	350-AA-02206-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02224-C4	AUXILIARY AIR	350-AA-02206-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02225-C4	AUXILIARY AIR	350-AA-02206-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02226-C4	AUXILIARY AIR	350-AA-02206-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02227-C4	AUXILIARY AIR	350-AA-02206-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02228-C4	AUXILIARY AIR	350-AA-02207-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012

# KOWSAR GISD

## MEGA MODULE PROJECT



DOCUMENT TITLE	Document No:		Rev.	DATE: Apr.2015
Line List	Client Document NO:	GISD7-211910007PS10Q001	02	Page: 24 of 112
	MMTE Document NO:	KGMMUG00L1001		

P&ID Sheet No.: M5-022

Line No.	Service	From	To	Des. Flow Rate(Nm3 m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
100-AA-02229-C4	AUXILIARY AIR	350-AA-02207-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02230-C4	AUXILIARY AIR	350-AA-02207-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02231-C4	AUXILIARY AIR	350-AA-02207-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02232-C4	AUXILIARY AIR	350-AA-02207-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02233-C4	AUXILIARY AIR	350-AA-02207-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02234-C4	AUXILIARY AIR	350-AA-02207-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02235-C4	AUXILIARY AIR	350-AA-02207-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02236-C4	AUXILIARY AIR	350-AA-02207-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02237-C4	AUXILIARY AIR	350-AA-02207-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02238-C4	AUXILIARY AIR	350-AA-02207-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02239-C4	AUXILIARY AIR	350-AA-02207-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02240-C4	AUXILIARY AIR	350-AA-02207-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02241-C4	AUXILIARY AIR	350-AA-02207-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02242-C4	AUXILIARY AIR	350-AA-02207-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02243-C4	AUXILIARY AIR	350-AA-02207-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02244-C4	AUXILIARY AIR	350-AA-02207-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02245-C4	AUXILIARY AIR	350-AA-02207-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02246-C4	AUXILIARY AIR	350-AA-02208-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02247-C4	AUXILIARY AIR	350-AA-02208-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02248-C4	AUXILIARY AIR	350-AA-02208-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02249-C4	AUXILIARY AIR	350-AA-02208-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02250-C4	AUXILIARY AIR	350-AA-02208-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02251-C4	AUXILIARY AIR	350-AA-02208-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02252-C4	AUXILIARY AIR	350-AA-02208-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02253-C4	AUXILIARY AIR	350-AA-02208-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012

# KOWSAR GISD

## MEGA MODULE PROJECT



DOCUMENT TITLE	Document No:		Rev.	DATE: Apr.2015
Line List	Client Document NO:	GISD7-211910007PS10Q001	02	Page: 25 of 112
	MMTE Document NO:	KGMMUG00L1001		

P&ID Sheet No.: M5-022

Line No.	Service	From	To	Des. Flow Rate(Nm3 m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
100-AA-02254-C4	AUXILIARY AIR	350-AA-02208-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02255-C4	AUXILIARY AIR	350-AA-02208-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02256-C4	AUXILIARY AIR	350-AA-02208-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02257-C4	AUXILIARY AIR	350-AA-02208-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02258-C4	AUXILIARY AIR	350-AA-02208-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02259-C4	AUXILIARY AIR	350-AA-02208-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02260-C4	AUXILIARY AIR	350-AA-02208-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02261-C4	AUXILIARY AIR	350-AA-02208-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02262-C4	AUXILIARY AIR	350-AA-02208-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02263-C4	AUXILIARY AIR	350-AA-02208-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02264-C4	AUXILIARY AIR	350-AA-02209-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02265-C4	AUXILIARY AIR	350-AA-02209-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02266-C4	AUXILIARY AIR	350-AA-02209-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02267-C4	AUXILIARY AIR	350-AA-02209-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02268-C4	AUXILIARY AIR	350-AA-02209-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02269-C4	AUXILIARY AIR	350-AA-02209-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02270-C4	AUXILIARY AIR	350-AA-02209-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02271-C4	AUXILIARY AIR	350-AA-02209-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02272-C4	AUXILIARY AIR	350-AA-02209-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02273-C4	AUXILIARY AIR	350-AA-02209-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02274-C4	AUXILIARY AIR	350-AA-02209-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02275-C4	AUXILIARY AIR	350-AA-02209-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02276-C4	AUXILIARY AIR	350-AA-02209-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02277-C4	AUXILIARY AIR	350-AA-02209-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02278-C4	AUXILIARY AIR	350-AA-02209-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02279-C4	AUXILIARY AIR	350-AA-02209-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02280-C4	AUXILIARY AIR	350-AA-02209-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
100-AA-02281-C4	AUXILIARY AIR	350-AA-02209-C4	AUXILIARY BURNER	695.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012

# KOWSAR GISD

## MEGA MODULE PROJECT



DOCUMENT TITLE	Document No:		Rev.	DATE: Apr.2015
Line List	Client Document NO:	GISD7-211910007PS10Q001	02	Page: 26 of 112
	MMTE Document NO:	KGMMUG00L1001		

P&ID Sheet No.: M5-023

Line No.	Service	From	To	Des. Flow Rate(Nm3 m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
400-TGF-23001-C2	TOP GAS FUEL	1200-TGF-03303-C2	MAIN BURNERS TYPE B	13000.00	60.00	39.00	0.588	0.234	OP/PL	-	NO.2/1021
500-TGF-23002-C2	TOP GAS FUEL	1200-TGF-03303-C2	MAIN BURNERS TYPE A	26000.00	60.00	39.00	0.588	0.234	OP/PL	-	NO.2/1021
500-TGF-23003-C2	TOP GAS FUEL	1200-TGF-03303-C2	MAIN BURNERS TYPE A	26000.00	60.00	39.00	0.588	0.234	OP/PL	-	NO.2/1021
500-TGF-23004-C2	TOP GAS FUEL	1200-TGF-03303-C2	MAIN BURNERS TYPE A	26000.00	60.00	39.00	0.588	0.234	OP/PL	-	NO.2/1021
500-TGF-23005-C2	TOP GAS FUEL	1200-TGF-03303-C2	MAIN BURNERS TYPE A	26000.00	60.00	39.00	0.588	0.234	OP/PL	-	NO.2/1021
500-TGF-23006-C2	TOP GAS FUEL	1200-TGF-03303-C2	MAIN BURNERS TYPE A	26000.00	60.00	39.00	0.588	0.234	OP/PL	-	NO.2/1021
400-TGF-23007-C2	TOP GAS FUEL	1200-TGF-03303-C2	MAIN BURNERS TYPE B	13000.00	60.00	39.00	0.588	0.234	OP/PL	-	NO.2/1021
2430-CA-23008-C3	COMBUSTION AIR	H.C AIR FROM PREHEATERS 1,2	MAIN BURNERS	379888.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
1000-CA-23009-C3	COMBUSTION AIR	2430-CA-23008-C3	MAIN BURNERS TYPE B	31660.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
1300-CA-23010-C3	COMBUSTION AIR	2430-CA-23008-C3	MAIN BURNERS TYPE A	63320.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
1300-CA-23011-C3	COMBUSTION AIR	2430-CA-23008-C3	MAIN BURNERS TYPE A	63320.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
1300-CA-23012-C3	COMBUSTION AIR	2430-CA-23008-C3	MAIN BURNERS TYPE A	63320.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
1300-CA-23013-C3	COMBUSTION AIR	2430-CA-23008-C3	MAIN BURNERS TYPE A	63320.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
1300-CA-23014-C3	COMBUSTION AIR	2430-CA-23008-C3	MAIN BURNERS TYPE A	63320.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
1000-CA-23015-C3	COMBUSTION AIR	2430-CA-23008-C3	MAIN BURNERS TYPE B	31660.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
65-TGF-23016-C8	TOP GAS FUEL	400-TGF-23001-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23017-C8	TOP GAS FUEL	400-TGF-23001-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23018-C8	TOP GAS FUEL	400-TGF-23001-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23019-C8	TOP GAS FUEL	400-TGF-23001-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23020-C8	TOP GAS FUEL	400-TGF-23001-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23021-C8	TOP GAS FUEL	400-TGF-23001-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23022-C8	TOP GAS FUEL	400-TGF-23001-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23023-C8	TOP GAS FUEL	400-TGF-23001-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23024-C8	TOP GAS FUEL	400-TGF-23001-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23025-C8	TOP GAS FUEL	400-TGF-23001-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23026-C8	TOP GAS FUEL	400-TGF-23001-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23027-C8	TOP GAS FUEL	400-TGF-23001-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23028-C8	TOP GAS FUEL	400-TGF-23001-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23029-C8	TOP GAS FUEL	400-TGF-23001-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23030-C8	TOP GAS FUEL	400-TGF-23001-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021

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## MEGA MODULE PROJECT



DOCUMENT TITLE	Document No:		Rev.	DATE: Apr.2015
Line List	Client Document NO:	GISD7-211910007PS10Q001	02	Page: 27 of 112
	MMTE Document NO:	KGMMUG00L1001		

P&ID Sheet No.: M5-023												
Line No.	Service	From	To	Des. Flow Rate(Nm3 ,m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code	
65-TGF-23031-C8	TOP GAS FUEL	400-TGF-23001-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021	
65-TGF-23032-C8	TOP GAS FUEL	400-TGF-23001-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021	
65-TGF-23033-C8	TOP GAS FUEL	400-TGF-23001-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021	
65-TGF-23034-C8	TOP GAS FUEL	400-TGF-23001-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021	
65-TGF-23035-C8	TOP GAS FUEL	400-TGF-23001-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021	
65-TGF-23036-C8	TOP GAS FUEL	400-TGF-23001-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021	
65-TGF-23037-C8	TOP GAS FUEL	400-TGF-23001-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021	
65-TGF-23038-C8	TOP GAS FUEL	400-TGF-23001-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021	
65-TGF-23039-C8	TOP GAS FUEL	400-TGF-23001-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021	
65-TGF-23040-C8	TOP GAS FUEL	400-TGF-23001-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021	
65-TGF-23041-C8	TOP GAS FUEL	400-TGF-23001-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021	
65-TGF-23042-C8	TOP GAS FUEL	400-TGF-23001-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021	
65-TGF-23043-C8	TOP GAS FUEL	400-TGF-23001-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021	
65-TGF-23044-C8	TOP GAS FUEL	400-TGF-23001-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021	
65-TGF-23045-C8	TOP GAS FUEL	400-TGF-23001-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021	
65-TGF-23046-C8	TOP GAS FUEL	400-TGF-23001-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021	
65-TGF-23047-C8	TOP GAS FUEL	400-TGF-23001-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021	
65-TGF-23048-C8	TOP GAS FUEL	400-TGF-23001-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021	
65-TGF-23049-C8	TOP GAS FUEL	400-TGF-23001-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021	
65-TGF-23050-C8	TOP GAS FUEL	400-TGF-23001-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021	
65-TGF-23051-C8	TOP GAS FUEL	400-TGF-23001-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021	
100-TGF-23052-C8	TOP GAS FUEL	500-TGF-23002-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021	
100-TGF-23053-C8	TOP GAS FUEL	500-TGF-23002-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021	
100-TGF-23054-C8	TOP GAS FUEL	500-TGF-23002-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021	
100-TGF-23055-C8	TOP GAS FUEL	500-TGF-23002-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021	
100-TGF-23056-C8	TOP GAS FUEL	500-TGF-23002-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021	
100-TGF-23057-C8	TOP GAS FUEL	500-TGF-23002-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021	
100-TGF-23058-C8	TOP GAS FUEL	500-TGF-23002-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021	
100-TGF-23059-C8	TOP GAS FUEL	500-TGF-23002-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021	
100-TGF-23060-C8	TOP GAS FUEL	500-TGF-23002-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021	

# KOWSAR GISD

## MEGA MODULE PROJECT



DOCUMENT TITLE	Document No:		Rev.	DATE: Apr.2015
Line List	Client Document NO:	GISD7-211910007PS10Q001	02	Page: 28 of 112
	MMTE Document NO:	KGMMUG00L1001		

P&ID Sheet No.: M5-023

Line No.	Service	From	To	Des. Flow Rate(Nm3 _m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
100-TGF-23061-C8	TOP GAS FUEL	500-TGF-23002-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23062-C8	TOP GAS FUEL	500-TGF-23002-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23063-C8	TOP GAS FUEL	500-TGF-23002-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23064-C8	TOP GAS FUEL	500-TGF-23002-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23065-C8	TOP GAS FUEL	500-TGF-23002-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23066-C8	TOP GAS FUEL	500-TGF-23002-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23067-C8	TOP GAS FUEL	500-TGF-23002-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23068-C8	TOP GAS FUEL	500-TGF-23002-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23069-C8	TOP GAS FUEL	500-TGF-23002-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23070-C8	TOP GAS FUEL	500-TGF-23002-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23071-C8	TOP GAS FUEL	500-TGF-23002-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23072-C8	TOP GAS FUEL	500-TGF-23002-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23073-C8	TOP GAS FUEL	500-TGF-23002-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23074-C8	TOP GAS FUEL	500-TGF-23002-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23075-C8	TOP GAS FUEL	500-TGF-23002-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23076-C8	TOP GAS FUEL	500-TGF-23002-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23077-C8	TOP GAS FUEL	500-TGF-23002-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23078-C8	TOP GAS FUEL	500-TGF-23002-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23079-C8	TOP GAS FUEL	500-TGF-23002-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23080-C8	TOP GAS FUEL	500-TGF-23002-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23081-C8	TOP GAS FUEL	500-TGF-23002-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23082-C8	TOP GAS FUEL	500-TGF-23002-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23083-C8	TOP GAS FUEL	500-TGF-23002-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23084-C8	TOP GAS FUEL	500-TGF-23002-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23085-C8	TOP GAS FUEL	500-TGF-23002-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23086-C8	TOP GAS FUEL	500-TGF-23002-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23087-C8	TOP GAS FUEL	500-TGF-23002-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23088-C8	TOP GAS FUEL	500-TGF-23003-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23089-C8	TOP GAS FUEL	500-TGF-23003-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23090-C8	TOP GAS FUEL	500-TGF-23003-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021

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## MEGA MODULE PROJECT



DOCUMENT TITLE		Document No:	Rev.	DATE: Apr.2015
Line List	Client Document NO:	GISD7-211910007PS10Q001	02	Page: 29 of 112
	MMTE Document NO:	KGMMUG00L1001		

P&ID Sheet No.: M5-023

Line No.	Service	From	To	Des. Flow Rate(Nm3 _m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
100-TGF-23091-C8	TOP GAS FUEL	500-TGF-23003-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23092-C8	TOP GAS FUEL	500-TGF-23003-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23093-C8	TOP GAS FUEL	500-TGF-23003-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23094-C8	TOP GAS FUEL	500-TGF-23003-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23095-C8	TOP GAS FUEL	500-TGF-23003-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23096-C8	TOP GAS FUEL	500-TGF-23003-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23097-C8	TOP GAS FUEL	500-TGF-23003-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23098-C8	TOP GAS FUEL	500-TGF-23003-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23099-C8	TOP GAS FUEL	500-TGF-23003-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23100-C8	TOP GAS FUEL	500-TGF-23003-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23101-C8	TOP GAS FUEL	500-TGF-23003-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23102-C8	TOP GAS FUEL	500-TGF-23003-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23103-C8	TOP GAS FUEL	500-TGF-23003-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23104-C8	TOP GAS FUEL	500-TGF-23003-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23105-C8	TOP GAS FUEL	500-TGF-23003-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23106-C8	TOP GAS FUEL	500-TGF-23003-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23107-C8	TOP GAS FUEL	500-TGF-23003-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23108-C8	TOP GAS FUEL	500-TGF-23003-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23109-C8	TOP GAS FUEL	500-TGF-23003-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23110-C8	TOP GAS FUEL	500-TGF-23003-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23111-C8	TOP GAS FUEL	500-TGF-23003-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23112-C8	TOP GAS FUEL	500-TGF-23003-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23113-C8	TOP GAS FUEL	500-TGF-23003-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23114-C8	TOP GAS FUEL	500-TGF-23003-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23115-C8	TOP GAS FUEL	500-TGF-23003-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23116-C8	TOP GAS FUEL	500-TGF-23003-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23117-C8	TOP GAS FUEL	500-TGF-23003-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23118-C8	TOP GAS FUEL	500-TGF-23003-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23119-C8	TOP GAS FUEL	500-TGF-23003-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23120-C8	TOP GAS FUEL	500-TGF-23003-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021

# KOWSAR GISD

## MEGA MODULE PROJECT



DOCUMENT TITLE	Document No:		Rev.	DATE: Apr.2015
Line List	Client Document NO:	GISD7-211910007PS10Q001	02	Page: 30 of 112
	MMTE Document NO:	KGMMUG00L1001		

P&ID Sheet No.: M5-023

Line No.	Service	From	To	Des. Flow Rate(Nm3 _m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
100-TGF-23121-C8	TOP GAS FUEL	500-TGF-23003-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23122-C8	TOP GAS FUEL	500-TGF-23003-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23123-C8	TOP GAS FUEL	500-TGF-23003-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23124-C8	TOP GAS FUEL	500-TGF-23004-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23125-C8	TOP GAS FUEL	500-TGF-23004-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23126-C8	TOP GAS FUEL	500-TGF-23004-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23127-C8	TOP GAS FUEL	500-TGF-23004-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23128-C8	TOP GAS FUEL	500-TGF-23004-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23129-C8	TOP GAS FUEL	500-TGF-23004-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23130-C8	TOP GAS FUEL	500-TGF-23004-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23131-C8	TOP GAS FUEL	500-TGF-23004-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23132-C8	TOP GAS FUEL	500-TGF-23004-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23133-C8	TOP GAS FUEL	500-TGF-23004-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23134-C8	TOP GAS FUEL	500-TGF-23004-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23135-C8	TOP GAS FUEL	500-TGF-23004-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23136-C8	TOP GAS FUEL	500-TGF-23004-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23137-C8	TOP GAS FUEL	500-TGF-23004-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23138-C8	TOP GAS FUEL	500-TGF-23004-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23139-C8	TOP GAS FUEL	500-TGF-23004-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23140-C8	TOP GAS FUEL	500-TGF-23004-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23141-C8	TOP GAS FUEL	500-TGF-23004-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23142-C8	TOP GAS FUEL	500-TGF-23004-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23143-C8	TOP GAS FUEL	500-TGF-23004-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23144-C8	TOP GAS FUEL	500-TGF-23004-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23145-C8	TOP GAS FUEL	500-TGF-23004-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23146-C8	TOP GAS FUEL	500-TGF-23004-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23147-C8	TOP GAS FUEL	500-TGF-23004-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23148-C8	TOP GAS FUEL	500-TGF-23004-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23149-C8	TOP GAS FUEL	500-TGF-23004-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23150-C8	TOP GAS FUEL	500-TGF-23004-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021



# KOWSAR GISD

## MEGA MODULE PROJECT



<b>DOCUMENT TITLE</b>		<b>Document No:</b>	<b>Rev.</b>	<b>DATE: Apr.2015</b>
Line List	Client Document NO:	GISD7-211910007PS10Q001	02	Page: 31 of 112
	MMTE Document NO:	KGMMUG00L1001		

P&ID Sheet No.: M5-023

Line No.	Service	From	To	Des. Flow Rate(Nm3 m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
100-TGF-23151-C8	TOP GAS FUEL	500-TGF-23004-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23152-C8	TOP GAS FUEL	500-TGF-23004-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23153-C8	TOP GAS FUEL	500-TGF-23004-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23154-C8	TOP GAS FUEL	500-TGF-23004-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23155-C8	TOP GAS FUEL	500-TGF-23004-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23156-C8	TOP GAS FUEL	500-TGF-23004-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23157-C8	TOP GAS FUEL	500-TGF-23004-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23158-C8	TOP GAS FUEL	500-TGF-23004-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23159-C8	TOP GAS FUEL	500-TGF-23004-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23160-C8	TOP GAS FUEL	500-TGF-23005-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23161-C8	TOP GAS FUEL	500-TGF-23005-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23162-C8	TOP GAS FUEL	500-TGF-23005-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23163-C8	TOP GAS FUEL	500-TGF-23005-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23164-C8	TOP GAS FUEL	500-TGF-23005-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23165-C8	TOP GAS FUEL	500-TGF-23005-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23166-C8	TOP GAS FUEL	500-TGF-23005-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23167-C8	TOP GAS FUEL	500-TGF-23005-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23168-C8	TOP GAS FUEL	500-TGF-23005-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23169-C8	TOP GAS FUEL	500-TGF-23005-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23170-C8	TOP GAS FUEL	500-TGF-23005-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23171-C8	TOP GAS FUEL	500-TGF-23005-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23172-C8	TOP GAS FUEL	500-TGF-23005-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23173-C8	TOP GAS FUEL	500-TGF-23005-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23174-C8	TOP GAS FUEL	500-TGF-23005-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23175-C8	TOP GAS FUEL	500-TGF-23005-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23176-C8	TOP GAS FUEL	500-TGF-23005-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23177-C8	TOP GAS FUEL	500-TGF-23005-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23178-C8	TOP GAS FUEL	500-TGF-23005-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23179-C8	TOP GAS FUEL	500-TGF-23005-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23180-C8	TOP GAS FUEL	500-TGF-23005-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021

# KOWSAR GISD

## MEGA MODULE PROJECT



DOCUMENT TITLE	Document No:		Rev.	DATE: Apr.2015
Line List	Client Document NO:	GISD7-211910007PS10Q001	02	Page: 32 of 112
	MMTE Document NO:	KGMMUG00L1001		

P&ID Sheet No.: M5-023

Line No.	Service	From	To	Des. Flow Rate(Nm3 m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
100-TGF-23181-C8	TOP GAS FUEL	500-TGF-23005-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23182-C8	TOP GAS FUEL	500-TGF-23005-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23183-C8	TOP GAS FUEL	500-TGF-23005-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23184-C8	TOP GAS FUEL	500-TGF-23005-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23185-C8	TOP GAS FUEL	500-TGF-23005-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23186-C8	TOP GAS FUEL	500-TGF-23005-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23187-C8	TOP GAS FUEL	500-TGF-23005-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23188-C8	TOP GAS FUEL	500-TGF-23005-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23189-C8	TOP GAS FUEL	500-TGF-23005-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23190-C8	TOP GAS FUEL	500-TGF-23005-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23191-C8	TOP GAS FUEL	500-TGF-23005-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23192-C8	TOP GAS FUEL	500-TGF-23005-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23193-C8	TOP GAS FUEL	500-TGF-23005-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23194-C8	TOP GAS FUEL	500-TGF-23005-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23195-C8	TOP GAS FUEL	500-TGF-23005-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23196-C8	TOP GAS FUEL	500-TGF-23006-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23197-C8	TOP GAS FUEL	500-TGF-23006-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23198-C8	TOP GAS FUEL	500-TGF-23006-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23199-C8	TOP GAS FUEL	500-TGF-23006-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23200-C8	TOP GAS FUEL	500-TGF-23006-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23201-C8	TOP GAS FUEL	500-TGF-23006-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23202-C8	TOP GAS FUEL	500-TGF-23006-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23203-C8	TOP GAS FUEL	500-TGF-23006-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23204-C8	TOP GAS FUEL	500-TGF-23006-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23205-C8	TOP GAS FUEL	500-TGF-23006-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23206-C8	TOP GAS FUEL	500-TGF-23006-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23207-C8	TOP GAS FUEL	500-TGF-23006-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23208-C8	TOP GAS FUEL	500-TGF-23006-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23209-C8	TOP GAS FUEL	500-TGF-23006-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23210-C8	TOP GAS FUEL	500-TGF-23006-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021

# KOWSAR GISD

## MEGA MODULE PROJECT



<b>DOCUMENT TITLE</b>		<b>Document No:</b>	<b>Rev.</b>	<b>DATE: Apr.2015</b>
Line List	Client Document NO:	GISD7-211910007PS10Q001	02	Page: 33 of 112
	MMTE Document NO:	KGMMUG00L1001		

P&ID Sheet No.: M5-023

Line No.	Service	From	To	Des. Flow Rate(Nm3 m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
100-TGF-23211-C8	TOP GAS FUEL	500-TGF-23006-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23212-C8	TOP GAS FUEL	500-TGF-23006-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23213-C8	TOP GAS FUEL	500-TGF-23006-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23214-C8	TOP GAS FUEL	500-TGF-23006-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23215-C8	TOP GAS FUEL	500-TGF-23006-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23216-C8	TOP GAS FUEL	500-TGF-23006-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23217-C8	TOP GAS FUEL	500-TGF-23006-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23218-C8	TOP GAS FUEL	500-TGF-23006-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23219-C8	TOP GAS FUEL	500-TGF-23006-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23220-C8	TOP GAS FUEL	500-TGF-23006-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23221-C8	TOP GAS FUEL	500-TGF-23006-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23222-C8	TOP GAS FUEL	500-TGF-23006-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23223-C8	TOP GAS FUEL	500-TGF-23006-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23224-C8	TOP GAS FUEL	500-TGF-23006-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23225-C8	TOP GAS FUEL	500-TGF-23006-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23226-C8	TOP GAS FUEL	500-TGF-23006-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23227-C8	TOP GAS FUEL	500-TGF-23006-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23228-C8	TOP GAS FUEL	500-TGF-23006-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23229-C8	TOP GAS FUEL	500-TGF-23006-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23230-C8	TOP GAS FUEL	500-TGF-23006-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
100-TGF-23231-C8	TOP GAS FUEL	500-TGF-23006-C2	MAIN BURNERS TYPE A	722.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23232-C8	TOP GAS FUEL	400-TGF-23007-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23233-C8	TOP GAS FUEL	400-TGF-23007-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23234-C8	TOP GAS FUEL	400-TGF-23007-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23235-C8	TOP GAS FUEL	400-TGF-23007-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23236-C8	TOP GAS FUEL	400-TGF-23007-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23237-C8	TOP GAS FUEL	400-TGF-23007-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23238-C8	TOP GAS FUEL	400-TGF-23007-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23239-C8	TOP GAS FUEL	400-TGF-23007-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23240-C8	TOP GAS FUEL	400-TGF-23007-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021

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## MEGA MODULE PROJECT



DOCUMENT TITLE		Document No:	Rev.	DATE: Apr.2015
Line List	Client Document NO:	GISD7-211910007PS10Q001	02	Page: 34 of 112
	MMTE Document NO:	KGMMUG00L1001		

P&ID Sheet No.: M5-023

Line No.	Service	From	To	Des. Flow Rate(Nm3 m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
65-TGF-23241-C8	TOP GAS FUEL	400-TGF-23007-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23242-C8	TOP GAS FUEL	400-TGF-23007-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23243-C8	TOP GAS FUEL	400-TGF-23007-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23244-C8	TOP GAS FUEL	400-TGF-23007-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23245-C8	TOP GAS FUEL	400-TGF-23007-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23246-C8	TOP GAS FUEL	400-TGF-23007-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23247-C8	TOP GAS FUEL	400-TGF-23007-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23248-C8	TOP GAS FUEL	400-TGF-23007-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23249-C8	TOP GAS FUEL	400-TGF-23007-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23250-C8	TOP GAS FUEL	400-TGF-23007-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23251-C8	TOP GAS FUEL	400-TGF-23007-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23252-C8	TOP GAS FUEL	400-TGF-23007-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23253-C8	TOP GAS FUEL	400-TGF-23007-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23254-C8	TOP GAS FUEL	400-TGF-23007-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23255-C8	TOP GAS FUEL	400-TGF-23007-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23256-C8	TOP GAS FUEL	400-TGF-23007-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23257-C8	TOP GAS FUEL	400-TGF-23007-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23258-C8	TOP GAS FUEL	400-TGF-23007-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23259-C8	TOP GAS FUEL	400-TGF-23007-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23260-C8	TOP GAS FUEL	400-TGF-23007-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23261-C8	TOP GAS FUEL	400-TGF-23007-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23262-C8	TOP GAS FUEL	400-TGF-23007-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23263-C8	TOP GAS FUEL	400-TGF-23007-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23264-C8	TOP GAS FUEL	400-TGF-23007-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23265-C8	TOP GAS FUEL	400-TGF-23007-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23266-C8	TOP GAS FUEL	400-TGF-23007-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
65-TGF-23267-C8	TOP GAS FUEL	400-TGF-23007-C2	MAIN BURNERS TYPE B	361.00	60.00	39.00	0.062	0.019	OP/PL	-	NO.2/1021
350-CA-23268-C3	COMBUSTION AIR	1000-CA-23009-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23269-C3	COMBUSTION AIR	1000-CA-23009-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23270-C3	COMBUSTION AIR	1000-CA-23009-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001

# KOWSAR GISD

## MEGA MODULE PROJECT



DOCUMENT TITLE	Document No:		Rev.	DATE: Apr.2015
Line List	Client Document NO:	GISD7-211910007PS10Q001	02	Page: 35 of 112
	MMTE Document NO:	KGMMUG00L1001		

P&ID Sheet No.: M5-023

Line No.	Service	From	To	Des. Flow Rate(Nm3 m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
350-CA-23271-C3	COMBUSTION AIR	1000-CA-23009-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23272-C3	COMBUSTION AIR	1000-CA-23009-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23273-C3	COMBUSTION AIR	1000-CA-23009-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23274-C3	COMBUSTION AIR	1000-CA-23009-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23275-C3	COMBUSTION AIR	1000-CA-23009-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23276-C3	COMBUSTION AIR	1000-CA-23009-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23277-C3	COMBUSTION AIR	1000-CA-23009-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23278-C3	COMBUSTION AIR	1000-CA-23009-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23279-C3	COMBUSTION AIR	1000-CA-23009-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23280-C3	COMBUSTION AIR	1000-CA-23009-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23281-C3	COMBUSTION AIR	1000-CA-23009-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23282-C3	COMBUSTION AIR	1000-CA-23009-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23283-C3	COMBUSTION AIR	1000-CA-23009-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23284-C3	COMBUSTION AIR	1000-CA-23009-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23285-C3	COMBUSTION AIR	1000-CA-23009-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23286-C3	COMBUSTION AIR	1000-CA-23009-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23287-C3	COMBUSTION AIR	1000-CA-23009-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23288-C3	COMBUSTION AIR	1000-CA-23009-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23289-C3	COMBUSTION AIR	1000-CA-23009-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23290-C3	COMBUSTION AIR	1000-CA-23009-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23291-C3	COMBUSTION AIR	1000-CA-23009-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23292-C3	COMBUSTION AIR	1000-CA-23009-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23293-C3	COMBUSTION AIR	1000-CA-23009-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23294-C3	COMBUSTION AIR	1000-CA-23009-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23295-C3	COMBUSTION AIR	1000-CA-23009-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23296-C3	COMBUSTION AIR	1000-CA-23009-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23297-C3	COMBUSTION AIR	1000-CA-23009-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23298-C3	COMBUSTION AIR	1000-CA-23009-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23299-C3	COMBUSTION AIR	1000-CA-23009-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23300-C3	COMBUSTION AIR	1000-CA-23009-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001

# KOWSAR GISD

## MEGA MODULE PROJECT



DOCUMENT TITLE	Document No:		Rev.	DATE: Apr.2015
Line List	Client Document NO:	GISD7-211910007PS10Q001	02	Page: 36 of 112
	MMTE Document NO:	KGMMUG00L1001		

P&ID Sheet No.: M5-023

Line No.	Service	From	To	Des. Flow Rate(Nm3 m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
350-CA-23301-C3	COMBUSTION AIR	1000-CA-23009-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23302-C3	COMBUSTION AIR	1000-CA-23009-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23303-C3	COMBUSTION AIR	1000-CA-23009-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23304-C3	COMBUSTION AIR	1300-CA-23010-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23305-C3	COMBUSTION AIR	1300-CA-23010-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23306-C3	COMBUSTION AIR	1300-CA-23010-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23307-C3	COMBUSTION AIR	1300-CA-23010-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23308-C3	COMBUSTION AIR	1300-CA-23010-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23309-C3	COMBUSTION AIR	1300-CA-23010-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23310-C3	COMBUSTION AIR	1300-CA-23010-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23311-C3	COMBUSTION AIR	1300-CA-23010-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23312-C3	COMBUSTION AIR	1300-CA-23010-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23313-C3	COMBUSTION AIR	1300-CA-23010-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23314-C3	COMBUSTION AIR	1300-CA-23010-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23315-C3	COMBUSTION AIR	1300-CA-23010-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23316-C3	COMBUSTION AIR	1300-CA-23010-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23317-C3	COMBUSTION AIR	1300-CA-23010-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23318-C3	COMBUSTION AIR	1300-CA-23010-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23319-C3	COMBUSTION AIR	1300-CA-23010-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23320-C3	COMBUSTION AIR	1300-CA-23010-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23321-C3	COMBUSTION AIR	1300-CA-23010-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23322-C3	COMBUSTION AIR	1300-CA-23010-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23323-C3	COMBUSTION AIR	1300-CA-23010-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23324-C3	COMBUSTION AIR	1300-CA-23010-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23325-C3	COMBUSTION AIR	1300-CA-23010-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23326-C3	COMBUSTION AIR	1300-CA-23010-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23327-C3	COMBUSTION AIR	1300-CA-23010-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23328-C3	COMBUSTION AIR	1300-CA-23010-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23329-C3	COMBUSTION AIR	1300-CA-23010-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23330-C3	COMBUSTION AIR	1300-CA-23010-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001

# KOWSAR GISD

## MEGA MODULE PROJECT



DOCUMENT TITLE	Document No:		Rev.	DATE: Apr.2015
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	MMTE Document NO:	KGMMUG00L1001		

P&ID Sheet No.: M5-023

Line No.	Service	From	To	Des. Flow Rate(Nm3 m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
350-CA-23331-C3	COMBUSTION AIR	1300-CA-23010-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23332-C3	COMBUSTION AIR	1300-CA-23010-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23333-C3	COMBUSTION AIR	1300-CA-23010-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23334-C3	COMBUSTION AIR	1300-CA-23010-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23335-C3	COMBUSTION AIR	1300-CA-23010-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23336-C3	COMBUSTION AIR	1300-CA-23010-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23337-C3	COMBUSTION AIR	1300-CA-23010-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23338-C3	COMBUSTION AIR	1300-CA-23010-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23339-C3	COMBUSTION AIR	1300-CA-23010-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23340-C3	COMBUSTION AIR	1300-CA-23011-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23341-C3	COMBUSTION AIR	1300-CA-23011-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23342-C3	COMBUSTION AIR	1300-CA-23011-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23343-C3	COMBUSTION AIR	1300-CA-23011-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23344-C3	COMBUSTION AIR	1300-CA-23011-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23345-C3	COMBUSTION AIR	1300-CA-23011-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23346-C3	COMBUSTION AIR	1300-CA-23011-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23347-C3	COMBUSTION AIR	1300-CA-23011-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23348-C3	COMBUSTION AIR	1300-CA-23011-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23349-C3	COMBUSTION AIR	1300-CA-23011-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23350-C3	COMBUSTION AIR	1300-CA-23011-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23351-C3	COMBUSTION AIR	1300-CA-23011-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23352-C3	COMBUSTION AIR	1300-CA-23011-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23353-C3	COMBUSTION AIR	1300-CA-23011-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23354-C3	COMBUSTION AIR	1300-CA-23011-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23355-C3	COMBUSTION AIR	1300-CA-23011-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23356-C3	COMBUSTION AIR	1300-CA-23011-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23357-C3	COMBUSTION AIR	1300-CA-23011-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23358-C3	COMBUSTION AIR	1300-CA-23011-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23359-C3	COMBUSTION AIR	1300-CA-23011-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23360-C3	COMBUSTION AIR	1300-CA-23011-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001



# KOWSAR GISD

## MEGA MODULE PROJECT



DOCUMENT TITLE	Document No:		Rev.	DATE: Apr.2015
Line List	Client Document NO:	GISD7-211910007PS10Q001	02	Page: 38 of 112
	MMTE Document NO:	KGMMUG00L1001		

P&ID Sheet No.: M5-023

Line No.	Service	From	To	Des. Flow Rate(Nm3 m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
350-CA-23361-C3	COMBUSTION AIR	1300-CA-23011-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23362-C3	COMBUSTION AIR	1300-CA-23011-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23363-C3	COMBUSTION AIR	1300-CA-23011-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23364-C3	COMBUSTION AIR	1300-CA-23011-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23365-C3	COMBUSTION AIR	1300-CA-23011-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23366-C3	COMBUSTION AIR	1300-CA-23011-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23367-C3	COMBUSTION AIR	1300-CA-23011-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23368-C3	COMBUSTION AIR	1300-CA-23011-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23369-C3	COMBUSTION AIR	1300-CA-23011-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23370-C3	COMBUSTION AIR	1300-CA-23011-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23371-C3	COMBUSTION AIR	1300-CA-23011-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23372-C3	COMBUSTION AIR	1300-CA-23011-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23373-C3	COMBUSTION AIR	1300-CA-23011-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23374-C3	COMBUSTION AIR	1300-CA-23011-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23375-C3	COMBUSTION AIR	1300-CA-23011-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23376-C3	COMBUSTION AIR	1300-CA-23012-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23377-C3	COMBUSTION AIR	1300-CA-23012-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23378-C3	COMBUSTION AIR	1300-CA-23012-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23379-C3	COMBUSTION AIR	1300-CA-23012-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23380-C3	COMBUSTION AIR	1300-CA-23012-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23381-C3	COMBUSTION AIR	1300-CA-23012-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23382-C3	COMBUSTION AIR	1300-CA-23012-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23383-C3	COMBUSTION AIR	1300-CA-23012-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23384-C3	COMBUSTION AIR	1300-CA-23012-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23385-C3	COMBUSTION AIR	1300-CA-23012-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23386-C3	COMBUSTION AIR	1300-CA-23012-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23387-C3	COMBUSTION AIR	1300-CA-23012-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23388-C3	COMBUSTION AIR	1300-CA-23012-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23389-C3	COMBUSTION AIR	1300-CA-23012-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23390-C3	COMBUSTION AIR	1300-CA-23012-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001



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DOCUMENT TITLE		Document No:	Rev.	DATE: Apr.2015
Line List	Client Document NO:	GISD7-211910007PS10Q001	02	Page: 39 of 112
	MMTE Document NO:	KGMMUG00L1001		

P&ID Sheet No.: M5-023

Line No.	Service	From	To	Des. Flow Rate(Nm3 m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
350-CA-23391-C3	COMBUSTION AIR	1300-CA-23012-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23392-C3	COMBUSTION AIR	1300-CA-23012-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23393-C3	COMBUSTION AIR	1300-CA-23012-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23394-C3	COMBUSTION AIR	1300-CA-23012-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23395-C3	COMBUSTION AIR	1300-CA-23012-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23396-C3	COMBUSTION AIR	1300-CA-23012-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23397-C3	COMBUSTION AIR	1300-CA-23012-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23398-C3	COMBUSTION AIR	1300-CA-23012-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23399-C3	COMBUSTION AIR	1300-CA-23012-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23400-C3	COMBUSTION AIR	1300-CA-23012-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23401-C3	COMBUSTION AIR	1300-CA-23012-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23402-C3	COMBUSTION AIR	1300-CA-23012-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23403-C3	COMBUSTION AIR	1300-CA-23012-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23404-C3	COMBUSTION AIR	1300-CA-23012-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23405-C3	COMBUSTION AIR	1300-CA-23012-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23406-C3	COMBUSTION AIR	1300-CA-23012-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23407-C3	COMBUSTION AIR	1300-CA-23012-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23408-C3	COMBUSTION AIR	1300-CA-23012-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23409-C3	COMBUSTION AIR	1300-CA-23012-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23410-C3	COMBUSTION AIR	1300-CA-23012-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23411-C3	COMBUSTION AIR	1300-CA-23012-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23412-C3	COMBUSTION AIR	1300-CA-23013-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23413-C3	COMBUSTION AIR	1300-CA-23013-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23414-C3	COMBUSTION AIR	1300-CA-23013-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23415-C3	COMBUSTION AIR	1300-CA-23013-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23416-C3	COMBUSTION AIR	1300-CA-23013-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23417-C3	COMBUSTION AIR	1300-CA-23013-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23418-C3	COMBUSTION AIR	1300-CA-23013-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23419-C3	COMBUSTION AIR	1300-CA-23013-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23420-C3	COMBUSTION AIR	1300-CA-23013-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001

# KOWSAR GISD

## MEGA MODULE PROJECT



DOCUMENT TITLE	Document No:		Rev.	DATE: Apr.2015
Line List	Client Document NO:	GISD7-211910007PS10Q001	02	Page: 40 of 112
	MMTE Document NO:	KGMMUG00L1001		

P&ID Sheet No.: M5-023

Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
350-CA-23421-C3	COMBUSTION AIR	1300-CA-23013-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23422-C3	COMBUSTION AIR	1300-CA-23013-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23423-C3	COMBUSTION AIR	1300-CA-23013-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23424-C3	COMBUSTION AIR	1300-CA-23013-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23425-C3	COMBUSTION AIR	1300-CA-23013-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23426-C3	COMBUSTION AIR	1300-CA-23013-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23427-C3	COMBUSTION AIR	1300-CA-23013-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23428-C3	COMBUSTION AIR	1300-CA-23013-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23429-C3	COMBUSTION AIR	1300-CA-23013-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23430-C3	COMBUSTION AIR	1300-CA-23013-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23431-C3	COMBUSTION AIR	1300-CA-23013-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23432-C3	COMBUSTION AIR	1300-CA-23013-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23433-C3	COMBUSTION AIR	1300-CA-23013-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23434-C3	COMBUSTION AIR	1300-CA-23013-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23435-C3	COMBUSTION AIR	1300-CA-23013-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23436-C3	COMBUSTION AIR	1300-CA-23013-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23437-C3	COMBUSTION AIR	1300-CA-23013-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23438-C3	COMBUSTION AIR	1300-CA-23013-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23439-C3	COMBUSTION AIR	1300-CA-23013-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23440-C3	COMBUSTION AIR	1300-CA-23013-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23441-C3	COMBUSTION AIR	1300-CA-23013-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23442-C3	COMBUSTION AIR	1300-CA-23013-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23443-C3	COMBUSTION AIR	1300-CA-23013-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23444-C3	COMBUSTION AIR	1300-CA-23013-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23445-C3	COMBUSTION AIR	1300-CA-23013-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23446-C3	COMBUSTION AIR	1300-CA-23013-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23447-C3	COMBUSTION AIR	1300-CA-23013-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23448-C3	COMBUSTION AIR	1300-CA-23014-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23449-C3	COMBUSTION AIR	1300-CA-23014-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23450-C3	COMBUSTION AIR	1300-CA-23014-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001

# KOWSAR GISD

## MEGA MODULE PROJECT



DOCUMENT TITLE	Document No:		Rev.	DATE: Apr.2015
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P&ID Sheet No.: M5-023

Line No.	Service	From	To	Des. Flow Rate(Nm3 m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
350-CA-23451-C3	COMBUSTION AIR	1300-CA-23014-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23452-C3	COMBUSTION AIR	1300-CA-23014-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23453-C3	COMBUSTION AIR	1300-CA-23014-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23454-C3	COMBUSTION AIR	1300-CA-23014-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23455-C3	COMBUSTION AIR	1300-CA-23014-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23456-C3	COMBUSTION AIR	1300-CA-23014-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23457-C3	COMBUSTION AIR	1300-CA-23014-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23458-C3	COMBUSTION AIR	1300-CA-23014-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23459-C3	COMBUSTION AIR	1300-CA-23014-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23460-C3	COMBUSTION AIR	1300-CA-23014-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23461-C3	COMBUSTION AIR	1300-CA-23014-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23462-C3	COMBUSTION AIR	1300-CA-23014-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23463-C3	COMBUSTION AIR	1300-CA-23014-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23464-C3	COMBUSTION AIR	1300-CA-23014-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23465-C3	COMBUSTION AIR	1300-CA-23014-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23466-C3	COMBUSTION AIR	1300-CA-23014-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23467-C3	COMBUSTION AIR	1300-CA-23014-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23468-C3	COMBUSTION AIR	1300-CA-23014-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23469-C3	COMBUSTION AIR	1300-CA-23014-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23470-C3	COMBUSTION AIR	1300-CA-23014-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23471-C3	COMBUSTION AIR	1300-CA-23014-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23472-C3	COMBUSTION AIR	1300-CA-23014-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23473-C3	COMBUSTION AIR	1300-CA-23014-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23474-C3	COMBUSTION AIR	1300-CA-23014-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23475-C3	COMBUSTION AIR	1300-CA-23014-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23476-C3	COMBUSTION AIR	1300-CA-23014-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23477-C3	COMBUSTION AIR	1300-CA-23014-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23478-C3	COMBUSTION AIR	1300-CA-23014-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23479-C3	COMBUSTION AIR	1300-CA-23014-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23480-C3	COMBUSTION AIR	1300-CA-23014-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001



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DOCUMENT TITLE	Document No:		Rev.	DATE: Apr.2015
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P&ID Sheet No.: M5-023

Line No.	Service	From	To	Des. Flow Rate(Nm3 m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
350-CA-23481-C3	COMBUSTION AIR	1300-CA-23014-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23482-C3	COMBUSTION AIR	1300-CA-23014-C3	MAIN BURNERS TYPE A	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23483-C3	COMBUSTION AIR	1000-CA-23014-C3	MAIN BURNERS TYPE B	1760.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23484-C3	COMBUSTION AIR	1000-CA-23015-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23485-C3	COMBUSTION AIR	1000-CA-23015-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23486-C3	COMBUSTION AIR	1000-CA-23015-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23487-C3	COMBUSTION AIR	1000-CA-23015-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23488-C3	COMBUSTION AIR	1000-CA-23015-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23489-C3	COMBUSTION AIR	1000-CA-23015-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23490-C3	COMBUSTION AIR	1000-CA-23015-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23491-C3	COMBUSTION AIR	1000-CA-23015-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23492-C3	COMBUSTION AIR	1000-CA-23015-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23493-C3	COMBUSTION AIR	1000-CA-23015-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23494-C3	COMBUSTION AIR	1000-CA-23015-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23495-C3	COMBUSTION AIR	1000-CA-23015-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23496-C3	COMBUSTION AIR	1000-CA-23015-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23497-C3	COMBUSTION AIR	1000-CA-23015-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23498-C3	COMBUSTION AIR	1000-CA-23015-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23499-C3	COMBUSTION AIR	1000-CA-23015-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23500-C3	COMBUSTION AIR	1000-CA-23015-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23501-C3	COMBUSTION AIR	1000-CA-23015-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23502-C3	COMBUSTION AIR	1000-CA-23015-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23503-C3	COMBUSTION AIR	1000-CA-23015-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23504-C3	COMBUSTION AIR	1000-CA-23015-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23505-C3	COMBUSTION AIR	1000-CA-23015-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23506-C3	COMBUSTION AIR	1000-CA-23015-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23507-C3	COMBUSTION AIR	1000-CA-23015-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23508-C3	COMBUSTION AIR	1000-CA-23015-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23509-C3	COMBUSTION AIR	1000-CA-23015-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23510-C3	COMBUSTION AIR	1000-CA-23015-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001

	<p style="text-align: center;"><b>KOWSAR GISD</b> <b>MEGA MODULE PROJECT</b></p>			
<b>DOCUMENT TITLE</b>	<b>Document No:</b>		<b>Rev.</b>	<b>DATE: Apr.2015</b>
Line List	Client Document NO:	GISD7-211910007PS10Q001	02	Page: 43 of 112
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Line No.	Service	From	To	Des. Flow Rate(Nm3 m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
350-CA-23511-C3	COMBUSTION AIR	1000-CA-23015-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23512-C3	COMBUSTION AIR	1000-CA-23015-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23513-C3	COMBUSTION AIR	1000-CA-23015-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23514-C3	COMBUSTION AIR	1000-CA-23015-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23515-C3	COMBUSTION AIR	1000-CA-23015-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23516-C3	COMBUSTION AIR	1000-CA-23015-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23517-C3	COMBUSTION AIR	1000-CA-23015-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23518-C3	COMBUSTION AIR	1000-CA-23015-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001
350-CA-23519-C3	COMBUSTION AIR	1000-CA-23015-C3	MAIN BURNERS TYPE B	880.00	700.00	675.00	0.060	0.055	OP/PL	-	NO.5/7001

	<div><div>KOWSAR GISD</div><div>MEGA MODULE PROJECT</div></div>			
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Line No.	Service	From	To	Des. Flow Rate(Nm3 m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
2130-RF-02401-C3	REFORMED FEED GAS	2030-RF-01804-C3	REFORMER FEED GAS HEADERS	316773.00	600.00	565.00	2.433	1.866	OP/PL	-	NO.5/7001
930-RF-02402-C3	REFORMED FEED GAS	2130-RF-02401-C3	REFORMER TUBES	52795.50	600.00	565.00	2.433	1.866	OP/PL	-	NO.5/7001
930-RF-02403-C3	REFORMED FEED GAS	2130-RF-02401-C3	REFORMER TUBES	52795.50	600.00	565.00	2.433	1.866	OP/PL	-	NO.5/7001
930-RF-02404-C3	REFORMED FEED GAS	2130-RF-02401-C3	REFORMER TUBES	52795.50	600.00	565.00	2.433	1.866	OP/PL	-	NO.5/7001
930-RF-02405-C3	REFORMED FEED GAS	2130-RF-02401-C3	REFORMER TUBES	52795.50	600.00	565.00	2.433	1.866	OP/PL	-	NO.5/7001
930-RF-02406-C3	REFORMED FEED GAS	2130-RF-02401-C3	REFORMER TUBES	52795.50	600.00	565.00	2.433	1.866	OP/PL	-	NO.5/7001
930-RF-02407-C3	REFORMED FEED GAS	2130-RF-02401-C3	REFORMER TUBES	52795.50	600.00	565.00	2.433	1.866	OP/PL	-	NO.5/7001

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Line No.	Service	From	To	Des. Flow Rate(Nm3 m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
450-NG-02800-C6	NATURAL GAS	BATTERY LIMIT	400-NG-02813-C6	82709.00	35.00	25.00	6.000	4.000	10 BAR/HP	-	NO.2/1021
250-NG-02801-C6	NATURAL GAS	300-NG-02820-C6	1200-CG-06218-C2	14118.00	35.00	25.00	3.100	1.655	10 BAR/HP	-	NO.2/1021
80-NG-02802-C6	NATURAL GAS	300-NG-02820-C6	50-NG-00310/313-C6	471.00	35.00	25.00	3.100	1.655	10 BAR/HP	-	NO.2/1021
350-NG-02803-C6	NATURAL GAS	500-NG-02808-C6	NATURAL GAS PREHEATER HE-A62.1	26437.50	35.00	25.00	3.100	2.060	10 BAR/HP	-	NO.2/1021
65-NG-02804-C6	NATURAL GAS	200-NG-02810-C6	INERT GAS GENERATOR CG-D25	471.00	35.00	25.00	3.100	2.060	10 BAR/HP	-	NO.2/1021
350-NG-02805-C6	NATURAL GAS	500-NG-02808-C6	NATURAL GAS PREHEATER HE-A62.2	26437.50	25.00	35.00	3.100	2.060	10 BAR/HP	-	NO.2/1021
250-NG-02806-C6	NATURAL GAS	300-NG-02820-C6	FURNACE TRANSITION ZONE (HEADER)	7368.00	35.00	25.00	3.100	1.488	10 BAR/HP	-	NO.2/1021
600-NG-02807-C6	NATURAL GAS	400-NG-02813-C6	500-NG-02808-C6	70000.00	35.00	25.00	3.100	1.100	10 BAR/HP	-	NO.2/1021
500-NG-02808-C6	NATURAL GAS	600-NG-02807-C6	350-NG-02803/2805-C6	52875.00	35.00	25.00	3.030	1.100	10 BAR/HP	-	NO.2/1021
200-NG-02809-C6	NATURAL GAS	300-NG-02820-C6	750-RG-01903-C2	16471.00	35.00	25.00	3.100	1.700	10 BAR/HP	-	NO.2/1021
200-NG-02810-C6	NATURAL GAS	300-NG-02811-C6	200-NG-02201-C6	5201.00	35.00	25.00	0.160	0.088	10 BAR/HP	-	NO.2/1021
300-NG-02811-C6	NATURAL GAS	450-NG-02800-C6	300-NG-02812-C6	18000.00	35.00	25.00	3.600	1.600	10 BAR/HP	-	NO.2/1021
300-NG-02812-C6	NATURAL GAS	300-NG-02811-C6	FUEL GAS MIXER MX-B10	12261.00	35.00	25.00	0.588	0.255	10 BAR/HP	-	NO.2/1021
400-NG-02813-C6	NATURAL GAS	450-NG-02800-C6	600-NG-02807-C6	70000.00	35.00	25.00	6.000	4.000	10 BAR/HP	-	NO.2/1021
100-NG-02814-C6	NATURAL GAS	300-NG-02820-C6	100-NG-05407-C6	941.00	35.00	25.00	3.100	1.655	10 BAR/HP	-	NO.2/1021
150-NG-02815-C6	NATURAL GAS	600-NG-02807-C6	500-NG-02808-C6	5300.00	35.00	25.00	3.030	1.100	10 BAR/HP	-	NO.2/1021
80-NG-02816-C6	NATURAL GAS	400-NG-02813-C6	VENT	2800.00	35.00	25.00	6.000	4.000	10 BAR/HP	-	NO.2/1021
15-NG-02817-C6	NATURAL GAS	400-NG-02813-C6	400-NG-02813-C6	98.00	35.00	25.00	6.000	4.000	10 BAR/HP	-	NO.2/1021
40-SG-02818-C6	SEAL GAS	40-SG-06915-C6	HOSE CONNECTION	100.00	15.00	5.00	2.200	1.920	OP/PL	-	NO.2/7032
40-SG-02819-C6	SEAL GAS	40-SG-06915-C6	HOSE CONNECTION	100.00	15.00	5.00	2.200	1.920	OP/PL	-	NO.2/7032
300-NG-02820-C6	NATURAL GAS	600-NG-02807-C6	300-NG-02801-C6	8780.00	35.00	25.00	3.100	1.100	10 BAR/HP	-	NO.2/1021
25-NG-02821-C6	NATURAL GAS	450-NG-2800-C6	50-NG-02822-C6	100.00	15.00	5.00	2.200	1.920	OP/PL	-	NO.2/7032
50-NG-02822-C6	NATURAL GAS	25-NG-02821-C6	MECHANICAL ROOM	100.00	15.00	5.00	2.200	1.920	OP/PL	-	NO.2/7032

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Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
2000-CA-03001-C4	COMBUSTION AIR	MAIN AIR BLOWER CP-B01	1500-CA-03002/3005-C4	379888.00	69.00	63.00	0.235	0.180	OP/PL	-	NO.2/5012
1500-CA-03002-C4	COMBUSTION AIR	2000-CA-03001-C4	COLD C.A PREHEATER HE-B04.1	189944.00	69.00	63.00	0.235	0.180	OP/PL	-	NO.2/5012
900-CA-03003-C4	COMBUSTION AIR	1300-CA-03007-C4	800-CA-01108/1109-C4	50000.00	69.00	63.00	0.235	0.180	OP/PL	-	NO.2/5012
800-CA-03004-C4	COMBUSTION AIR	2000-CA-03001-C4	VENT	40000.00	69.00	63.00	0.235	0.180	OP/PL	-	NO.2/5012
1500-CA-03005-C4	COMBUSTION AIR	2000-CA-03001-C4	COLD C.A PREHEATER HE-B04.2	189944.00	69.00	63.64	0.235	0.180	OP/PL	-	NO.2/5012
900-CA-03006-C4	COMBUSTION AIR	1300-CA-03007-C4	900-CA-01212-C4	50000.00	69.00	63.00	0.235	0.180	OP/PL	-	NO.2/5012
1300-CA-03007-C4	COMBUSTION AIR	2000-CA-03001-C4	900-CA-03003/0306-C4	100000.00	69.00	63.00	0.235	0.180	OP/PL	-	NO.2/5012
200-AA-03008-C4	AUXILIARY AIR	900-AA-03009-C4	200-NG-06501-C6	3695.00	55.00	53.54	0.075	0.030	OP/PL	-	NO.2/5012
900-AA-03009-C4	AUXILIARY AIR	AUXILIARY AIR BLOWER CP-B20	AUXILIARY BURNER AIR HEADER	50000.00	55.00	53.54	0.031	0.003	OP/PL	-	NO.2/5012
15-MWS-03010-C1	M.W.S	40-MWS-09626-C1	MAIN AIR BLOWER CP-B01	3.20	34.00	32.00	4.200	3.800	OP/HL	WINTERIZE/F	NOTE.01
15-MWR-03011-C1	M.W.R	MAIN AIR BLOWER CP-B01	40-MWR-03012-C1	3.20	40.00	38.00	4.200	3.500	OP/HL	WINTERIZE/F	NOTE.01
40-MWR-03012-C1	M.W.R	15-MWS-03011-C1	100-MWR-09627-C1	3.20	40.00	38.00	4.200	3.500	OP/HL	WINTERIZE/F	NOTE.01
900-CA-03013-C4	COMBUSTION AIR	2000-CA-03001-C4	900-DA-03015-C4	60000.00	69.00	63.67	0.235	0.180	OP/PL	-	NO.2/5012
750-CA-03014-C4	COMBUSTION AIR	750-CA-03013-C4	900-AA-03009-C4	50000.00	69.00	63.67	0.235	0.180	OP/PL	-	NO.2/5012
750-DA-03015-C4	DILUTION AIR	DILUTION AIR BLOWER CP-C05	D.A TO FLUE GAS MIXER MX-C20.1,2	50000.00	65.00	40.00	0.120	0.100	OP/PL	-	NO.2/5012
750-DA-03017-C4	DILUTION AIR	900-DA-03015-C4	500-DA-01111-C4	25000.00	65.00	40.00	0.120	0.100	OP/PL	-	NO.2/5012
50-DW-03021-C1	DRAIN WATER	MAIN AIR BLOWER CP-B01	DRAIN	1.00	50.00	40.00	0.000	0.000	OP/PL	-	NO.2/6021
750-DA-03018-C4	DILUTION AIR	900-DA-03015-C4	500-DA-01211-C4	25000.00	65.00	40.00	0.120	0.100	OP/PL	-	NO.2/5012



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40-MWR-03103-C1	M.W.R	15-MWS-03105-C1	100-MWR-09627-C1	3.20	42.00	40.00	4.200	3.500	OP/HL	F	NOTE.01
15-MWS-03104-C1	M.W.S	40-MWS-09628-C1	EJECTOR STACK FAN CP-C11	3.20	34.00	32.00	4.200	3.800	OP/HL	F-ET	NOTE.01
15-MWS-03105-C1	M.W.S	EJECTOR STACK FAN CP-C11	40-MWR-03103-C1	3.20	42.00	40.00	4.200	3.500	OP/HL	F-ET	NOTE.01
50-DW-03106-C1	DRAIN WATER	EJECTOR STACK FAN CP-C11	VENT	1.00	50.00	40.00	0.000	0.000	OP/HL	-	NO.2/6021

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P&ID Sheet No.: M5-032											
Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
15-NG-03201-C6	NATURAL GAS	200-NG-02810-C6	200-NG-02810-C6	30.00	35.00	25.00	3.600	1.600	10 BAR/HP	-	NO.2/1021
80-NG-03202-C6	NATURAL GAS	200-NG-02810-C6	200-NG-06501-C6	500.00	35.00	25.00	0.075	0.030	10 BAR/HP	-	NO.2/1021
40-NG-03203-C6	NATURAL GAS	200-NG-02810-C6	VENT	210.00	35.00	25.00	3.600	1.600	10 BAR/HP	-	NO.2/1021

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P&ID Sheet No.: M5-033

Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
1200-TGF-03303-C2	TOP GAS FUEL	TOP GAS FUEL MIST ELIMINATOR SR-B23	1200-TGF-03303-C2	155058.00	60.00	39.00	0.588	0.234	OP/PL	-	NO.2/1021
80-PWR-03305-C1	P.W.R	TOP GAS FUEL MIST ELIMINATOR SR-B23	SEAL LEG NO.1	1.00	60.00	39.00	0.588	0.234	OP/HL	-	NO.2/6021
350-TGF-03306-C2	TOP GAS FUEL	1150-TGF-00402-C2	1150-TGF-00402-C2	13500.00	60.00	39.00	0.588	0.109	OP/PL	-	NO.2/1021
1150-TGF-03307-C2	TOP GAS FUEL	FUEL GAS MIXER MX-B10	TOP GAS FUEL MIST ELIMINATOR SR-B23	155058.00	60.00	38.50	0.588	0.089	OP/PL	-	NO.2/1021
15-NG-03308-C6	NATURAL GAS	300-NG-02812-C6	300-NG-02812-C6	31.00	35.00	25.00	0.588	0.255	10 BAR/HP	-	NO.2/1021
80-NG-03309-C6	NATURAL GAS	300-NG-02812-C6	VENT	750.00	35.00	25.00	0.588	0.255	10 BAR/HP	-	NO.2/1021
25-PG-03310-C6	PURGE GAS	40-PG-07424-C6	1150-TGF-00402-C2	60.00	45.00	38.00	1.200	0.469	OP/PL	-	NO.2/7032



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P&ID Sheet No.: M5-040											
Line No.	Service	From	To	Des. Flow Rate(Nm3 ,m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
100-MWR-04001-C1	M.W.R	PDC SC-H13.2	150-MWR-00213-C1	88.00	59.00	54.00	5.200	4.300	OP/HL	F	NOTE.01
25-SG-04002-C6	DRY SEAL GAS	40-SG-06908-C6	450-SL-04003-C7	150.00	15.00	5.00	2.200	1.920	OP/PL	-	NO.2/7032
450-SL-04003-C7	SLURRY	PDC TRAMP MATERIAL DISCHARGE SLIDE GATE SG-H14.1	PDC TRAMP MATERIAL DISCHARGE SLIDE GATE SG-H14.3	245.00	44.00	38.00	2.200	1.920	OP/HL	-	NO.2/6021(LI GHT)
450-SL-04004-C7	SLURRY	PDC TRAMP MATERIAL DISCHARGE SLIDE GATE SG-H14.3	HOT DISCHARGE	245.00	44.00	38.00	2.200	1.920	OP/HL	-	NO.2/6021(LI GHT)
1208-BSG-04005-C3	BOTTOM SEAL GAS	PDC CASING TK-H15.2	BOTTOM SEAL GAS BUBBLER SR-D36	467.00	880.00	26.00	0.020	0.000	OP/PL	-	NO.5/7001
591-BSG-04006-C3	BOTTOM SEAL GAS	1208-BSG-04005-C3	BSG DUST COLLECTION NOZZEL PP-D43	467.00	880.00	26.00	0.020	0.000		-	NO.5/7001
750-DP-04007-C10		BSG DUST COLLECTION NOZZEL PP-D43	BSG DUST COLLECTION SCRUBBER SR-D46	63000.00	61.00	45.00	0.000	-0.010		-	NO. 2/7001
40-MWS-04008-C1	M.W.S	100-MWS-00212-C1	PDC SC-H13.2	44.00	56.00	51.00	5.200	4.600	OP/HL	-	NOTE.01
40-MWR-04009-C1	M.W.R	PDC SC-H13.2	100-MWR-04001-C1	44.00	59.00	54.00	5.200	4.300	OP/HL	-	NOTE.01

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P&ID Sheet No.: M5-054

Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
1262-CG-05401-C3	COOLING GAS	PRODUCT COOLER RF-A03	2176-CG-05403-C3	100382.50	520.00	415.00	1.989	1.486	OP/PL	-	NO.5/7001
1262-CG-05402-C3	COOLING GAS	PRODUCT COOLER RF-A03	2176-CG-05403-C3	100382.50	520.00	415.00	1.989	1.486	OP/PL	-	NO.5/7001
2176-CG-05403-C3	COOLING GAS	1262-CG-05401/05402-C3	1770-CG-05404-C3	200765.00	520.00	415.00	1.989	1.486	OP/PL	-	NO.5/7001
1770-CG-05404-C3	COOLING GAS	2167-CG-05403-C3	1910-CG-06101-C3	200765.00	520.00	415.00	1.989	1.486	OP/PL	-	NO.5/7001
250-CG-05405-C2	COOLING GAS	1000-CG-06403-C2	PRODUCT COOLER RF-A03	12424.00	55.00	41.00	2.161	1.640	OP/PL	-	NO.2/1021
25-DW-05406-C1	DRAIN WATER	PRODUCT COOLER	SEAL LEG NO.1	1.00	55.00	41.00	2.161	1.650	OP/HL	-	NO.2/6021
100-NG-05407-C6	NATURAL GAS	100-NG-02814-C6	RING TYPE HEADER	941.00	35.00	25.00	3.100	1.655	10 BAR/HP	-	NO.2/1021
80-NG-05408-C6	NATURAL GAS	100-NG-05407-C6	PRODUCT COOLER RF-A03	120.00	35.00	25.00	3.100	1.655	10 BAR/HP	-	NO.2/1021
80-NG-05409-C6	NATURAL GAS	100-NG-05407-C6	PRODUCT COOLER RF-A03	120.00	35.00	25.00	3.100	1.655	10 BAR/HP	-	NO.2/1021
80-NG-05410-C6	NATURAL GAS	100-NG-05407-C6	PRODUCT COOLER RF-A03	120.00	35.00	25.00	3.100	1.655	10 BAR/HP	-	NO.2/1021
80-NG-05411-C6	NATURAL GAS	100-NG-05407-C6	PRODUCT COOLER RF-A03	120.00	35.00	25.00	3.100	1.655	10 BAR/HP	-	NO.2/1021
80-NG-05412-C6	NATURAL GAS	100-NG-05407-C6	PRODUCT COOLER RF-A03	120.00	35.00	25.00	3.100	1.655	10 BAR/HP	-	NO.2/1021
80-NG-05413-C6	NATURAL GAS	100-NG-05407-C6	PRODUCT COOLER RF-A03	120.00	35.00	25.00	3.100	1.655	10 BAR/HP	-	NO.2/1021
80-NG-05414-C6	NATURAL GAS	100-NG-05407-C6	PRODUCT COOLER RF-A03	120.00	35.00	25.00	3.100	1.655	10 BAR/HP	-	NO.2/1021
80-NG-05415-C6	NATURAL GAS	100-NG-05407-C6	PRODUCT COOLER RF-A03	120.00	35.00	25.00	3.100	1.655	10 BAR/HP	-	NO.2/1021
80-PWR-05416-C1	P.W.R	BOTTOM SEAL MIST ELIMINATOR SR-D35	80-PWR-05417-C1	1.50	43.00	41.00	2.200	1.960	OP/HL	-	NO.2/6021
80-PWR-05417-C1	P.W.R	BOTTOM SEAL MIST ELIMINATOR SR-D35	SEAL LEG NO.1	1.50	43.00	41.00	2.200	1.960	OP/HL	-	NO.2/6021
100-SG-05418-C6	SEAL GAS	200-SG-06702-C6	200-SG-05419-C6	1500.00	43.00	41.00	2.200	1.960	OP/PL	-	NO.2/7032
100-SL-05420-C7	SLURRY	LOWER SEAL LEG SLIDE GATE SG-D41	TOP OF GRATING	0.50	50.00	42.00	0.000	0.000		-	NO.2/8001
100-SL-05421-C7	SULLRY	LOWER SEAL LEG SLIDE GATE SG-D41	TOP OF GRATING	0.50	50.00	42.00	0.000	0.000		-	NO.2/8001
200-SG-05419-C6	SEAL GAS	BOTTOM SEAL MIST ELIMINATOR SR-D35	LOWER SEAL GAS INLET CONE TK-D41	5760.00	43.00	41.00	2.200	1.960	OP/PL	-	NO.2/7032

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25-SG-05501-C6	SEAL GAS	50-SG-06912-C6	PRODUCT VIBRATING SCREEN SC-2H02	97.00	15.00	5.00	2.200	1.920	OP/PL	-	NO.2/7032
25-SG-05502-C6	SEAL GAS	50-SG-06912-C6	PRODUCT VIBRATING SCREEN SC-2H02	97.00	15.00	5.00	2.200	1.920	OP/PL	-	NO.2/7032

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P&ID Sheet No.: M5-061

Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
1910-CG-06101-C3	COOLING GAS	1770-CG-05404-C3	COOLING GAS SCRUBBER SR-A70	200765.00	520.00	415.00	1.989	1.486	OP/PL	-	NO.5/7001
1300-CG-06102-C2	COOLING GAS	COOLING GAS SCRUBBER SR-A70	COOLING GAS COMPRESSOR CP-A71	225555.00	50.00	37.00	1.961	1.383	OP/PL	-	NO.2/1021
750-PWR-06103-C1	P.W.R	COOLING GAS SCRUBBER SR-A70	300-PWR-06104-C1	1145.50	72.80	59.50	2.050	1.900	OP/HL	F	NOTE.01
300-PWR-06104-C1	P.W.R	750-PWR-06103-C1	750-PWR-06133-C1	1145.50	72.80	59.50	2.05	1.90	OP/HL	F	NOTE.01
750-PWR-06105-C1	P.W.R	750-PWR-06105-C1	VENT	1145.50	72.80	59.50	2.050	1.900	OP/HL	-	NO.2/6021
600-PWR-06106-C1	P.W.R	750-PWR-06133-C1	1300-PWR-08100-C1	1145.50	72.80	59.50	2.050	1.900	OP/HL	-	NO.2/6021
250-SL-06107-C7	SLURRY	COOLING GAS SCRUBBER SR-A70	250-SL-06112-C7	3.90	72.80	59.50	3.020	2.900	OP/HL	-	NO.2/9005(HEAVY)
150-SL-06108-C7	SLURRY	250-SL-06107-C7	200-SL-06109-C7	3.90	72.80	59.50	3.020	2.900	OP/HL	-	NO.2/9005(HEAVY)
200-SL-06109-C7	SLURRY	150-SL-06108-C7	200-SL-06111-C7	3.90	72.80	59.50	3.020	2.900	OP/HL	-	NO.2/9005(HEAVY)
150-SL-06110-C7	SLURRY	200-SL-06109-C7	VENT	3.90	72.80	59.50	3.020	2.900	OP/HL	-	NO.2/9005(HEAVY)
200-SL-06111-C7	SLURRY	200-SL-06109-C7	250-SL-08001-C7	3.90	72.80	59.50	3.020	2.900	OP/HL	-	NO.2/9005(HEAVY)
250-SL-06112-C7	SLURRY	250-SL-06107-C7	SCRUBBER BLOW DOWN SUMP TK-E93	50.00	72.80	59.50	3.200	2.900	OP/HL	-	NO.2/6021
25-PWS-06113-C1	P.W.S	50-PWS-08410-C1	25-PWS-06130-C1	4.00	31.00	29.00	5.200	4.600	OP/HL	ET	NOTE.01
40-PWS-06114-C1	P.W.S	50-PWS-08410-C1	HOSE STATION	5.00	31.00	29.00	5.200	4.600	OP/HL	F	NOTE.01
40-PWS-06115-C1	P.W.S	100-PWS-06132-C1	COOLING GAS SCRUBBER SWIRL NOZZLE	16.20	31.00	29.00	2.560	1.970	OP/HL	-	NO.2/6021
40-PWS-06116-C1	P.W.S	100-PWS-06132-C1	COOLING GAS SCRUBBER SWIRL NOZZLE	16.20	31.00	29.00	2.560	1.970	OP/HL	-	NO.2/6021
40-PWS-06117-C1	P.W.S	100-PWS-06132-C1	COOLING GAS SCRUBBER SWIRL NOZZLE	16.20	31.00	29.00	2.560	1.970	OP/HL	-	NO.2/6021
40-PWS-06118-C1	P.W.S	100-PWS-06132-C1	COOLING GAS SCRUBBER SWIRL NOZZLE	16.20	31.00	29.00	2.560	1.970	OP/HL	-	NO.2/6021
40-PWS-06119-C1	P.W.S	100-PWS-06123-C1	COOLING GAS SCRUBBER SWIRL NOZZLE	16.20	31.00	29.00	2.560	1.970	OP/HL	-	NO.2/6021
40-PWS-06120-C1	P.W.S	100-PWS-06123-C1	COOLING GAS SCRUBBER SWIRL NOZZLE	16.20	31.00	29.00	2.560	1.970	OP/HL	-	NO.2/6021
40-PWS-06121-C1	P.W.S	100-PWS-06123-C1	COOLING GAS SCRUBBER SWIRL NOZZLE	16.20	31.00	29.00	2.560	1.970	OP/HL	-	NO.2/6021
40-PWS-06122-C1	P.W.S	100-PWS-06123-C1	COOLING GAS SCRUBBER SWIRL NOZZLE	16.20	31.00	29.00	2.560	1.970	OP/HL	-	NO.2/6021
100-PWS-06123-C1	P.W.S	150-PWS-08411-C1	HEADER (Blind)	64.50	31.00	29.00	2.600	2.000	OP/HL	-	NO.2/6021
100-PWS-06124-C1	P.W.S	150-PWS-08412-C1	50-PWS-06128/6129-C1	51.60	31.00	29.00	4.390	2.650	OP/HL	-	NO.2/6021
50-PWS-06125-C1	P.W.S	150-PWS-08412-C1	COOLING GAS SCRUBBER THROAT NOZZLE	25.80	31.00	29.00	4.390	2.650	OP/HL	-	NO.2/6021
50-PWS-06126-C1	P.W.S	100-PWS-06131-C1	COOLING GAS SCRUBBER THROAT NOZZLE	25.80	31.00	29.00	4.390	2.650	OP/HL	-	NO.2/6021
50-PWS-06127-C1	P.W.S	100-PWS-06131-C1	COOLING GAS SCRUBBER THROAT NOZZLE	25.80	31.00	29.00	4.390	2.650	OP/HL	-	NO.2/6021
50-PWS-06128-C1	P.W.S	100-PWS-06124-C1	COOLING GAS SCRUBBER THROAT NOZZLE	25.80	31.00	29.00	4.390	2.650	OP/HL	-	NO.2/6021
50-PWS-06129-C1	P.W.S	100-PWS-06124-C1	COOLING GAS SCRUBBER THROAT NOZZLE	25.80	31.00	29.00	4.390	2.650	OP/HL	-	NO.2/6021
25-PWR-06130-C1	P.W.R	25-PWS-06113-C1	SIGHT DRAIN	5.00	31.00	29.00	5.200	4.600	OP/HL	ET	NO.2/6021

	<p align="center"><b>KOWSAR GISD</b> <b>MEGA MODULE PROJECT</b></p>			
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P&ID Sheet No.: M5-061											
Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
100-PWS-06131-C1	P.W.S	150-PWS-08412-C1	50-PWS-06127/6128-C1	51.60	31.00	29.00	4.390	2.650	OP/HL	-	NO.2/6021
100-PWS-06132-C1	P.W.S	150-PWS-08411-C1	HEADER (Blind)	64.50	31.00	29.00	2.600	2.000	OP/HL	-	NO.2/6021
750-PWR-06133-C1	P.W.R	300-PWR-06104-C1	600-PWR-06106-C1	1145.50	72.80	59.50	2.050	1.900	OP/HL	F	NOTE.01



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P&ID Sheet No.: M5-062

Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
250-CG-06205-C2	COOLING GAS	1100-CG-06206-C2	1200-CG-06217-C2	9953.00	55.00	42.00	2.161	1.650	OP/PL	-	NO.2/1021
1200-CG-06206-C2	COOLING GAS	PULSATION DAMPNER PD-A72	1200-CG-06218-C2	229305.00	55.00	42.00	2.161	1.650	OP/PL	-	NO.2/1021
50-MWR-06214-C1	M.W.R	PU-A71A/B	80-MWR-09555-C1	7.00	42.00	40.00	4.200	3.500	OP/HL	WINTERIZE/F	NOTE.01
50-PWR-06213-C1	P.W.R	1300-CG-06102-C2	SEAL LEG NO.1	2.00	50.00	35.00	1.960	1.380	OP/HL	-	NO.2/6021
50-PWR-06212-C1	P.W.R	1200-CG-06206-C2	SEAL LEG NO.1	2.00	55.00	42.00	2.160	1.650	OP/HL	-	NO.2/6021
50-PWR-06211-C1	P.W.R	PULSATION DAMPNER PD-A72	SEAL LEG NO.1	2.00	55.00	42.00	2.160	1.650	OP/HL	-	NO.2/6021
50-PWR-06207-C1	P.W.R	CP-A71 HEAD VENT DRAIN	50-PWR-08801-C1	6.00	57.00	41.90	2.160	1.650	OP/HL	-	NO.2/6021
40-PWR-06208-C1	P.W.R	CP-A71 CYLINDER DRAIN	SEAL LEG NO.1	6.00	57.00	41.90	2.160	1.650	OP/HL	-	NO.2/6021
50-PWR-06209-C1	P.W.R	CP-A71 SEAL FLUSH DRAIN	SEAL LEG NO.1	6.00	57.00	41.90	2.160	1.650	OP/HL	-	NO.2/6021
50-PWR-06210-C1	P.W.R	PULSATION DAMPNER PD-A72	50-PWR-06211-C1	2.00	55.00	42.00	2.160	1.650	OP/HL	-	NOTE.01
40-MWS-06216-C1	M.W.S	40-MWS-09629-C1	40-MWS-09629-C1	7.00	34.00	32.00	4.200	3.800	OP/HL	WINTERIZE/F	NOTE.01
1200-CG-06217-C2	COOLING GAS	1300-CG-06102-C2	COOLING GAS COMPRESSOR CP-A71	225555.00	50.00	37.00	1.961	1.383	OP/PL	-	NO.2/1021
1100-CG-06218-C2	COOLING GAS	1200-CG-06206-C2	COOLING GAS MIST ELIMINATOR SR-A73	229305.00	55.00	42.00	2.161	1.650	OP/PL	-	NO.2/1021





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P&ID Sheet No.: M5-064											
Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
1100-CG-06401-C2	COOLING GAS	1200-CG-06218-C2	COOLING GAS SCRUBBER SR-A70	229305.00	55.00	41.90	2.161	1.650	OP/PL	-	NO.2/1021
250-CG-06402-C2	COOLING GAS	1100-CG-06401-C2	750-RG-01903-C1	14118.00	55.00	41.90	2.161	1.650	OP/PL	-	NO.2/1021
1000-CG-06403-C2	COOLING GAS	COOLING GAS MIST ELIMINATOR SR-A73	PRODUCT COOLER RF-A03	198778.00	55.00	41.50	2.161	1.636	OP/PL	-	NO.2/1021
25-PG-06405-C6	PURGE GAS	40-PG-07433-C6	1200-CG-06218-C2	70.00	45.00	38.00	1.200	0.469	OP/PL	-	NO.2/7032
80-PWR-06406-C1	P.W.R	COOLING GAS MIST ELIMINATOR SR-A73	SEAL LEG NO.1	3.00	57.00	41.50	2.161	1.636	OP/PL	-	NO.2/6021
50-CG-06407-C2	P.W.R	1100-CG-06401-C2	LOCATED AT GRADE	1.00	55.00	41.90	2.161	1.650	OP/HL	-	NO.2/1021

	<p style="text-align: center;"><b>KOWSAR GISD</b> <b>MEGA MODULE PROJECT</b></p>			
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P&ID Sheet No.: M5-065											
Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
200-NG-06501-C6	NATURAL GAS	200-NG-03008-C4	FLUE GAS AFTER BURNER	3695.00	55.00	53.54	0.075	0.030	10 BAR/HP	-	NO.2/1021
600-SG-06503-C6	SEAL GAS	SEAL GAS COOLER SR-D01	SEAL GAS COMPRESSOR CP-D03	22000.00	40.00	34.00	0.001	-0.011	OP/PL	-	NO.2/7032
500-PWR-06504-C1	P.W.R	SEAL GAS COOLER SR-D01	300-PWR-06505-C1	350.00	66.00	59.50	0.700	0.500	OP/HL	-	NO.2/6021
300-PWR-06505-C1	P.W.R	500-PWR-06504-C1	300-PWR-06506-C1	350.00	66.00	59.50	0.700	0.500	OP/HL	-	NO.2/6021
300-PWR-06506-C1	P.W.R	300-PWR-06505-C1	INERT GAS SUMP TK-E90	350.00	66.00	59.50	0.700	0.500	OP/HL	-	NO.2/6021

	<p style="text-align: center;"><b>KOWSAR GISD</b> <b>MEGA MODULE PROJECT</b></p>			
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P&ID Sheet No.: M5-066												
Line No.	Service	From	To	Des. Flow Rate(Nm3 m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code	
600-SG-06601-C6	SEAL GAS	SEAL GAS COMPRESSOR CP-D03	600-SG-06712-C6	22000.00	200.00	194.30	2.400	2.090	OP/PL	-	NO.5/7001	
400-SG-06602-C6	SEAL GAS	S.G COMPRESSOR CP-D03	600-SG-06503-C6	12186.00	200.00	194.30	2.400	2.090	OP/PL	-	NO.5/7001	
50-PWR-06603-S1	P.W.R	S.G COMPRESSOR CP-D03 DRAIN	SEAL LEG NO.1	2.00	40.00	34.00	0.001	-0.011	OP/HL	-	NOT NEED TO PAINT	
25-MWS-06604-C1	M.W.S	100-MWS-09558-C1	SEAL GAS COMPRESSOR CP-D03	5.00	34.00	32.00	4.200	3.800	OP/HL	WINTERIZE/F	NOTE.01	
50-MWS-06608-C1	M.W.S	100-MWS-09558-C1	S.G COMPRESSOR CP-D03 OIL COOLER	12.00	34.00	32.00	4.200	3.800	OP/HL	WINTERIZE/F	NOTE.01	
65-PWR-06609-S1	P.W.R	SEAL GAS COMPRESSOR CP-D03	SEAL LEG NO.1	2.00	40.00	34.00	0.001	-0.011	OP/HL	-	NOT NEED TO PAINT	
65-MWR-06611-C1	M.W.R	S.G COMPRESSOR CP-D03 OIL COOLER	150-MWR-06704-C1	12.00	43.00	41.00	4.200	3.500	OP/HL	WINTERIZE/F	NOTE.01	

	<h1 style="text-align: center;">KOWSAR GISD</h1> <h2 style="text-align: center;">MEGA MODULE PROJECT</h2>			
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P&ID Sheet No.: M5-067											
Line No.	Service	From	To	Des. Flow Rate(Nm3 m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
400-SG-06700-C6	SEAL GAS	SEAL GAS AFTER COOLER SR-D05	400-SG-06705-C6	22000.00	43.00	41.00	2.200	2.000	OP/PL	-	NO.2/7032
300-SG-06701-C6	SEAL GAS	400-SG-06700-C6	GAS COOLER E2001	15425.00	48.00	41.00	2.200	2.000	OP/PL	-	NO.2/7032
200-SG-06702-C6	SEAL GAS	400-SG-06705-C6	BOTTOM SEAL MIST ELIMINATOR SR-D35	5760.00	43.00	41.00	2.200	1.960	OP/PL	-	NO.2/7032
300-SG-06703-C6	SEAL GAS	400-SG-06700-C6	RECYCLE TO SEAL GAS COOLER	22000.00	43.00	41.00	2.200	2.000	OP/PL	-	NO.2/7032
150-MWR-06704-C1	M.W.R	150-MWS-09527-C1	250-MWR-09528-C1	140.00	48.00	46.00	4.200	3.500	OP/HL	WINTERIZE/F	NOTE.01
400-SG-06705-C6	SEAL GAS	400-SG-06700-C6	HEADER	9465.00	43.00	41.00	2.200	2.000	OP/PL	-	NO.2/7032
200-SG-06706-C6	SEAL GAS	400-SG-06700-C6	VENT	5500.00	43.00	41.00	2.200	2.000	OP/PL	-	NO.2/7032
250-SG-06707-C6	SEAL GAS	400-SG-06705-C6	250-SG-00448-C2	5882.00	43.00	41.00	0.588	0.375	OP/PL	-	NO.2/7032
40-SG-06708-C6	SEAL GAS	400-SG-06705-C6	BOTTOM SEAL GAS BUBBLER VENT SR-D36	59.00	43.00	41.00	0.000	0.000	OP/PL	-	NO.2/7032
250-SG-06709-C6	SEAL GAS	400-SG-06705-C6	UPPER SEAL GAS INLET CONE TK-D40	3681.00	43.00	41.00	0.588	0.391	OP/PL	-	NO.2/7032
80-PWR-06710-S1	P.W.R	SEAL GAS AFTER COOLER SR-D05	SEAL LEG NO.1	3.00	47.00	42.00	2.200	2.000	OP/HL	-	NOT NEED TO PAINT
80-PWR-06711-S1	P.W.R	500-SG-06712-C6	80-PWR-06710-S1	3.00	47.00	42.00	2.200	2.000	OP/HL	WINTERIZE/F	NOT NEED TO PAINT
600-SG-06712-C6	SEAL GAS	600-SG-06601-C6	SEAL GAS AFTER COOLER SR-D05	22000.00	43.00	41.00	2.200	2.000	OP/PL	-	NO.2/7032

	<p align="center"><b>KOWSAR GISD</b> <b>MEGA MODULE PROJECT</b></p>			
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P&ID Sheet No.: M5-068											
Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
300-SG-06801-C6	DRY SEAL GAS	WATER DROP SEPRATOR V2001	HEADER	15053.00	15.00	5.00	2.200	1.920	OP/PL	-	NO.2/7032
25-PWR-06803-C1	P.W.R	WATER DROP SEPRATOR V2001	SEAL LEG NO.1	0.10	15.00	5.00	2.200	1.100	OP/HL	-	NO.2/6021

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P&ID Sheet No.: M5-069

Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
200-SG-06901-C6	DRY SEAL GAS	300-SG-06801-C6	HEADER	5700.00	15.00	5.00	2.200	1.920	OP/PL	-	NO.2/7032
200-SG-06903-C6	DRY SEAL GAS	300-SG-06801-C6	HDRI SEAL LEG INLET CONE TK-D85	3245.00	15.00	5.00	2.200	1.579	OP/PL	-	NO.2/7032
50-SG-06904-C6	DRY SEAL GAS	050-SG-06901-C6	BOTTOM SEAL GAS BUBBLER SR-D36	59.00	15.00	5.00	2.200	1.920	OP/PL	-	NO.2/7032
80-SG-06906-C6	DRY SEAL GAS	050-SG-06901-C6	250-NG-02806-C6	386.00	15.00	5.00	2.200	1.920	OP/PL	-	NO.2/7032
50-SG-06908-C6	DRY SEAL GAS	050-SG-06901-C6	TRAMP CHUTE TRANSITION CH-H14.4A	150.00	15.00	5.00	2.200	1.920	OP/PL	-	NO.2/7032
50-SG-06909-C6	DRY SEAL GAS	200-SG-06903-C6	PDC CASING TK-H15.1	118.00	15.00	5.00	2.200	1.579	OP/PL	-	NO.2/7032
40-SG-06910-C6	DRY SEAL GAS	050-SG-06901-C6	TRAMP CHUTE TRANSITION CH-H14.4B	150.00	15.00	5.00	2.200	1.920	OP/PL	-	NO.2/7032
150-SG-06911-C6	DRY SEAL GAS	300-SG-06801-C6	200-SG-05419-C6	1047.00	15.00	5.00	2.200	1.579	OP/PL	-	NO.2/7032
50-SG-06912-C6	DRY SEAL GAS	200-SG-06905-C6	25-SG-05501/5502-C6	194.00	15.00	5.00	2.200	1.920	OP/PL	-	NO.2/7032
80-SG-06913-C6	DRY SEAL GAS	300-SG-06901-C6	PURGE GAS COMPRESSOR CP-D20.1	800.00	15.00	5.00	2.200	1.920	OP/PL	-	NO.2/7032
40-SG-06915-C6	DRY SEAL GAS	80-SG-06913-C6	040-SG-02818/2519-C6	100	15	5	2.2	1.92	OP/PL	-	NO.2/7032
50-SG-06902-C6	DRY SEAL GAS	300-SG-06801-C6	FEED GAS DESULFURIZATION UNIT	50.00	15.00	5.00	2.200	1.920	OP/PL	-	NO.2/7032





# KOWSAR GISD MEGA MODULE PROJECT



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P&ID Sheet No.: M5-070											
Line No.	Service	From	To	Des. Flow Rate(Nm3 ,m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
80-SG-07001-C6	DRY SEAL GAS	80-SG-06913-C6	PURGE GAS COMPRESSOR CP-D20.2	400	15	5	2.2	1.92	OP/PL	-	NO.2/7032
50-SG-07002-C6	DRY SEAL GAS	PURGE GAS COMPRESSOR CP-D20.1	80-PG-07004-C6	400.00	45.00	38.00	15.400	14.200	OP/PL	-	NO.2/7032
50-SG-07003-C6	DRY SEAL GAS	PURGE GAS COMPRESSOR CP-D20B	80-PG-07004-C6	400.00	45.00	38.00	15.400	14.200	OP/PL	-	NO.2/7032
80-PG-07004-C6	PURGE GAS	50-SG-07002/7003-C6	ABSORPTION VESSEL DR-D21.1&2	800.00	45.00	38.00	15.400	14.200	OP/PL	-	NO.2/7032
32-MWS-07005-C1	M.W.S	40-MWS-09644-C1	PURGE GAS COMPRESSOR CP-D20.1	2.65	34.00	32.00	4.200	3.800	OP/HL	ET	NOTE.01
32-MWS-07006-C1	M.W.S	40-MWS-09644-C1	PURGE GAS COMPRESSOR CP-D202	2.65	34.00	32.00	4.200	3.800	OP/HL	ET	NOTE.01
32-MWR-07007-C1	M.W.R	PURGE GAS COMPRESSOR CP-D20.1	32-MWR-07009-C1	2.65	42.00	40.00	4.200	3.500	OP/HL	ET	NOTE.01
32-MWR-07008-C1	M.W.R	PURGE GAS COMPRESSOR CP-D20.2	32-MWR-07007-C1	2.65	42.00	40.00	4.200	3.500	OP/HL	ET	NOTE.01
40-MWR-07009-C1	M.W.R	32-MWR-07009-C1	100-MWR-09627-C1	5.30	42.00	40.00	4.200	3.500	OP/HL	WINTERIZE /F	NOTE.01



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Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
80-PG-07201-C6	PURGE GAS	ABSORPTION VESSEL DR-D21.1&2	PURGE GAS TANK TK-D22.3	800.00	45.00	38.00	15.400	14.000	OP/PL	-	NO.2/7032
80-PG-07202-C6	PURGE GAS	80-PG-07201-C6	300-SG-06801-C6(TEMPORARY BACK UP)	1500.00	45.00	38.00	2.200	1.920	OP/PL	-	NO.2/7032
80-PG-07203-C6	PURGE GAS	80-PG-07202-C6	EMERGENCY PURGE GAS DISTRIBUTION	706.00	45.00	38.00	1.200	0.469	OP/PL	-	NO.2/7032
25-IP-07204-C6	IMPULSE PURGE GAS	80-PG-07202-C6	IMPULSE PURGE GAS DISTRIBUTION	100.00	45.00	38.00	4.000	4.000	OP/PL	-	NO.2/7032
80-PG-07205-C6	IMPULSE PURGE GAS	80-PG-07201-C6	PURGE GAS TANK TK-D22.1	800.00	45.00	38.00	15.400	14.000	OP/PL	-	NO.2/7032
80-PG-07206-C6	IMPULSE PURGE GAS	80-PG-07201-C6	PURGE GAS TANK TK-D22.2	800.00	45.00	38.00	15.400	14.000	OP/PL	-	NO.2/7032

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P&ID Sheet No.: M5-074

Line No.	Service	From	To	Des. Flow Rate(Nm3 ,m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
25-IP-07401-C6	IMPULSE PURGE GAS	25-IP-07204-C6	15-IP-07403/7402-C6	100.00	45.00	38.00	4.000	4.000	OP/PL	-	NO.2/7032
15-IP-07402-C6	IMPULSE PURGE GAS	25-IP-07401-C6	PDT-D43	50.00	45.00	38.00	4.00	4.00	OP/PL	-	NO.2/7032
15-IP-07403-C6	IMPULSE PURGE GAS	25-IP-07401-C6	PDT-D43	50.00	45.00	38.00	4.00	4.00	OP/PL	-	NO.2/7032
15-IP-07404-C6	IMPULSE PURGE GAS	25-IP-07401-C6	PDT-A44	50.00	45.00	38.00	4.00	4.00	OP/PL	-	NO.2/7032
20-IP-07405-C6	IMPULSE PURGE GAS	25-IP-07401-C6	500-TGF-00201-C2	90.00	45.00	38.00	4.000	4.000	OP/PL	-	NO.2/7032
15-IP-07406-C6	IMPULSE PURGE GAS	25-IP-07446-C6	PDT-D54.3	50.00	45.00	38.00	4.00	4.00	OP/PL	-	NO.2/7032
15-IP-07407-C6	IMPULSE PURGE GAS	25-IP-07446-C6	PDT-D54.3	50.00	45.00	38.00	4.00	4.00	OP/PL	-	NO.2/7032
15-IP-07408-C6	IMPULSE PURGE GAS	25-IP-07446-C6	PDT-D54.2	50.00	45.00	38.00	4.00	4.00	OP/PL	-	NO.2/7032
15-IP-07409-C6	IMPULSE PURGE GAS	25-IP-07446-C6	PDT-D54.2	50.00	45.00	38.00	4.00	4.00	OP/PL	-	NO.2/7032
15-IP-07410-C6	IMPULSE PURGE GAS	25-IP-07446-C6	PDT-D54.1	50.00	45.00	38.00	4.00	4.00	OP/PL	-	NO.2/7032
15-IP-07411-C6	IMPULSE PURGE GAS	25-IP-07446-C6	PDT-D54.1	50.00	45.00	38.00	4.00	4.00	OP/PL	-	NO.2/7032
40-PG-07412-C6	PURGE GAS	40-PG-07443-C5	25-PRG-00520-C6	150.00	45.00	38.00	1.200	0.469	OP/PL	-	NO.2/7032
40-PG-07415-C6	PURGE GAS	40-PG-07443-C5	25-PRG-00620-C6	150.00	45.00	38.00	1.200	0.469	OP/PL	-	NO.2/7032
40-PG-07417-C6	PURGE GAS	40-PG-07444-C6	25-PRG-00720-C6	150.00	45.00	38.00	1.200	0.469	OP/PL	-	NO.2/7032
40-PG-07419-C6	PURGE GAS	65-PG-07442-C6	25-PRG-00820-C6	150.00	45.00	38.00	1.200	0.469	OP/PL	-	NO.2/7032
40-PG-07420-C6	PURGE GAS	65-PG-07442-C6	25-PRG-00920-C6	150.00	45.00	38.00	1.200	0.469	OP/PL	-	NO.2/7032
25-PG-07421-C6	PURGE GAS	50-PG-07443-C6	600-PRG-01001-C2	60.00	45.00	38.00	1.200	0.469	OP/PL	-	NO.2/7032
50-PG-07422-C6	PURGE GAS	80-PG-07203-C6	1200-PRG-01002-C2	230.00	45.00	38.00	1.200	0.469	OP/PL	-	NO.2/7032
25-IP-07423-C6	IMPULSE PURGE GAS	25-IP-07204-C6	REFORMED GAS COOLER SR-A42	100.00	45.00	38.00	4.00	4.00	OP/PL	-	NO.2/7032
40-PG-07424-C6	PURGE GAS	40-PG-07433-C6	1150-TGF-00402-C2	150.00	45.00	38.00	1.200	0.469	OP/PL	-	NO.2/7032
40-PG-07426-C6	PURGE GAS	50-PG-07443-C6	25-SG-04002-C6	150.00	45.00	38.00	1.200	0.469	OP/PL	-	NO.2/7032
15-IP-07427-C6	IMPULSE PURGE GAS	25-IP-07445-C6	FIC-D44.2	50.00	45.00	38.00	4.00	4.00	OP/PL	-	NO.2/7032
15-IP-07428-C6	IMPULSE PURGE GAS	25-IP-07445-C6	FIC-D44.1	50.00	45.00	38.00	4.00	4.00	OP/PL	-	NO.2/7032
15-IP-07429-C6	IMPULSE PURGE GAS	25-IP-07445-C6	FIC-D44.4	50.00	45.00	38.00	4.00	4.00	OP/PL	-	NO.2/7032
15-IP-07430-C6	IMPULSE PURGE GAS	25-IP-07445-C6	FIC-D44.3	50.00	45.00	38.00	4.00	4.00	OP/PL	-	NO.2/7032
15-IP-07431-C6	IMPULSE PURGE GAS	25-IP-07401-C6	FIC-A79	50.00	45.00	38.00	4.00	4.00	OP/PL	-	NO.2/7032
40-PG-07432-C6	PURGE GAS	40-PG-07444-C6	25-PG-06220-C6	150.00	45.00	38.00	1.200	0.469	OP/PL	-	NO.2/7032
40-PG-07433-C6	PURGE GAS	50-PG-07443-C6	1200-CG-06218-C2	150.00	45.00	38.00	1.200	0.469	OP/PL	-	NO.2/7032
50-PG-07435-C6	PURGE GAS	80-PG-07203-C6	80-PG-07203-C6	600.00	45.00	38.00	15.400	14.000	OP/PL	-	NO.2/7032

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Line No.	Service	From	To	Des. Flow Rate(Nm3 ,m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
40-PG-07436-C6	PURGE GAS	50-PG-07443-C6	40-SG-06708-C6	150.00	45.00	38.00	1.200	0.469	OP/PL	-	NO.2/7032
25-IP-07437-C6	IMPULSE PURGE GAS	25-IP-07204-C6	GAS ANALYZER BUILDING	100.00	45.00	38.00	4.00	4.00	OP/PL	-	NO.2/7032
15-IP-07438-C6	IMPULSE PURGE GAS	25-IP-07446-C6	PRODUCT COOLER DUST COLLECTION SYSTEM(PT-H27)	50.00	45.00	38.00	4.00	4.00	OP/PL	-	NO.2/7032
15-IP-07439-C6	IMPULSE PURGE GAS	25-IP-07446-C6	B.S.G DUST COOLECTION PT-D25	50.00	45.00	38.00	4.00	4.00	OP/PL	-	NO.2/7032
15-IP-07440-C6	IMPULSE PURGE GAS	25-IP-07446-C6	PT-P14	50.00	45.00	38.00	4.00	4.00	OP/PL	-	NO.2/7032
40-PG-07441-C6	PURGE GAS	50-PG-07443-C6	PURGE GAS ACCUMULATOR TK-G23	150.00	45.00	38.00	1.200	0.469	OP/PL	-	NO.2/7032
65-PG-07442-C6	PURGE GAS	80-PG-07203-C6	HEADER	400.00	45.00	38.00	1.200	0.469	OP/PL	-	NO.2/7032
50-PG-07447-C5	PURGE GAS	80-PG-07203-C6	HEADER	240.00	45.00	38.00	1.200	0.469	OP/PL	-	NO.2/7032
40-PG-07444-C6	PURGE GAS	65-PG-07442-C6	40-PG-07417/7432-C6	150.00	45.00	38.00	1.200	0.469	OP/PL	-	NO.2/7032
25-IP-07445-C6	IMPULSE PURGE GAS	25-IP-07204-C6	HEADER	100.00	45.00	38.00	4.00	4.00	OP/PL	-	NO.2/7032
25-IP-07446-C6	IMPULSE PURGE GAS	25-IP-07204-C6	HEADER	100.00	45.00	38.00	4.00	4.00	OP/PL	-	NO.2/7032
40-PG-07443-C6	PURGE GAS	65-PG-07442-C6	40-PG-07412/7415-C6	150.00	45.00	38.00	1.200	0.469	OP/PL	-	NO.2/7032

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Line No.	Service	From	To	Des. Flow Rate(Nm3 m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
150-IG-07601-C6	INERT GAS	INERT GAS GENERATOR GG-D25	400-SG-06700-C6	3000.00	45.00	38.00	1.000	0.656	OP/PL	-	NO.2/7032
450-PWR-07603-C1	P.W.R	INERT GAS GENERATOR GG-D25	INERT GAS SUMP TK-E90	150.00	46.00	44.00	2.600	1.500	OP/HL	-	NO.2/6021
250-PWR-07604-C1	P.W.R	INERT GAS SUMP PUMP(PU-E91.1)	500-PWR-08319-C1	350.00	66.00	59.50	2.500	2.000	OP/HL	-	NO.2/6021
250-PWR-07605-C1	P.W.R	INERT GAS SUMP PUMP(PU-E91.2)	250-PWR-07604-C1	350.00	66.00	59.50	2.500	2.000	OP/HL	-	NO.2/6021
200-PWR-07606-C1	P.W.R	INERT GAS SUMP PUMP(PU-E92)	250-PWR-07604-C1	150.00	66.00	59.50	2.500	2.000	OP/HL	-	NO.2/6021
65-MWR-07610-C1	M.W.R	INERT GAS GENERATOR GG-D25	450-PWR-07603-C1	30.00	31.00	29.00	2.600	2.000	OP/HL	WINTERIZE /F	NOTE.01
65-MWR-07608-C1	M.W.R	INERT GAS GENERATOR GG-D25	450-PWR-07603-C1	30.00	46.00	44.00	2.600	1.500	OP/HL	WINTERIZE /F	NOTE.01

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250-SL-08001-C7	SLURRY	200-SL-06111/0422-C7	200-SL-08002/8003-C7	300.00	72.90	65.40	2.500	2.000	OP/HL	-	NO.2/9005(HEAVY)
200-SL-08002-C7	SLURRY	250-SL-08001-C7	PROCESS CLASSIFIER DS-E25	150.00	72.90	65.40	2.500	2.000	OP/HL	-	NO.2/9005(HEAVY)
200-SL-08003-C7	SLURRY	250-SL-08001-C7	PROCESS CLASSIFIER DS-E25	150.00	72.90	65.40	2.500	2.000	OP/HL	-	NO.2/9005(HEAVY)
100-SL-08004-C7	SLURRY	PROCESS CLASSIFIER DS-E25	SCRUBBER BLOWDOWN SUMP TK-E93	60.00	72.90	65.40	0.100	0.090	OP/HL	-	NO.2/6021(LIGHT)
450-PWR-08005-C1	P.W.R	PROCESS CLASSIFIER DS-E25	350-PWR-08006-C1	150.00	72.90	65.40	0.100	0.090	OP/HL	-	NO.2/6021
150-PWR-08009-C1	P.W.R	PROCESS CLASSIFIER DS-E25	350-PWR-08006-C1	150.00	72.90	65.40	0.100	0.090	OP/HL	-	NO.2/6021
350-PWR-08006-C1	P.W.R	150-PWR-08005/8009-C1	1300-PWR-08100-C1	300.00	72.90	65.40	0.100	0.090	OP/HL	-	NO.2/6021
100-SL-08007-C7	SLURRY	100-SL-08008-C7	1300-PWR-08100-C1	60.00	72.90	65.40	2.500	2.000	OP/HL	WINTERIZE /F	NOTE.01
100-SL-08008-C7	SLURRY	PU-E94	250-SL-08001-C7	60.00	72.90	65.40	2.500	2.000	OP/HL	-	NO.2/6021(LIGHT)

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1300-PWR-08100-C1	P.W.R	RETURN CONTAMINATED WATER FROM PLANT	CLARIFIER CF-E31	4334	73.50	66.50	1	0	OP/HL	-	NO.2/6021
1300-PWR-08101-C1	P.W.R	CLARIFIER CF-E31	HOT CONTAMINATED PROCESS WATER SUMP TK-E41	4334.00	73.50	66.50	0.000	0.000	OP/HL	-	NO.2/6021
100-SL-08102-C7	SLURRY	CLARIFIER CF-E31	PU-E33.3	50.00	73.50	66.50	0.700	0.000	OP/HL	-	NO.2/9005(HEAVY)
100-SL-08103-C7	SLURRY	CLARIFIER CF-E31	PU-E33.2	50.00	73.50	66.50	0.700	0.000	OP/HL	-	NO.2/9005(HEAVY)
100-SL-08104-C7	SLURRY	CLARIFIER CF-E31	PU-E33.1	50.00	73.50	66.50	0.700	0.000	OP/HL	-	NO.2/9005(HEAVY)
100-SL-08105-C7	SLURRY	PU-E33.3	100-SL-08114-C7	50.00	73.50	66.50	3.000	2.500	OP/HL	-	NO.2/9005(HEAVY)
100-SL-08106-C7	SLURRY	PU-E33.2	100-SL-08114-C7	50.00	73.50	66.50	3.000	2.500	OP/HL	-	NO.2/9005(HEAVY)
100-SL-08107-C7	SLURRY	PU-E33.1	100-SL-08114-C7	50.00	73.50	66.50	3.000	2.500	OP/HL	-	NO.2/9005(HEAVY)
80-PWS-08108-C1	P.W.S	80-PWS-08340-C1	100-SL-08105-C7	10.00	31.00	29.00	9.000	8.000	OP/HL	-	NO.2/6021
15-PWS-08109-C1	P.W.S	80-PWS-08108-C1	PU-E33.3	1.40	31.00	29.00	9.000	8.000	OP/HL	-	NO.2/6021
80-PWS-08110-C1	P.W.S	80-PWS-08340-C1	100-SL-08106-C7	10.00	31.00	29.00	9.000	8.000	OP/HL	-	NO.2/6021
15-PWS-08111-C1	P.W.S	40-PWS-08110-C1	PU-E33.2	1.40	31.00	29.00	9.000	8.000	OP/HL	-	NO.2/6021
40-PWS-08112-C1	P.W.S	80-PWS-08340-C1	100-SL-08107-C7	10.00	31.00	29.00	9.000	8.000	OP/HL	-	NO.2/6021
15-PWS-08113-C1	P.W.S	40-PWS-08112-C1	PU-E33.1	1.40	31.00	29.00	9.000	8.000	OP/HL	-	NO.2/6021
100-SL-08114-C7	SLURRY	100-SL-08105-C7	SETTLING POND(SB-E93.1)	100.00	73.50	66.50	3.000	2.500	OP/HL	WINTERIZE/F	NO.2/9005(HEAVY)
100-SL-08115-C7	SLURRY	100-SL-08106-C7	SETTLING POND(SB-E93.1)	50.00	73.50	66.50	3.000	2.500	OP/HL	-	NO.2/9005(HEAVY)
80-PWS-08116-C1	P.W.S	100-SL-08106-C7	SETTLING POND(SB-E93.1)	32.00	31.00	29.00	9.000	8.000	OP/HL	WINTERIZE/F	NOTE.01
80-PWS-08117-C7	P.W.S	100-SL-08106-C7	SETTLING POND(SB-E93.2)	32.00	31.00	29.00	9.000	8.000	OP/HL	WINTERIZE/F	NOTE.01
40-PWS-08118-C1	P.W.S	100-SL-08106-C7	SETTLING POND(SB-E93.2)	5.00	31.00	29.00	9.000	8.000	OP/HL	-	NO.2/6021
40-PWS-08119-C1	P.W.S	100-SL-08105-C7	SETTLING POND(SB-E93.2)	5.00	31.00	29.00	9.000	8.000	OP/HL	-	NO.2/6021
150-SL-08121-C7	SLURRY	SETTLING POND SUMP TK-E93	PU-E97.1	100.00	71.50	64.50	0.500	0.100	OP/HL	WINTERIZE/F	NOTE.01
150-SL-08122-C7	SLURRY	SETTLING POND SUMP TK-E93	PU-E97.2	100.00	71.50	64.50	0.500	0.100	OP/HL	WINTERIZE/F	NOTE.01
150-SL-08123-C7	SLURRY	PU-E97.1	150-SL-08125-C7	100.00	71.50	64.50	2.200	1.500	OP/HL	WINTERIZE/F	NOTE.01
150-SL-08124-C7	SLURRY	PU-E97.2	150-SL-08125-C7	100.00	71.50	64.50	2.200	1.500	OP/HL	WINTERIZE/F	NOTE.01
150-SL-08125-C7	SLURRY	150-SL-08123/8124-C7	CLARIFIER CF-E31	100.00	71.50	64.50	2.200	1.500	OP/HL	WINTERIZE/F	NOTE.01

	<h1 style="text-align: center;">KOWSAR GISD</h1> <h2 style="text-align: center;">MEGA MODULE PROJECT</h2>			
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P&ID Sheet No.: M5-081											
Line No.	Service	From	To	Des. Flow Rate(Nm3 ,m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
100-SL-08126-C7	SLURRY	80-PWS-08127-C1	CLARIFIER OVERFLOW	100.00	70.40	66.00	3.000	2.500	OP/HL	-	NO.2/9005(HEAVY)
80-PWS-08127-C1	P.W.S	80-PWS-08340-C1	40-PWS-08126/8128/8135-C1	32.00	31.00	29.00	9.000	8.000	OP/HL	WINTERIZE /F	NO.2/6021
40-PWS-08128-C1	P.W.S	80-PWS-08127-C1	CLARIFIER OVERFLOW	5.00	31.00	29.00	9.000	8.000	OP/HL	-	NO.2/6021
50-PWS-08129-C1	P.W.S	ENDERFLOW ROOM SUMP	CLARIFIER CF-E31	10.00	69.00	50.00	2.500	2.000	OP/HL	WINTERIZE /F	NOTE.01
40-PWS-08130-C1	P.W.S	80-PWS-08108-C1	HOSE STATION	5.00	31.00	29.00	9.000	8.000	OP/HL	-	NO.2/6021
25-PWS-08131-C1	P.W.S	80-PWS-08340-C1	15-PWS-08132/8133-C1	3.00	31.00	29.00	9.000	8.000	OP/HL	ET	NOTE.01
15-PWS-08132-C1	P.W.S	25-PWS-08131-C1	PU-E97.2	1.40	31.00	29.00	9.000	8.000	OP/HL	ET	NOTE.01
15-PWS-08133-C1	P.W.S	25-PWS-08131-C1	PU-E97.1	1.40	31.00	29.00	9.000	8.000	OP/HL	ET	NOTE.01
200-SL-08135-C7	SLURRY	80-PWS-08127-C1	CLARIFIER OVERFLOW	214.00	72.80	49.10	1.900	1.400	OP/HL	-	NOTE.01
150-SL-08134-C1	SLURRY	SETTLING POND SUMP	TRENCH	65.00	71.50	64.50	0.000	0.000	OP/HL	-	NO.2/6021(LIGHT)
50-SL-08136-C7	SLURRY	100-SL-08105-C7	FEED CHAMBER CLARIFIRE	65.00	71.50	64.50	0.000	0.000	OP/HL	-	NO.2/6021(LIGHT)
50-SL-08137-C7	SLURRY	100-SL-08106-C7	FEED CHAMBER CLARIFIRE	65.00	71.50	64.50	0.000	0.000	OP/HL	-	NO.2/6021(LIGHT)
50-SL-08138-C7	SLURRY	100-SL-08107-C7	FEED CHAMBER CLARIFIRE	65.00	71.50	64.50	0.000	0.000	OP/HL	-	NO.2/6021(LIGHT)

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P&ID Sheet No.: M5-082

Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
500-PWS-08201-C1	P.W.S	HOT CONTAMINATED PROCESS WATER SUMP TK-E41	HOT PROCESS WATER SUPPLY PUMP PU-E61.2	1350.00	72.80	66.10	0.500	0.100	OP/HL	-	NO.2/6021
500-PWS-08202-C1	P.W.S	HOT CONTAMINATED PROCESS WATER SUMP TK-E41	HOT PROCESS WATER SUPPLY PUMP PU-E61.1	1350.00	72.80	66.10	0.500	0.100	OP/HL	-	NO.2/6021
450-PWS-08203-C1	P.W.S	HOT PROCESS WATER SUPPLY PUMP PU-E61.2	450-PWS-08214-C1	1350.00	72.80	66.10	10.00	9.000	OP/HL	-	NO.2/6021
450-PWS-08204-C1	P.W.S	HOT PROCESS WATER SUPPLY PUMP PU-E61.1	450-PWS-08214-C1	1350.00	72.80	66.10	10.00	9.000	OP/HL	-	NO.2/6021
650-PWS-08205-C1	P.W.S	HOT CONTAMINATED PROCESS WATER SUMP TK-E41	COOLING TOWER CIRCULATING PUMP PU-E45.3	1560.70	72.80	66.10	0.500	0.100	OP/HL	-	NO.2/6021
650-PWS-08206-C1	P.W.S	HOT CONTAMINATED PROCESS WATER SUMP TK-E41	COOLING TOWER CIRCULATING PUMP PU-E45.2	1560.70	72.80	66.10	0.500	0.100	OP/HL	-	NO.2/6021
650-PWS-08207-C1	P.W.S	HOT CONTAMINATED PROCESS WATER SUMP TK-E41	COOLING TOWER CIRCULATING PUMP PU-E45.1	1560.70	72.80	66.10	0.500	0.100	OP/HL	-	NO.2/6021
500-PWS-08208-C1	P.W.S	PU-E45.3	750-PWS-08212-C1	1560.70	72.80	66.10	2.500	2.000	OP/HL	-	NO.2/6021
500-PWS-08209-C1	P.W.S	PU-E45.2	750-PWS-08212-C1	1560.70	72.80	66.10	2.500	2.000	OP/HL	-	NO.2/6021
500-PWS-08210-C1	P.W.S	PU-E45.1	750-PWS-08212-C1	1560.70	72.80	66.10	2.500	2.000	OP/HL	-	NO.2/6021
750-PWS-08212-C1	P.W.S	500-PWS-08208/8209/8210-C1	600-PWS-08301/8302-C1	3121.40	72.80	66.10	2.500	2.000	OP/HL	-	NO.2/6021
400-PWS-08213-C1	P.W.S	750-PWS-08212-C1	HOT CONTAMINATED PROCESS WATER SUMP TK-E41	1000.00	72.80	66.10	2.500	2.000	OP/HL	-	NO.2/6021
450-PWS-08214-C1	P.W.S	450-PWS-08203/8204-C1	400-PWS-08503-C1	1350.00	72.80	66.10	10.00	9.000	OP/HL	-	NO.2/6021
450-PWS-08215-C1	P.W.S	HOT CONTAMINATED PROCESS WATER SUMP TK-E41	TRENCH	575.00	69.00	63.00	0.000	0.000	OP/HL	-	NO.2/6021
150-DW-08216-C1	DRAIN WATER	HOT CONTAMINATED PROCESS WATER SUMP TK-E41	SUMP DRAIN	80.00	69.00	63.00	0.500	0.000	OP/PL	-	NO.2/6021



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P&ID Sheet No.: M5-083(1/2)

Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
600-PWS-08301-C1	P.W.S	750-PWS-08212-C1	PROCESS COOLING TOWER CT-E42.1	1503.00	72.80	66.10	2.500	2.000	OP/HL	-	NO.2/6021
600-PWS-08302-C1	P.W.S	750-PWS-08212-C1	PROCESS COOLING TOWER CT-E42.2	1503.00	72.80	66.10	2.500	2.000	OP/HL	-	NO.2/6021
500-PWS-08303-C1	P.W.S	COLD CONTAMINATED PROCESS WATER SUMP TK-E42	PROCESS COOLING WATER SUPPLY PUMP PU-E42.4	1095.00	31.00	29.00	0.600	0.100	OP/HL	-	NO.2/6021
500-PWS-08304-C1	P.W.S	COLD CONTAMINATED PROCESS WATER SUMP TK-E42	PROCESS COOLING WATER SUPPLY PUMP PU-E42.3	1095.00	31.00	29.00	0.600	0.100	OP/HL	-	NO.2/6021
500-PWS-08305-C1	P.W.S	COLD CONTAMINATED PROCESS WATER SUMP TK-E42	PROCESS COOLING WATER SUPPLY PUMP PU-E42.2	1095.00	31.00	29.00	0.600	0.100	OP/HL	-	NO.2/6021
500-PWS-08306-C1	P.W.S	COLD CONTAMINATED PROCESS WATER SUMP TK-E42	PROCESS COOLING WATER SUPPLY PUMP PU-E42.1	1095.00	31.00	29.00	0.600	0.100	OP/HL	-	NO.2/6021
450-PWS-08307-C1	P.W.S	PU-E42.4	800-PWS-08311-C1	1095.00	31.00	29.00	9.000	8.000	OP/HL	-	NO.2/6021
450-PWS-08308-C1	P.W.S	PU-E42.3	800-PWS-08311-C1	1095.00	31.00	29.00	9.000	8.000	OP/HL	-	NO.2/6021
450-PWS-08309-C1	P.W.S	PU-E42.2	800-PWS-08311-C1	1095.00	31.00	29.00	9.000	8.000	OP/HL	-	NO.2/6021
450-PWS-08310-C1	P.W.S	PU-E42.1	800-PWS-08311-C1	1095.00	31.00	29.00	9.000	8.000	OP/HL	-	NO.2/6021
800-PWS-08311-C1	P.W.S	450-PWS-08307/8308/8309/8310-C1	500-PWS-08416-C1	3285.00	31.00	29.00	9.000	8.000	OP/HL	-	NO.2/6021
200-SW-08313-C1	SEAL WATER	200-SW-09301-C1	200-SW-09301-C1	397.00	31.00	29.00	2.000	1.500	OP/HL	-	NO.2/6021
150-PWR-08314-C1	P.W.R	750-PWS-08212-C1	SURFACE DRAINAGE CHANNEL	117.00	72.80	66.10	2.50	2.00	OP/HL	WINTERIZE /F	NOTE.01
40-PWS-08315-C1	P.W.S	800-PWS-08311-C1	HOSE STATION AT COOLING TOWER BASE	5.00	31.00	29.00	9.000	8.000	OP/HL	WINTERIZE /F	NOTE.01
40-PWS-08316-C1	P.W.S	800-PWS-08311-C1	HOSE STATION AT PUMP AREA	5.00	31.00	29.00	9.000	8.000	OP/HL	WINTERIZE /F	NOTE.01
50-SW-08317-C1	SEAL WATER	200-SW-09301-C1	FLOCCULANT FEED PUMP PU-E40.1/2	4.00	31.00	29.00	2.000	1.500	OP/HL	WINTERIZE /F	NOTE.01

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P&ID Sheet No.: M5-083(2/2)

Line No.	Service	From	To	Des. Flow Rate(Nm3 ,m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
80-PWR-08318-C1	BLOWDOWN	500-PWR-08319-C1	HOT WELL	35.00	72.00	54.00	1.60	1.10	OP/HL	WINTERIZE /F	NOTE.01
500-PWR-08319-C1	P.W.S	350-PWR-01909-C1	600-PWR-08335-C1	847.00	72.00	54.00	1.60	1.10	OP/HL	-	NO.2/6021
400-PWR-08320-C1	P.W.S	600-PWR-08335-C1	PROCESS COOLING TOWER CT-E43.1	580.20	66.20	49.60	1.600	1.100	OP/HL	-	NO.2/6021
400-PWR-08321-C1	P.W.S	600-PWR-08335-C1	PROCESS COOLING TOWER CT-E43.2	580.20	66.20	49.60	1.600	1.100	OP/HL	-	NO.2/6021
350-PWS-08322-C1	P.W.S	CLEAN COLD WELL	PROCESS COOLING WATER SUPPLY PUMP PU-E43.2	433.00	31.00	29.00	0.50	0.10	OP/HL	-	NO.2/6021
350-PWS-08323-C1	P.W.S	CLEAN COLD WELL	PROCESS COOLING WATER SUPPLY PUMP PU-E43.1	433.00	31.00	29.00	0.50	0.10	OP/HL	-	NO.2/6021
300-PWS-08324-C1	P.W.S	CLEAN COLD PROCESS WATER PUMP PU-E43.2	400-PWS-08325-C1	433.00	31.00	29.00	7.20	6.50	OP/HL	-	NO.2/6021
400-PWS-08325-C1	P.W.S	300-PWS-08324/8338/8339-C1	500-PWS-08414-C1	866.00	31.00	29.00	7.20	6.50	OP/HL	-	NO.2/6021
200-PWS-08326-C1	P.W.S	CLEAN COLD PROCESS WATER SUMP TK-E43	INERT GAS GENERATOR SUPPLY PUMP PU-E62	150.00	31.00	29.00	0.50	0.10	OP/HL	-	NO.2/6021
150-PWS-08327-C1	P.W.S	INERT GAS GENERATOR SUPPLY PUMP PU-E62	INERT GAS GENERATION GG-D25	150.00	31.00	29.00	2.60	2.00	OP/HL	WINTERIZE /F	NOTE.01
350-PWS-08328-C1	P.W.S	CLEAN COLD PROCESS WATER SUMP TK-E43	HEAT EXCHANGER COLD WATER PUMP PU -E64.2	550.00	31.00	29.00	0.50	0.10	OP/HL	-	NO.2/6021
350-PWS-08329-C1	P.W.S	CLEAN COLD PROCESS WATER SUMP TK-E43	HEAT EXCHANGER COLD WATER PUMP PU -E64.1	550.00	31.00	29.00	0.50	0.10	OP/HL	-	NO.2/6021
300-PWS-08330-C1	P.W.S	HEAT EXCHANGER COLD WATER PUMP PU -E64.2	300-PWS-08332-C1	550.00	31.00	29.00	3.00	2.50	OP/HL	-	NO.2/6021
300-PWS-08331-C1	P.W.S	HEAT EXCHANGER COLD WATER PUMP PU -E64.1	300-PWS-08332-C1	550.00	31.00	29.00	3.00	2.50	OP/HL	-	NO.2/6021
300-PWS-08332-C1	P.W.S	300-PWS-08330/8331-C1	HEADER	550.00	31.00	29.00	3.000	2.500	OP/HL	-	NO.2/6021
100-SW-08333-C1	SEAL WATER	225-SW-93134-P3	CLEAN COLD PROCESS WATER SUMP TK-E43	57.00	31.00	29.00	2.000	1.500	OP/HL	WINTERIZE /F	NOTE.01
100-SW-08334-C1	SEAL WATER	100-SW-08333-C1	100-SW-08333-C1	57.00	31.00	29.00	2.000	1.500	OP/HL	WINTERIZE /F	NOTE.01
600-PWR-08335-C1	P.W.S	500-PWR-08319-C1	400-PWR-08320/8321-C1	1160.30	66.20	49.60	1.600	1.100	OP/HL	-	NO.2/6021
250-PWS-08336-C1	P.W.S	CLEAN COLD PROCESS WATER SUMP TK-E43	TRENCH	180.00	31.00	29.00	0.000	0.000	OP/HL	-	NO.2/6021
350-PWS-08337-C1	P.W.S	CLEAN COLD PROCESS WATER SUMP TK-E43	CLEAN COLD PROCESS WATER PUMP PU-E43.3	433.00	31.00	29.00	0.50	0.10	OP/HL	-	NO.2/6021

	<p style="text-align: center;"><b>KOWSAR GISD</b> <b>MEGA MODULE PROJECT</b></p>			
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P&ID Sheet No.: M5-083(2/2)											
Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
300-PWS-08338-C1	P.W.S	CLEAN COLD PROCESS WATER PUMP PU-E43.3	400-PWS-08325-C1	433.00	31.00	29.00	7.20	6.50	OP/HL	-	NO.2/6021
300-PWS-08339-C1	P.W.S	CLEAN COLD PROCESS WATER PUMP PU-E43.1	400-PWS-08325-C1	433.00	31.00	29.00	7.20	6.50	OP/HL	-	NO.2/6021
80-PWS-08340-C1	P.W.S	800-PWS-08311-C1	40-PWS-08108-C1	32.00	31.00	29.00	9.000	8.000	OP/HL	WINTERIZE/F	NOTE.01
250-PWR-08341-C1	P.W.S	600-PWR-08335-C1	CLEAN COLD PROCESS WATER SUMP TK-E43	230.00	62.00	47.00	1.600	1.100	OP/HL	-	NO.2/6021
150-DW-08342-C1	DRAIN WATER	CLEAN COLD PROCESS WATER SUMP TK-E43	SUMP DRAIN	80.00	31.00	29.00	0.500	0.000	OP/PL	-	NO.2/6021
150-SW-08345-C1	SEAL WATER	225-SW-93134-P3	TK-S10	80.00	31.00	29.00	0.500	0.000	OP/PL	-	NO.2/6021

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P&ID Sheet No.: M5-084

Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
100-PWS-08400-C1	P.W.S	400-PWS-08413-C1	HEADER	20.00	31.00	29.00	9.000	8.000	OP/HL	WINTERIZE/F	NOTE.01
700-PWS-08401-C1	P.W.S	800-PWS-08311-C1	450-PWS-08402-C1	2750.00	31.00	29.00	9.000	8.000	OP/HL	-	NO.2/6021
450-PWS-08402-C1	P.W.S	700-PWS-08401-C1	TOP GAS SCRUBBER SR-A45	1001.50	31.00	29.00	9.000	6.000	OP/HL	-	NO.2/6021
400-PWS-08403-C1	P.W.S	700-PWS-08401-C1	TOP GAS SCRUBBER SR-A45	820.00	31.00	29.00	9.000	6.000	OP/HL	-	NO.2/6021
400-PWS-08404-C1	P.W.S	700-PWS-08401-C1	450-PWS-00407-C1	900.00	31.00	29.00	9.000	8.000	OP/HL	-	NO.2/6021
250-PWS-08405-C1	P.W.S	SCRUBBER VENTURI BOOSTER PUMP PU-E07.1	250-PWS-08407-C1	414.00	31.00	29.00	6.100	5.500	OP/HL	-	NO.2/6021
250-PWS-08406-C1	P.W.S	SCRUBBER VENTURI BOOSTER PUMP PU-E07.2	250-PWS-08407-C1	414.00	31.00	29.00	6.100	5.500	OP/HL	-	NO.2/6021
250-PWS-08407-C1	P.W.S	250-PWS-08405/8406-C1	TOP GAS SCRUBBER SR-A45	329.00	31.00	29.00	6.100	5.500	OP/HL	-	NO.2/6021
50-PWS-08408-C1	P.W.S	700-PWS-08401-C1	250-SL-00418-C7	10.00	31.00	29.00	9.000	6.000	OP/HL	WINTERIZE/F	NOTE.01
300-PWS-08409-C1	P.W.S	400-PWS-08325-C1	300-PWS-01906-C1	495.00	31.00	29.00	7.200	4.500	OP/HL	-	NO.2/6021
50-PWS-08410-C1	P.W.S	400-PWS-08413-C1	250-SL-06107-C7	10.00	31.00	29.00	9.000	6.000	OP/HL	WINTERIZE/F	NOTE.01
150-PWS-08411-C1	P.W.S	400-PWS-08413-C1	COOLING GAS SCRUBBER SR-A70	129.00	31.00	29.00	9.000	6.000	OP/HL	WINTERIZE/F	NOTE.01
150-PWS-08412-C1	P.W.S	250-PWS-08407-C1	COOLING GAS SCRUBBER SR-A70	129.00	31.00	29.00	6.100	5.500	OP/HL	WINTERIZE/F	NOTE.01
400-PWS-08413-C1	P.W.S	500-PWS-08416-C1	COOLING GAS SCRUBBER SR-A70	891.00	31.00	29.00	9.000	6.000	OP/HL	-	NO.2/6021
500-PWS-08414-C1	P.W.S	400-PWS-08325-C1	250-PWS-08415-C1	348.00	31.00	29.00	7.200	6.000	OP/HL	-	NO.2/6021
250-PWS-08415-C1	P.W.S	500-PWS-08414-C1	SEAL GAS COOLER SR-D01	348.00	31.00	29.00	7.200	6.000	OP/HL	-	NO.2/6021
500-PWS-08416-C1	P.W.S	800-PWS-08311-C1	400-PWS-08413-C1	1464.00	31.00	29.00	9.000	8.000	OP/HL	-	NO.2/6021
100-PWS-08417-C1	P.W.S	800-PWS-08311-C1	BOTTOM SEAL GAS BUBBLER SR-D36	60.00	31.00	29.00	9.000	8.000	OP/HL	WINTERIZE/F	NOTE.01
40-SW-08422-C1	SEAL WATER	400-PWS-08325-C1	HEADER	7.00	31.00	29.00	7.200	6.500	OP/HL	WINTERIZE/F	NOTE.01
300-PWS-08439-C1	P.W.S	500-PWS-08416-C1	300-PWS-08440/8441-C1	414.00	31.00	29.00	1.500	1.000	OP/HL	-	NO.2/6021
300-PWS-08440-C1	P.W.S	300-PWS-08439-C1	SCRUBBER VENTURI BOOSTER PUMP PU-E07.1	414.00	31.00	29.00	1.500	1.000	OP/HL	-	NO.2/6021
300-PWS-08441-C1	P.W.S	300-PWS-08439-C1	SCRUBBER VENTURI BOOSTER PUMP PU-E07.2	414.00	31.00	29.00	1.500	1.000	OP/HL	-	NO.2/6021
15-SW-08442-C1	SEAL WATER	40-SW-08422-C1	TOP GAS SCRUBBER RECYCLE PUMP PU-E17	1.40	31.00	29.00	7.200	6.500	OP/HL	ET	NOTE.01
25-SW-08443-C1	SEAL WATER	40-SW-08422-C1	15-SW-08444/8445-C1	2.80	31.00	29.00	7.200	6.000	OP/HL	ET	NOTE.01
15-SW-08444-C1	SEAL WATER	25-SW-08443-C1	B.S.G DUST COLLECTION SUMP PUMP PU-E29.1	1.40	31.00	29.00	7.200	6.500	OP/HL	ET	NOTE.01

# KOWSAR GISD



## MEGA MODULE PROJECT





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15-SW-08445-C1	SEAL WATER	25-SW-08443-C1	B.S.G DUST COLLECTION SUMP PUMP PU-E29.2	1.40	31.00	29.00	7.200	6.500	OP/HL	ET	NOTE.01
15-SW-08446-C1	SEAL WATER	25-SW-08470-C1	PRODUCT COOLER DUST COLLECTION SUMP PUMP PU-E22.2	1.40	31.00	29.00	7.200	6.500	OP/HL	ET	NOTE.01
15-SW-08447-C1	SEAL WATER	25-SW-08470-C1	PRODUCT COOLER DUST COLLECTION SUMP PUMP PU-E22.1	1.40	31.00	29.00	7.200	6.500	OP/HL	ET	NOTE.01
65-PWS-08448-C1	P.W.S	800-PWS-08311-C1	50-PWS-13503-C1	20.00	31.00	29.00	7.200	6.500	OP/HL	WINTERIZE/F	NOTE.01
50-PWS-08449-C1	P.W.S	500-PWS-08414-C1	SEAL LEG NO.1	25.00	31.00	29.00	7.200	6.500	OP/HL	WINTERIZE/F	NOTE.01
40-PWS-08450-C1	P.W.S	100-PWS-08400-C1	HOSE STATION HEAT RECOVERY TRAIN 1 BOTTOM	5.00	31.00	29.00	9.000	8.000	OP/HL	WINTERIZE/F	NOTE.01
40-PWS-08451-C1	P.W.S	100-PWS-08400-C1	HOSE STATION HEAT RECOVERY TRAIN 1 TOP	5.00	31.00	29.00	9.000	8.000	OP/HL	WINTERIZE/F	NOTE.01
40-PWS-08452-C1	P.W.S	100-PWS-08400-C1	HOSE STATION EJECTOR STACK AREA	5.00	31.00	29.00	9.000	8.000	OP/HL	WINTERIZE/F	NOTE.01
40-PWS-08453-C1	P.W.S	100-PWS-08400-C1	HOSE STATION HEAT RECOVERY TRAIN 2 TOP	5.00	31.00	29.00	9.000	8.000	OP/HL	WINTERIZE/F	NOTE.01
40-PWS-08454-C1	P.W.S	100-PWS-08400-C1	HOSE STATION HEAT RECOVERY TRAIN 2 BOTTOM	5.00	31.00	29.00	9.000	8.000	OP/HL	WINTERIZE/F	NOTE.01
40-PWS-08455-C1	P.W.S	100-PWS-08400-C1	HOSE STATION MAIN AIR BLOWER	5.00	31.00	29.00	9.000	8.000	OP/HL	WINTERIZE/F	NOTE.01
40-PWS-08456-C1	P.W.S	40-PWS-08457-C1	H.S EJECTOR STACK END OF REFORMER BOTTOM	5.00	31.00	29.00	9.000	8.000	OP/HL	WINTERIZE/F	NOTE.01
40-PWS-08457-C1	P.W.S	100-PWS-08400-C1	HOSE STATION EJECTOR STACK END OF REFORMER TOP	5.00	31.00	29.00	9.000	8.000	OP/HL	WINTERIZE/F	NOTE.01
40-PWS-08458-C1	P.W.S	450-PWS-08402-C1	HOSE STATION UPPER BURDEN FEEDER	5.00	31.00	29.00	9.000	8.000	OP/HL	WINTERIZE/F	NOTE.01
40-PWS-08459-C1	P.W.S	40-PWS-08458-C1	HOSE STATION MIDDLE BURDEN FEEDER	5.00	31.00	29.00	9.000	8.000	OP/HL	WINTERIZE/F	NOTE.01
40-PWS-08460-C1	P.W.S	450-PWS-08402-C1	HOSE STATION LOWER BURDEN FEEDER	5.00	31.00	29.00	9.000	8.000	OP/HL	WINTERIZE/F	NOTE.01
40-PWS-08461-C1	P.W.S	700-PWS-08401-C1	HOSE STATION AT LOWER SLIDE GATE	5.00	31.00	29.00	9.000	8.000	OP/HL	WINTERIZE/F	NOTE.01
40-PWS-08462-C1	P.W.S	500-PWS-08416-C1	HOSE STATION AT BOTTOM OF FURNACE NORTH	5.00	31.00	29.00	9.000	8.000	OP/HL	WINTERIZE/F	NOTE.01
40-PWS-08463-C1	P.W.S	700-PWS-08401-C1	HOSE STATION AT BOTTOM OF FURNACE SOUTH	5.00	31.00	29.00	9.000	8.000	OP/HL	WINTERIZE/F	NOTE.01
40-PWS-08464-C1	P.W.S	50-PWS-08467-C1	H. S AT FURNACE AREA END OF REFORMER BOTTOM	5.00	31.00	29.00	7.200	6.000	OP/HL	WINTERIZE/F	NOTE.01
40-PWS-08465-C1	P.W.S	50-PWS-08467-C1	H. S AT FURNACE AREA END OF REFORMER BOTTOM	5.00	31.00	29.00	7.200	6.000	OP/HL	WINTERIZE/F	NOTE.01
40-PWS-08466-C1	P.W.S	50-PWS-08467-C1	HOSE STATION AT FURNACE AREA END OF REFORMER TOP	5.00	31.00	29.00	7.200	6.000	OP/HL	WINTERIZE/F	NOTE.01
50-PWS-08467-C1	P.W.S	250-PWS-08415-C1	40-PWS-08465/8466-C1	5.00	31.00	29.00	7.200	6.000	OP/HL	WINTERIZE/F	NOTE.01
25-PWS-08471-C1	P.W.S	250-PWS-08405-C1	250-PWS-08405-C1	4.00	31.00	29.00	6.100	5.500	OP/HL	ET	NOTE.01
25-PWS-08472-C1	P.W.S	250-PWS-08406-C1	250-PWS-08406-C1	4.00	31.00	29.00	6.100	5.500	OP/HL	ET	NOTE.01
40-PWS-08475-C1	P.W.S	100-PWS-08400-C1	DESULPHURIZATION UNIT	5.00	31.00	29.00	9.000	8.000	OP/HL	ET	NOTE.01
25-SW-08470-C1	SEAL WATER	40-SW-08422-C1	15-SW-08446/8447-C1	2.80	31.00	29.00	7.200	6.500	OP/HL	ET	NOTE.01

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150-PWS-08501-C1	P.W.S	250-PWS-08505-C1	80-PWS-10402-C1	175.00	72.80	66.10	10.000	9.000	OP/HL	WINTERIZE/F	NOTE.01
50-PWS-08502-C1	P.W.S	400-PWS-08503-C1	CHARGE HOPPER FLUSHING WATER PUMP PU-E08	5.00	72.80	66.10	10.000	9.000	OP/HL	WINTERIZE/F	NOTE.01
400-PWS-08503-C1	P.W.S	450-PWS-08214-C1	250-PWS-00415-C1/400-PWS-00409-C1	808.00	72.80	66.10	10.000	9.000	OP/HL	-	NO.2/6021
250-PWS-08505-C1	P.W.S	450-PWS-08214-C1	150-PWS-08501/8504-C1	257.00	72.80	66.10	10.000	9.000	OP/HL	-	NO.2/6021
150-PWS-08504-C1	P.W.S	250-PWS-08505-C1	80-PWS-10112-C1	150.00	72.80	66.10	10.000	9.000	OP/HL	WINTERIZE/F	NOTE.01
150-PWS-08506-C1	P.W.S	250-PWS-08505-C1	100-PWS-10201-C1	150.00	72.80	66.10	10.000	9.000	OP/HL	WINTERIZE/F	NOTE.01



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50-PWR-08801-C1	P.W.R	HEADER	LUBE OIL COLLECTION	12.00	87.00	80.00	2.400	1.700	OP/HL	-	NO.2/6021
50-PWR-08804-C1	P.W.R	100-PWR-08805-C1	BLOWER AREA SUMP TK-E10	70.00	80.00	67.70	2.500	2.100	OP/HL	WINTERIZE/F	NOTE.01
100-PWR-08805-C1	P.W.R	BLOWER AREA SUMP PUMP PU-E11.1	1300-PWR-08100-C1	70.00	80.00	67.70	2.500	2.100	OP/HL	WINTERIZE/F	NOTE.01
50-PWS-08807-C1	P.W.S	50-PWS-08449-C1	SEAL LEG NO.1	12.50	31.00	29.00	7.200	6.500	OP/HL	-	NO.2/6021
100-PWR-08806-C1	P.W.R	BLOWER AREA SUMP PUMP PU-E11.2	100-PWR-08805-C1	70.00	80.00	67.70	2.500	2.100	OP/HL	WINTERIZE/F	NOTE.01



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P&ID Sheet No.: M5-091											
Line No.	Service	From	To	Des. Flow Rate(Nm3 ,m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
50-CHF-09101-C1	FLOCCULANT	FLOCCULANT ADDITION SYSTEM WT-E40	1300-PWR-08100-C1	4.200	31.00	29.00	3.000	2.500	OP/HL	-	NOT NEED TO PAINT
10-CHM-09102-P1	CORROSION INHIBITOR	CORROSION INHIBITOR SYSTEM WT-E75	100-SW-93164-C1	0.011	31.00	29.00	7.000	6.000	OP/HL	-	NOT NEED TO PAINT
32-CHB-09103-P1	BIOCIDE	32-CHB-09107-P1	HOT CONTAMINATED PROCESS WATER SUMP TK-E41	1.000	31.00	29.00	4.000	3.500	OP/HL	-	NOT NEED TO PAINT
32-CHD-09104-C1	DISPERSANT	32-CHD-09105-C1	HOT CONTAMINATED PROCESS WATER SUMP TK-E41	1.000	31.00	29.00	4.000	3.500	OP/HL	-	NOT NEED TO PAINT
32-CHD-09105-C1	DISPERSANT	DISPERSANT ADDITION SYSTEM WT-E46	32-CHD-09104/9106-C1	1.000	31.00	29.00	4.000	3.500	OP/HL	-	NOT NEED TO PAINT
15-CHD-09106-C1	DISPERSANT	32-CHD-09105-C1	CLEAN COLD PROCESS WATER SUMP TK-E43	1.000	31.00	29.00	4.000	3.500	OP/HL	-	NOT NEED TO PAINT
32-CHB-09107-P1	BIOCIDE	BIOCIDE ADDITION SYSTEM WT-E47	32-CHB-09103/9108-P1	1.000	31.00	29.00	4.000	3.500	OP/HL	-	NOT NEED TO PAINT
15-CHB-09108-P1	BIOCIDE	32-CHB-09107-P1	CLEAN COLD PROCESS WATER SUMP TK-E43	1.000	31.00	29.00	4.000	3.500	OP/HL	-	NOT NEED TO PAINT



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50-DW-09222-C1	DRAIN WATER	CARBON FILTER FL-K083	DRAIN	5.00	31.00	24.00	0.800	0.600	OP/HL	-	NO.2/6021
10-SW-09216-C1	SEAL WATER	PU-K84.1	80-PW-09215-C5	0.002	31.00	24.00	7.000	5.000	OP/HL	-	NO.2/6021
80-PW-09215-C5	POTABLE WATER	CARBON FILTER FL-K083	80-PW-09303-C5	5.00	31.00	24.00	5.000	4.000	OP/HL	-	NOT NEED TO PAINT
15-PW-09203-C5	POTABLE WATER	80-PW-09215-C5	CHEMICAL INJECTION ROOM	0.50	31.00	29.00	5.000	4.000	OP/HL	-	NOT NEED TO PAINT
50-PW-09218-C5	POTABLE WATER	50-PW-09213/9214-C5	CARBON FILTER FL-K083	5.00	31.00	24.00	5.000	4.000	OP/HL	-	NOT NEED TO PAINT
50-PW-09213-C5	POTABLE WATER	PU-K82.1	50-PW-09218-C5	5.00	31.00	24.00	5.000	4.000	OP/HL	-	NOT NEED TO PAINT
50-PW-09214-C5	POTABLE WATER	PU-K82.2	50-PW-09218-C5	5.00	31.00	24.00	5.000	4.000	OP/HL	-	NOT NEED TO PAINT
50-PW-09211-C5	POTABLE WATER	POTABLE WATER TANK TK-K05	PU-K82.1	5.00	31.00	24.00	0.500	0.100	OP/HL	-	NOT NEED TO PAINT
50-PW-09212-C5	POTABLE WATER	POTABLE WATER TANK TK-K05	PU-K82.2	5.00	31.00	24.00	0.500	0.100	OP/HL	-	NOT NEED TO PAINT
100-DW-09217-C1	DRAIN WATER	POTABLE WATER TANK TK-K05	DRAIN	28.00	31.00	24.00	0.500	ATM	OP/PL	-	NO.2/6021

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32-PW-09201-C5	POTABLE WATER	80-PW-09303-C5	WARE HOUSE	2.00	31.00	24.00	5.000	4.000	OP/HL	-	NOT NEED TO PAINT
50-PW-09204-C5	POTABLE WATER	80-PW-09303-C5	MAIN ELEC.& CONTROL ROOM	4.00	31.00	24.00	5.000	4.000	OP/HL	-	NOT NEED TO PAINT
25-PW-09205-C5	POTABLE WATER	80-PW-09303-C5	MECHANICAL ROOM	1.00	31.00	24.00	5.000	4.000	OP/HL	-	NOT NEED TO PAINT
50-PW-09206-C5	POTABLE WATER	80-PW-09303-C5	LABORATORY	4.00	31.00	24.00	5.000	4.000	OP/HL	-	NOT NEED TO PAINT
50-PW-09208-C5	POTABLE WATER	80-PW-09303-C5	OFFICE BUIDING	4.00	31.00	24.00	5.000	4.000	OP/HL	-	NOT NEED TO PAINT
50-PW-09209-C5	POTABLE WATER	80-PW-09303-C5	CONTEEN,LOCKER&SHOWER	4.00	31.00	24.00	5.000	4.000	OP/HL	-	NOT NEED TO PAINT

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200-RW-09301-P4	RAW WATER	RAW WATER FEED TANK YK-K01	RAW WATER FEED PUMPS PU-K65.1	132.00	31	24.00	0.500	0.100	OP/HP	-	NOT NEED TO PAINT
200-RW-09302-P4	RAW WATER	RAW WATER FEED TANK YK-K01	RAW WATER FEED PUMPS PU-K65.2	132.00	31	24.00	0.500	0.100	OP/HP	-	NOT NEED TO PAINT
200-RW-09303-P4	RAW WATER	RAW WATER FEED TANK YK-K01	RAW WATER FEED PUMPS PU-K65.3	132.00	31	24.00	0.500	0.100	OP/HP	-	NOT NEED TO PAINT
200-RW-09304-P4	RAW WATER	RAW WATER FEED TANK YK-K01	RAW WATER FEED PUMPS PU-K65.4	132.00	31	24.00	0.500	0.100	OP/HP	-	NOT NEED TO PAINT
200-RW-09305-P4	RAW WATER	RAW WATER FEED TANK YK-K01	RAW WATER FEED PUMPS PU-K65.5	132.00	31	24.00	0.500	0.100	OP/HP	-	NOT NEED TO PAINT
150-RW-93006-P4	RAW WATER	RAW WATER FEED PUMPS PU-K65.1	300-RW-93011-P4	132.00	31	24.00	4.000	3.500	OP/HP	-	NOT NEED TO PAINT
150-RW-93007-P4	RAW WATER	RAW WATER FEED PUMPS PU-K65.2	300-RW-93011-P4	132.00	31	24.00	4.000	3.500	OP/HP	-	NOT NEED TO PAINT
150-RW-93008-P4	RAW WATER	RAW WATER FEED PUMPS PU-K65.3	300-RW-93011-P4	132.00	31	24.00	4.000	3.500	OP/HP	-	NOT NEED TO PAINT
150-RW-93009-P4	RAW WATER	RAW WATER FEED PUMPS PU-K65.4	300-RW-93011-P4	132.00	31	24.00	4.000	3.500	OP/HP	-	NOT NEED TO PAINT
150-RW-93010-P4	RAW WATER	RAW WATER FEED PUMPS PU-K65.5	300-RW-93011-P4	132.00	31	24.00	4.000	3.500	OP/HP	-	NOT NEED TO PAINT
300-RW-93011-P4	RAW WATER	HEADER	HEADER	528.00	31	24.00	4.000	3.500	OP/HP	-	NOT NEED TO PAINT
355-RW-93195-P3	RAW WATER	300-RW-93193-P4	RAW WATER FEED TANK YK-K01	528.00	31	24.00	2.000	1.500	OP/HP	-	NOT NEED TO PAINT
300-RW-93193-P4	RAW WATER	300-RW-93192/93193-P4	355-RW-93195-P3	528.00	31	24.00	2.000	1.500	OP/HP	-	NOT NEED TO PAINT
300-RW-93192-P4	RAW WATER	PU-K64.1	300-RW-93193-P4	528.00	31	24.00	2.000	1.500	OP/HP	-	NOT NEED TO PAINT
300-RW-93190-P4	RAW WATER	500-RW-93194-P4	PU-K64.1	528.00	31	24.00	0.5	0.100	OP/HP	-	NOT NEED TO PAINT
300-RW-93191-P4	RAW WATER	500-RW-93194-P4	PU-K64.2	528.00	31	24.00	0.5	0.100	OP/HP	-	NOT NEED TO PAINT
500-RW-93194-P4	RAW WATER	500-RW-93189/93188-P4	300-RW-93190/93191-P4	528.00	31	24.00	0.5	0.100	OP/HP	-	NOT NEED TO PAINT
500-RW-93188-P4	RAW WATER	500-RW-93194-P4	RAW WATER STORAGE TANK K08	528	31	24.00	0.5	0.100	OP/HP	-	NOT NEED TO PAINT
500-RW-93189-P4	RAW WATER	500-RW-93194-P4	RAW WATER STORAGE TANK K08	528	31	24.00	0.5	0.100	OP/HP	-	NOT NEED TO PAINT

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Line No.	Service	From	To	Des. Flow Rate(Nm3 ,m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
300-DW-93161-P4	DRIAN WATER	RAW WATER FEED TANK YK-K01	DRAIN	250.00	31	24.00	0.500	ATM	OP/HP	-	NOT NEED TO PAINT
500-DW-93196-P4	DRIAN WATER	RAW WATER STORAGE TANK K08	DRAIN	700.00	31	24.00	0.500	0.000	OP/HP	-	NOT NEED TO PAINT
150--BA-93017-C4	BLOWING AIR	150--BA-93026/93027-C4	HEADER	600.00	60.00	50.00	0.80	0.500		-	NO.2/5012
150--BA-93027-C4	BLOWING AIR	CP-K66.1	150--BA-93017-C4	600.00	60.00	50.00	0.80	0.500		-	NO.2/5012
150--BA-93026-C4	BLOWING AIR	CP-K66.2	150--BA-93017-C4	600.00	60.00	50.00	0.80	0.500		-	NO.2/5012
200-DW-93162-P4	DRAIN WATER	RAW WATER TANK TK-K02	DRAIN	120.00	31.00	24.00	0.500	0.000	OP/HP	-	NOT NEED TO PAINT
150-RW-93028-P4	RAW WATER	RAW WATER TANK TK-K02	PU-K67.1	200.00	31.00	24.00	0.500	0.100	OP/HP	-	NOT NEED TO PAINT
150-RW-93029-P4	RAW WATER	RAW WATER TANK TK-K02	PU-K67.2	200.00	31.00	24.00	0.500	0.100	OP/HP	-	NOT NEED TO PAINT
150-RW-93030-P4	RAW WATER	PU-K67.1	150-RW-93032-P4	200.00	31.00	24.00	2.000	1.500	OP/HP	-	NOT NEED TO PAINT
150-RW-93031-P4	RAW WATER	PU-K67.2	150-RW-93032-P4	200.00	31.00	24.00	2.000	1.500	OP/HP	-	NOT NEED TO PAINT
150-RW-93032-P4	RAW WATER	150-RW-93030/93031-P4	HEADER	200.00	31.00	24.00	2.000	1.500	OP/HP	-	NOT NEED TO PAINT
150-DW-93022-P4	DRAIN WATER	150-RW-93033-P4	200-DW-93054-P4	200.00	31.00	24.00	1.50	1.000	OP/HP	-	NOT NEED TO PAINT
150-DW-93023-P4	DRAIN WATER	150-RW-93034-P4	200-DW-93054-P4	200.00	31.00	24.00	1.50	1.000	OP/HP	-	NOT NEED TO PAINT
150-DW-93024-P4	DRAIN WATER	150-RW-93035-P4	200-DW-93054-P4	200.00	31.00	24.00	1.50	1.000	OP/HP	-	NOT NEED TO PAINT
150-DW-93025-P4	DRAIN WATER	150-RW-93036-P4	200-DW-93054-P4	200.00	31.00	24.00	1.50	1.000	OP/HP	-	NOT NEED TO PAINT
150-DW-93037-P4	DRAIN WATER	150-RW-93041-P4	TO TRENCH	50.00	31.00	24.00	1.50	1.000	OP/HP	-	NOT NEED TO PAINT
150-DW-93038-P4	DRAIN WATER	150-RW-93042-P4	TO TRENCH	50.00	31.00	24.00	1.50	1.000	OP/HP	-	NOT NEED TO PAINT
150-DW-93039-P4	DRAIN WATER	150-RW-93043-P4	TO TRENCH	50.00	31.00	24.00	1.50	1.000	OP/HP	-	NOT NEED TO PAINT
150-DW-93040-P4	DRAIN WATER	150-RW-93044-P4	TO TRENCH	50.00	31.00	24.00	1.50	1.000	OP/HP	-	NOT NEED TO PAINT
150-DW-93049-P4	DRAIN WATER	SAND FILTER FL-K01.1	TO TRENCH	50.00	31.00	24.00	3.500	3.000	OP/HP	-	NOT NEED TO PAINT

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Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
150-DW-93050-P4	DRAIN WATER	SAND FILTER FL-K01.2	TO TRENCH	50.00	31.00	24.00	3.500	3.000	OP/HP	-	NOT NEED TO PAINT
150-DW-93051-P4	DRAIN WATER	SAND FILTER FL-K01.3	TO TRENCH	50.00	31.00	24.00	3.500	3.000	OP/HP	-	NOT NEED TO PAINT
150-DW-93052-P4	DRAIN WATER	SAND FILTER FL-K01.4	TO TRENCH	50.00	31.00	24.00	3.500	3.000	OP/HP	-	NOT NEED TO PAINT
200-DW-93045-P4	DRAIN WATER	250-RW-93013-P4	200-DW-93054-P4	200.00	31.00	24.00	1.50	1.000	OP/HP	-	NOT NEED TO PAINT
200-DW-93046-P4	DRAIN WATER	250-RW-93014-P4	200-DW-93054-P4	200.00	31.00	24.00	1.50	1.000	OP/HP	-	NOT NEED TO PAINT
200-DW-93047-P4	DRAIN WATER	250-RW-93015-P4	200-DW-93054-P4	200.00	31.00	24.00	1.50	1.000	OP/HP	-	NOT NEED TO PAINT
200-DW-93048-P4	DRAIN WATER	250-RW-93016-P4	200-DW-93054-P4	200.00	31.00	24.00	1.50	1.000	OP/HP	-	NOT NEED TO PAINT
150-RW-93033-P4	RAW WATER	150-RW-93032-P4	150-DW-93037-P4	200.00	31.00	24.00	2.00	1.500	OP/HP	-	NOT NEED TO PAINT
150-RW-93034-P4	RAW WATER	150-RW-93032-P4	150-DW-93038-P4	200.00	31.00	24.00	2.00	1.500	OP/HP	-	NOT NEED TO PAINT
150-RW-93035-P4	RAW WATER	150-RW-93032-P4	150-DW-93039-P4	200.00	31.00	24.00	2.00	1.500	OP/HP	-	NOT NEED TO PAINT
150-RW-93036-P4	RAW WATER	150-RW-93032-P4	150-DW-93040-P4	200.00	31.00	24.00	2.00	1.500	OP/HP	-	NOT NEED TO PAINT
150-RW-93041-P4	RAW WATER	SAND FILTER FL-K01.1	300-RW-93055-P4	132.00	31.00	24.00	3.500	3.000	OP/HP	-	NOT NEED TO PAINT
150-RW-93042-P4	RAW WATER	SAND FILTER FL-K01.2	300-RW-93055-P4	132.00	31.00	24.00	3.500	3.000	OP/HP	-	NOT NEED TO PAINT
150-RW-93043-P4	RAW WATER	SAND FILTER FL-K01.3	300-RW-93055-P4	132.00	31.00	24.00	3.500	3.000	OP/HP	-	NOT NEED TO PAINT
150-RW-93044-P4	RAW WATER	SAND FILTER FL-K01.4	300-RW-93055-P4	132.00	31.00	24.00	3.500	3.000	OP/HP	-	NOT NEED TO PAINT
150-RW-93013-P4	RAW WATER	300-RW-93011-P4	SAND FILTER FL-K01.1	132.00	31.00	24.00	4.000	3.500	OP/HP	-	NOT NEED TO PAINT
150-RW-93014-P4	RAW WATER	300-RW-93011-P4	SAND FILTER FL-K01.2	132.00	31.00	24.00	4.000	3.500	OP/HP	-	NOT NEED TO PAINT
150-RW-93015-P4	RAW WATER	300-RW-93011-P4	SAND FILTER FL-K01.3	132.00	31.00	24.00	4.000	3.500	OP/HP	-	NOT NEED TO PAINT
150-RW-93016-P4	RAW WATER	300-RW-93011-P4	SAND FILTER FL-K01.4	132.00	31.00	24.00	4.000	3.500	OP/HP	-	NOT NEED TO PAINT

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Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
150-DW-93076-P4	DRAIN WATER	150-RW-93056-P4	200-DW-93054-P4	200.00	31.00	24.00	1.50	1.000	OP/HP	-	NOT NEED TO PAINT
150-DW-93077-P4	DRAIN WATER	150-RW-93057-P4	200-DW-93054-P4	200.00	31.00	24.00	1.50	1.000	OP/HP	-	NOT NEED TO PAINT
150-DW-93078-P4	DRAIN WATER	150-RW-93058-P4	200-DW-93054-P4	200.00	31.00	24.00	1.50	1.000	OP/HP	-	NOT NEED TO PAINT
150-DW-93079-P4	DRAIN WATER	150-RW-93059-P4	200-DW-93054-P4	200.00	31.00	24.00	1.50	1.000	OP/HP	-	NOT NEED TO PAINT
150-DW-93064-P4	DRAIN WATER	150-RW-93072-P4	200-DW-93054-P4	200.00	31.00	24.00	1.50	1.000	OP/HP	-	NOT NEED TO PAINT
150-DW-93065-P4	DRAIN WATER	150-RW-93073-P4	200-DW-93054-P4	200.00	31.00	24.00	1.50	1.000	OP/HP	-	NOT NEED TO PAINT
150-DW-93066-P4	DRAIN WATER	150-RW-93074-P4	200-DW-93054-P4	200.00	31.00	24.00	1.50	1.000	OP/HP	-	NOT NEED TO PAINT
150-DW-93067-P4	DRAIN WATER	150-RW-93075-P4	200-DW-93054-P4	200.00	31.00	24.00	1.50	1.000	OP/HP	-	NOT NEED TO PAINT
150--BA-93018-C4	BLOWING AIR	150--BA-93017-C4	SAND FILTER FL-K01.1	600.00	60.00	50.00	0.80	0.500		-	NO.2/5012
150--BA-93019-C4	BLOWING AIR	150--BA-93017-C4	SAND FILTER FL-K01.2	600.00	60.00	50.00	0.80	0.500		-	NO.2/5012
150--BA-93020-C4	BLOWING AIR	150--BA-93017-C4	SAND FILTER FL-K01.3	600.00	60.00	50.00	0.80	0.500		-	NO.2/5012
150--BA-93021-C4	BLOWING AIR	150--BA-93017-C4	SAND FILTER FL-K01.4	600.00	60.00	50.00	0.80	0.500		-	NO.2/5012
150-RW-93072-P4	RAW WATER	CARBON FILTER FL-K02.1	300-RW-93086-P4	132.00	31.00	24.00	3.00	2.500	OP/HP	-	NOT NEED TO PAINT
150-RW-93073-P4	RAW WATER	CARBON FILTER FL-K02.2	300-RW-93086-P4	132.00	31.00	24.00	3.00	2.500	OP/HP	-	NOT NEED TO PAINT
150-RW-93074-P4	RAW WATER	CARBON FILTER FL-K02.3	300-RW-93086-P4	132.00	31.00	24.00	3.00	2.500	OP/HP	-	NOT NEED TO PAINT
150-RW-93075-P4	RAW WATER	CARBON FILTER FL-K02.4	300-RW-93086-P4	132.00	31.00	24.00	3.00	2.500	OP/HP	-	NOT NEED TO PAINT
150-RW-93060-P4	RAW WATER	150-RW-93032-P4	150-DW-93064-P4	200.00	31.00	24.00	2.00	1.500	OP/HP	-	NOT NEED TO PAINT
150-RW-93061-P4	RAW WATER	150-RW-93032-P4	150-DW-93065-P4	200.00	31.00	24.00	2.00	1.500	OP/HP	-	NOT NEED TO PAINT
150-RW-93062-P4	RAW WATER	150-RW-93032-P4	150-DW-93066-P4	200.00	31.00	24.00	2.00	1.500	OP/HP	-	NOT NEED TO PAINT
150-RW-93063-P4	RAW WATER	150-RW-93032-P4	150-DW-93063-P4	200.00	31.00	24.00	2.00	1.500	OP/HP	-	NOT NEED TO PAINT

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Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
150-RW-93056-P4	RAW WATER	300-RW-93055-P4	CARBON FILTER FL-K02.1	132.00	31.00	24.00	3.500	3.000	OP/HP	-	NOT NEED TO PAINT
150-RW-93057-P4	RAW WATER	300-RW-93055-P4	CARBON FILTER FL-K02.2	132.00	31.00	24.00	3.500	3.000	OP/HP	-	NOT NEED TO PAINT
150-RW-93058-P4	RAW WATER	300-RW-93055-P4	CARBON FILTER FL-K02.3	132.00	31.00	24.00	3.500	3.000	OP/HP	-	NOT NEED TO PAINT
150-RW-93059-P4	RAW WATER	300-RW-93055-P4	CARBON FILTER FL-K02.4	132.00	31.00	24.00	3.500	3.000	OP/HP	-	NOT NEED TO PAINT
100-DW-93068-P4	DRAIN WATER	150-DW-93064-P4	TO TRENCH	50.00	31.00	24.00	1.50	1.000	OP/HP	-	NOT NEED TO PAINT
100-DW-93069-P4	DRAIN WATER	150-DW-93065-P4	TO TRENCH	50.00	31.00	24.00	1.50	1.000	OP/HP	-	NOT NEED TO PAINT
100-DW-93070-P4	DRAIN WATER	150-DW-93066-P4	TO TRENCH	50.00	31.00	24.00	1.50	1.000	OP/HP	-	NOT NEED TO PAINT
100-DW-93071-P4	DRAIN WATER	150-DW-93063-P4	TO TRENCH	50.00	31.00	24.00	1.50	1.000	OP/HP	-	NOT NEED TO PAINT
100-DW-93080-P4	DRAIN WATER	CARBON FILTER FL-K02.1	TO TRENCH	50.00	31.00	24.00	3.500	3.000	OP/HP	-	NOT NEED TO PAINT
100-DW-93081-P4	DRAIN WATER	CARBON FILTER FL-K02.2	TO TRENCH	50.00	31.00	24.00	3.500	3.000	OP/HP	-	NOT NEED TO PAINT
100-DW-93082-P4	DRAIN WATER	CARBON FILTER FL-K02.3	TO TRENCH	50.00	31.00	24.00	3.500	3.000	OP/HP	-	NOT NEED TO PAINT
100-DW-93083-P4	DRAIN WATER	CARBON FILTER FL-K02.4	TO TRENCH	50.00	31.00	24.00	3.500	3.000	OP/HP	-	NOT NEED TO PAINT
200-RW-93054-P4	RAW WATER	CLARIFIER SB-K98	HEADER	200.00	31.00	24.00	1.50	1.000	OP/HP	-	NOT NEED TO PAINT
100-SL-93185-C7	SLURRY	CLARIFIER SB-K98	TO TRENCH	20.00	31.00	24.00	0.00	0.000		-	NO.2/6021
300-RW-93055-P4	RAW WATER	150-RW-93041/93042/93043/93044-P4	150-RW-93056/93059/93057/93058-P4	528.00	31.00	24.00	3.50	3.000	OP/HP	-	NOT NEED TO PAINT
300-RW-93086-P4	RAW WATER	150-RW-93072/93073/93074/93075-P4	HEADER	528.00	31.00	24.00	3.00	2.500	OP/HP	-	NOT NEED TO PAINT
25-RW-93140-P4	RAW WATER	300-RW-93086-P4	POTABLE WATER TANK TK-K05	5.00	31.00	24.00	3.00	2.500	OP/HP	-	NOT NEED TO PAINT
50-RW-93131-P4	RAW WATER	300-RW-93086-P4	200-SW-93134-C1	8.00	31.00	24.00	3.00	2.500	OP/HP	-	NOT NEED TO PAINT
150-RW-93097-P4	RAW WATER	300-RW-93086-P4	RAW WATER TANK TK-K02	100.00	31	24.00	3.000	2.500	OP/HP	-	NOT NEED TO PAINT



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Line No.	Service	From	To	Des. Flow Rate(Nm3 ,m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
200-RW-93198-P4	RAW WATER	CLARIFIER SB-K98	RAW WATER FEED TANK TK-K01	200.00	31.00	24.00	0.00	0.000	OP/HP	-	NOT NEED TO PAINT
150-RW-93089-P4	RAW WATER	300-RW-93086-P4	CARTRIGE FILTERS HOUSING FL-K03.1	132.00	31.00	24.00	3.00	2.500	OP/HP	-	NOT NEED TO PAINT
150-RW-93090-P4	RAW WATER	300-RW-93086-P4	CARTRIGE FILTERS HOUSING FL-K03.2	132.00	31.00	24.00	3.00	2.500	OP/HP	-	NOT NEED TO PAINT
150-RW-93091-P4	RAW WATER	300-RW-93086-P4	CARTRIGE FILTERS HOUSING FL-K03.3	132.00	31.00	24.00	3.00	2.500	OP/HP	-	NOT NEED TO PAINT
150-RW-93092-P4	RAW WATER	300-RW-93086-P4	CARTRIGE FILTERS HOUSING FL-K03.4	132.00	31.00	24.00	3.00	2.500	OP/HP	-	NOT NEED TO PAINT
150-RW-93093-P4	RAW WATER	CARTRIGE FILTERS HOUSING FL-K03.1	300-RW-93175-P4	132.00	31.00	24.00	2.00	1.500	OP/HP	-	NOT NEED TO PAINT
150-RW-93094-P4	RAW WATER	CARTRIGE FILTERS HOUSING FL-K03.2	300-RW-93175-P4	132.00	31.00	24.00	2.00	1.500	OP/HP	-	NOT NEED TO PAINT
150-RW-93095-P4	RAW WATER	CARTRIGE FILTERS HOUSING FL-K03.3	300-RW-93175-P4	132.00	31.00	24.00	2.00	1.500	OP/HP	-	NOT NEED TO PAINT
150-RW-93096-P4	RAW WATER	CARTRIGE FILTERS HOUSING FL-K03.4	300-RW-93175-P4	132.00	31.00	24.00	2.00	1.500	OP/HP	-	NOT NEED TO PAINT
300-RW-93175-P4	RAW WATER	150-RW-93093/93094/93095/93096-P4	HEADER	528.00	34.00	24.00	2.00	1.500	OP/HP	-	NOT NEED TO PAINT
200-RW-93098-P4	RAW WATER	300-RW-93175-P4	HIGH PERESSURE PUMPS PU-K68.1	126.00	31.00	24.00	2.00	1.500	OP/HP	-	NOT NEED TO PAINT
200-RW-93099-P4	RAW WATER	300-RW-93175-P4	HIGH PERESSURE PUMPS PU-K68.2	126.00	31.00	24.00	2.00	1.500	OP/HP	-	NOT NEED TO PAINT
200-RW-93100-P4	RAW WATER	300-RW-93175-P4	HIGH PERESSURE PUMPS PU-K68.3	126.00	31.00	24.00	2.00	1.500	OP/HP	-	NOT NEED TO PAINT
200-RW-93101-P4	RAW WATER	300-RW-93175-P4	HIGH PERESSURE PUMPS PU-K68.4	126.00	31.00	24.00	2.00	1.500	OP/HP	-	NOT NEED TO PAINT
200-RW-93102-P4	RAW WATER	300-RW-93175-P4	HIGH PERESSURE PUMPS PU-K68.5	126.00	31.00	24.00	2.00	1.500	OP/HP	-	NOT NEED TO PAINT
150-RW-93103-P4	RAW WATER	HIGH PERESSURE PUMPS PU-K68.1	150-DMW-93150-P5	126.00	31.00	24.00	32.00	29.000	OP/HP	-	NOT NEED TO PAINT
150-RW-93104-P4	RAW WATER	HIGH PERESSURE PUMPS PU-K68.2	150-DMW-93150-P5	126.00	31.00	24.00	32.00	29.000	OP/HP	-	NOT NEED TO PAINT
150-RW-93105-P4	RAW WATER	HIGH PERESSURE PUMPS PU-K68.3	150-DMW-93150-P5	126.00	31.00	24.00	32.00	29.000	OP/HP	-	NOT NEED TO PAINT
150-RW-93106-P4	RAW WATER	HIGH PERESSURE PUMPS PU-K68.4	150-DMW-93150-P5	126.00	31.00	24.00	32.00	29.000	OP/HP	-	NOT NEED TO PAINT



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Line No.	Service	From	To	Des. Flow Rate(Nm3 ,m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
150-RW-93107-P4	RAW WATER	HIGH PERESSURE PUMPS PU-K68.5	150-DMW-93150-P5	126.00	31.00	24.00	32.00	29.000	OP/HP	-	NOT NEED TO PAINT
150-DMW-93150-P5	DEMINERALIZED WATER	150-RW-93136-P5	300-RW-93108-P4	126.00	80.00	31.00	3.00	2.500	OP/HP	-	NOT NEED TO PAINT
300-RW-93108-P4	RAW WATER	150-DMW-93150-P5	100-RW--93109/93110/93111/93112-P5	504.00	31.00	24.00	32.000	29.000	OP/HP	-	NOT NEED TO PAINT
50-DMW-93130-P4	DEMINERALIZED WATER	300-DMW-93121-P4	POTABLE WATER TANK TK-K05	5.00	31.00	24.00	2.00	1.500	OP/HP	-	NOT NEED TO PAINT
150-RW-93109-P5	RAW WATER	300-RW-93108-P4	RO UNIT A	124.30	31.00	24.00	32.00	29.000	OP/HP	-	NOT NEED TO PAINT
150-RW-93110-P5	RAW WATER	300-RW-93108-P4	RO UNIT B	124.30	31.00	24.00	32.00	29.000	OP/HP	-	NOT NEED TO PAINT
150-RW-93111-P5	RAW WATER	300-RW-93108-P4	RO UNIT C	124.30	31.00	24.00	32.00	29.000	OP/HP	-	NOT NEED TO PAINT
150-RW-93112-P5	RAW WATER	300-RW-93108-P4	RO UNIT D	124.30	31.00	24.00	32.00	29.000	OP/HP	-	NOT NEED TO PAINT
100-RJW-93113-P5	REJECT WATER	RO UNIT A	200-DW-93153-P5	31.00	31.00	24.00	28.00	25.000	OP/HP	-	NOT NEED TO PAINT
100-RJW-93114-P5	REJECT WATER	RO UNIT B	200-DW-93153-P5	31.00	31.00	24.00	28.00	25.000	OP/HP	-	NOT NEED TO PAINT
100-RJW-93115-P5	REJECT WATER	RO UNIT C	200-DW-93153-P5	31.00	31.00	24.00	28.00	25.000	OP/HP	-	NOT NEED TO PAINT
100-RJW-93116-P5	REJECT WATER	RO UNIT D	200-DW-93153-P5	31.00	31.00	24.00	28.00	25.000	OP/HP	-	NOT NEED TO PAINT
200-DW-93153-P5	DRAIN WATER	100-RJW-93113/93114/93115/93116-P5	150-DW-93155-P4	130.00	31.00	24.00	28.00	25.000	OP/HP	-	NOT NEED TO PAINT
100-DMW-93117-P4	DEMINERALIZED WATER	RO UNIT A	300-DMW-93121-P4	93.20	31.00	24.00	5.00	2.000	OP/HP	-	NOT NEED TO PAINT
100-DMW-93118-P4	DEMINERALIZED WATER	RO UNIT B	300-DMW-93121-P4	93.20	31.00	24.00	5.00	2.000	OP/HP	-	NOT NEED TO PAINT
100-DMW-93119-P4	DEMINERALIZED WATER	RO UNIT C	300-DMW-93121-P4	93.20	31.00	24.00	5.00	2.000	OP/HP	-	NOT NEED TO PAINT
100-DMW-93120-P4	DEMINERALIZED WATER	RO UNIT D	300-DMW-93121-P4	93.20	31.00	24.00	5.00	2.000	OP/HP	-	NOT NEED TO PAINT
150-DMW-93177-P4	DEMINERALIZED WATER	CIP TANK TK-K06	150-DMW-93178-P4	65.00	31.00	24.00	0.000	0.000	OP/HP	-	NOT NEED TO PAINT
25-SW-93179-P4	SEAL WATER	WATER HEATER HE-K01	CIP TANK TK-K06	4.00	80.00	60.00	3.000	2.000	OP/HP	-	NOT NEED TO PAINT

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25-SW-93180-P4	SEAL WATER	80-SW-93143-P4	WATER HEATER HE-K01	4.00	31.00	24.00	3.000	2.000	OP/HP	-	NOT NEED TO PAINT
80-SW-93143-P4	SEAL WATER	150-DMW-93142-P4	CIP & FLUSHING TANK TK-K06	35.00	31.00	24.00	3.000	2.000	OP/HP	-	NOT NEED TO PAINT
150-DMW-93142-P4	DEMINERALIZED WATER	PU-K71.2	CIP CARTRIDGE FILTER FL-K05	126.00	31.00	24.00	3.000	2.000	OP/HP	-	NOT NEED TO PAINT
150-DMW-93210-P4	DEMINERALIZED WATER	PU-K71.1	150-DMW-93142-P4	126.00	31.00	24.00	3.000	2.000	OP/HP	-	NOT NEED TO PAINT
150-DMW-93138-P4	DEMINERALIZED WATER	150-DMW-93135-P4	PU-K71.2	126.00	31.00	24.00	0.300	0.100	OP/HP	-	NOT NEED TO PAINT
150-DMW-93139-P4	DEMINERALIZED WATER	150-DMW-93142-P4	150-DMW-93136-P4	126.00	31.00	24.00	3.000	1.000	OP/HP	-	NOT NEED TO PAINT
80-DMW-93132-P4	DEMINERALIZED WATER	300-DMW-93121-P4	80-DMW-93133-P4	40.00	31.00	24.00	5.00	2.000	OP/HP	-	NOT NEED TO PAINT
80-DMW-93133-P4	DEMINERALIZED WATER	80-DMW-93132-P4	CIP TANK TK-K06	40.00	31.00	24.00	5.00	2.000	OP/HP	-	NOT NEED TO PAINT
150-DMW-93135-P4	DEMINERALIZED WATER	CIP & FLUSHING TANK TK-K06	FLUSHING PUMP PU-K71.1	126.00	31.00	24.00	0.300	0.100	OP/HP	-	NOT NEED TO PAINT
300-DMW-93121-P4	DEMINERALIZED WATER	100-DMW-93117/93118/93119/93120-P4	DEMIN WATER TANK TK-K03	373.00	31.00	24.00	5.000	2.000	OP/HP	-	NOT NEED TO PAINT
300-DW-93160-P4	DRAIN WATER	DEMIN WATER TANK TK-K03	DRAIN	270.00	31.00	24.00	0.500	0.100	OP/HP	-	NOT NEED TO PAINT
250-DMW-93122-P4	DEMINERALIZED WATER	DEMIN WATER TANK TK-K03	PU-K69.1	325.50	31.00	24.00	0.30	0.100	OP/HP	-	NOT NEED TO PAINT
250-DMW-93124-P4	DEMINERALIZED WATER	DEMIN WATER TANK TK-K03	PU-K69.2	325.50	31.00	24.00	0.30	0.100	OP/HP	-	NOT NEED TO PAINT
250-DMW-93123-P4	DEMINERALIZED WATER	PU-K69.1	200-SW-93134-C1	325.50	31.00	24.00	4.00	2.000	OP/HP	-	NOT NEED TO PAINT
250-DMW-93125-P4	DEMINERALIZED WATER	PU-K69.2	200-SW-93134-C1	325.50	31.00	24.00	4.00	2.000	OP/HP	-	NOT NEED TO PAINT
200-SW-93134-C1	SEAL WATER	250-DMW-93123/93125-P4	TK-E42	325.50	31.00	24.00	4.00	2.000	OP/HL	-	NO.2/6021
100-DMW-93126-C1	DEMINERALIZED WATER	DEMIN WATER TANK TK-K03	PU-K70.1	42.50	31.00	24.00	0.30	0.100	OP/HL	-	NO.2/6021
100-DMW-93128-C1	DEMINERALIZED WATER	DEMIN WATER TANK TK-K03	PU-K70.2	42.50	31.00	24.00	0.30	0.100	OP/HL	-	NO.2/6021

	<p style="text-align: center;"><b>KOWSAR GISD</b> <b>MEGA MODULE PROJECT</b></p>			
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Line No.	Service	From	To	Des. Flow Rate(Nm3 ,m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
100-DMW-93127-C1	DEMINERALIZED WATER	PU-K70.1	100-SW-93164-C1	42.50	31.00	24.00	2.00	1.500	OP/HL	-	NO.2/6021
100-DMW-93129-C1	DEMINERALIZED WATER	PU-K70.2	100-SW-93164-C1	42.50	31.00	24.00	2.00	1.500	OP/HL	-	NO.2/6021
50-DMW-93152-C1	DEMINERALIZED WATER	100-SW-93164-C1	20-DMW-93174-C1	5.00	31.00	24.00	2.00	1.500	OP/HL	-	NO.2/6021
20-DMW-93174-C1	DEMINERALIZED WATER	50-DMW-93152-C1	10-DMW-93165/93167/93170-C1	2.00	31.00	24.00	2.00	1.500	OP/HL	-	NO.2/6021
10-DMW-93165-C1	DEMINERALIZED WATER	20-DMW-93174-C1	PU-K075.1/2	0.50	31.00	24.00	2.00	1.500	OP/HL	-	NO.2/6021
10-DMW-93167-C1	DEMINERALIZED WATER	20-DMW-93174-C1	PU-K076.1/2	0.50	31.00	24.00	2.00	1.500	OP/HL	-	NO.2/6021
10-DMW-93170-C1	DEMINERALIZED WATER	20-DMW-93174-C1	PU-K077.1/2	0.50	31.00	24.00	2.00	1.500	OP/HL	-	NO.2/6021
10-DMW-93163-C1	DEMINERALIZED WATER	50-DMW-93152-C1	PU-K0841/2	0.50	31.00	24.00	2.00	1.500	OP/HL	-	NO.2/6021
10-DMW-93166-C1	DEMINERALIZED WATER	50-DMW-93152-C1	PU-K073.1/2	0.50	31.00	24.00	2.00	1.500	OP/HL	-	NO.2/6021
10-DMW-93169-C1	DEMINERALIZED WATER	50-DMW-93152-C1	PU-K079.1/2	0.50	31.00	24.00	2.00	1.500	OP/HL	-	NO.2/6021

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100-SW-93164-C1	SEAL WATER	100-DMW-93127/93129-C1	MACHINARY COOLING WATER SUMP TK-M70	42.50	31.00	24.00	2.00	1.500	OP/HL	WINTERIZ/F	NO.2/6021
10-DMW-93168-C1	DEMINERALIZED WATER	50-DMW-93152-C1	PU-K074.1/2	0.50	31.00	24.00	2.00	1.500	OP/HL	-	NO.2/6021
15-SW-93144-P1	SEAL WATER	PU-K075.1/2	300-RW-93086-P4	0.05	31.00	24.00	7.000	5.000		-	NOT NEED TO PAINT
15-SW-93173-P1	SEAL WATER	PU-K076.1/2	300-RW-93086-P4	0.07	31.00	24.00	7.000	5.000		-	NOT NEED TO PAINT
15-SW-93154-P1	SEAL WATER	PU-K077.1/2	300-RW-93086-P4	0.07	31.00	24.00	7.000	5.000		-	NOT NEED TO PAINT
10-SW-93176-P1	SEAL WATER	PU-K079.1/2	POTABLE WATER TANK TK-K05	0.01	31.00	24.00	7.000	5.000		-	NOT NEED TO PAINT
20-SW-93172-P1	SEAL WATER	PU-K074.1/2	DEMIN WATER TANK TK-K03	0.20	31.00	24.00	7.000	5.000		-	NOT NEED TO PAINT
20-SW-93171-P1	SEAL WATER	PU-K073.1/2	RAW WATER FEED TANK TK-K01	0.10	31.00	24.00	7.000	5.000		-	NOT NEED TO PAINT
20-SW-93206-C1	SEAL WATER	PU-K085.1/2	SB-K98	0.50	31.00	24.00	2.00	1.500	OP/HL	-	NO.2/6021
10-DMW-93205-C1	DEMINERALIZED WATER	50-DMW-93152-C1	PU-K085.1/2	0.50	31.00	24.00	2.00	1.500	OP/HL	-	NO.2/6021
150-DW-93207-P5	DRAIN WATER	200-DW-93153-P5	150-DW-93155-P4	0.50	31.00	24.00	2.00	1.500	OP/HL	-	NO.2/6021
200-DW-93153-P5	DRAIN WATER	150-DW-93207-P5	TK-K06	0.50	31.00	24.00	2.00	1.500	OP/HL	-	NO.2/6021

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300-MWR-09401-C1	M.W.R	250-MWR-09508-C1	MACHINERY COOLING WATER SUMP TK-M70	381.20	49.40	46.70	4.200	3.800	OP/HL	-	NO.2/6021
100-MWS-09402-C1	M.W.S	MACHINERY COOLING WATER SUMP TK-M70	PU-M01	40.00	47.60	45.80	0.500	0.100	OP/HL	-	NO.2/6021
350-MWS-09403-C1	M.W.S	MACHINERY COOLING WATER SUMP TK-M70	PU-M64.2	480.00	47.60	45.80	0.500	0.100	OP/HL	-	NO.2/6021
350-MWS-09404-C1	M.W.S	MACHINERY COOLING WATER SUMP TK-M70	PU-M64.1	480.00	47.60	45.80	0.500	0.100	OP/HL	-	NO.2/6021
100-MWS-09405-C1	M.W.S	EMERGENCY MACHINERY COOLING WATER PUMP PU-M01	40-MWS-09650-C1	40.00	47.60	45.80	4.000	3.600	OP/HL	-	NO.2/6021
300-MWS-09406-C1	M.W.S	PU-M64.2	300-MWS-09427-C1	480.00	47.60	45.80	5.000	4.500	OP/HL	-	NO.2/6021
300-MWS-09407-C1	M.W.S	PU-M64.1	300-MWS-09427-C1	480.00	47.60	45.80	5.000	4.500	OP/HL	-	NO.2/6021
200-MWS-09408-C1	M.W.S	300-PWR-09427-C1	M.C.W HEAT EXCHANGER HE-M02.1	240.00	47.60	45.80	5.000	4.500	OP/HL	-	NO.2/6021
200-MWS-09409-C1	M.W.S	300-MWS-09427-C1	M.C.W HEAT EXCHANGER HE-M02.2	240.00	47.60	45.80	5.000	4.500	OP/HL	-	NO.2/6021
200-MWS-09410-C1	M.W.S	300-MWS-09427-C1	M.C.W HEAT EXCHANGER HE-M02.3	240.00	47.60	45.80	5.000	4.500	OP/HL	-	NO.2/6021
200-MWS-09411-C1	M.W.S	M.C.W HEAT EXCHANGER HE-M02.1	300-MWS-09414-C1	240.00	34.00	32.00	4.200	3.800	OP/HL	-	NO.2/6021
200-MWS-09412-C1	M.W.S	M.C.W HEAT EXCHANGER HE-M02.2	300-MWS-09414-C1	240.00	34.00	32.00	4.200	3.800	OP/HL	-	NO.2/6021
200-MWS-09413-C1	M.W.S	M.C.W HEAT EXCHANGER HE-M02.2	300-MWS-09414-C1	240.00	34.00	32.00	4.200	3.800	OP/HL	-	NO.2/6021
300-MWS-09414-C1	M.W.S	200-MWS-09411/9412/9413-C1	100-MWS-09522-C1	480.00	34.00	32.00	4.200	3.800	OP/HL	-	NO.2/6021
200-PWS-09416-C1	P.W.S	300-PWS-08332-C1	M.C.W HEAT EXCHANGER HE-M02.1	275.00	31.00	29.00	3.000	2.500	OP/HL	-	NO.2/6021
200-PWR-09417-C1	P.W.R	M.C.W HEAT EXCHANGER HE-M02.1	300-PWR-09422-C1	275.00	47.70	42.20	2.000	1.500	OP/HL	-	NO.2/6021
200-PWS-09418-C1	P.W.S	300-PWS-08332-C1	M.C.W HEAT EXCHANGER HE-M02.2	275.00	31.00	29.00	3.000	2.500	OP/HL	-	NO.2/6021
200-PWR-09419-C1	P.W.R	M.C.W HEAT EXCHANGER HE-M02.1	300-PWR-09422-C1	275.00	47.70	42.20	2.000	1.500	OP/HL	-	NO.2/6021
200-PWS-09420-C1	P.W.S	300-PWS-08332-C1	M.C.W HEAT EXCHANGER HE-M02.3	275.00	31.00	29.00	3.000	2.500	OP/HL	-	NO.2/6021
200-PWR-09421-C1	P.W.R	M.C.W HEAT EXCHANGER HE-M02.3	300-PWR-09422-C1	275.00	47.70	42.20	2.000	1.500	OP/HL	-	NO.2/6021
300-PWR-09422-C1	P.W.R	250-PWR-09417/9419/9421-C1	500-PWR-08319-C1	550.00	47.70	42.20	2.000	1.500	OP/HL	-	NO.2/6021
100-SW-09423-C1	SEAL WATER	100-SW-93164-C1	100-SW-931642-C1	42.50	31.00	24.00	2.000	1.500	OP/HL	-	NO.2/6021
200-MWS-09426-C1	M.W.S	300-MWS-09414-C1	FURNACE AREA M.W BOOSTER PUMP PU-M16.1	180.00	34.00	32.00	4.200	3.800	OP/HL	-	NO.2/6021
300-MWS-09427-C1	M.W.S	300-MWS-09406/9407-C1	200-MWS-09408/9409/9410-C1	480.00	47.60	45.80	5.000	4.500	OP/HL	-	NO.2/6021
150-DW-09428-C1	DRAIN WATER	MACHINERY COOLING WATER SUMP(TK-M70)	TRENCH	70.00	47.60	45.80	0.500	0.100	OP/HL	-	NO.2/6021
350-MWS-09429-C1	M.W.S	MACHINERY COOLING WATER SUMP(TK-M70)	TRENCH	350.00	47.60	45.80	0.000	0.000	OP/HL	-	NO.2/6021

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250-MWS-09501-C1	M.W.S	300-MWS-09414-C1	100-MWS-09552/9553/9554-C1	144.00	34.00	32.00	4.200	3.800	OP/HL	-	NO.2/6021
100-MWS-09502-C1	M.W.S	100-MWS-09552-C1	HEADER	24.00	34.00	32.00	4.200	3.800	OP/HL	WINTERIZ/F	NOTE.01
50-MWS-09503-C1	M.W.S	100-MWS-09530-C1	PU-A48.1A/B	7.00	34.00	32.00	4.200	3.800	OP/HL	WINTERIZ/F	NOTE.01
50-MWS-09506-C1	M.W.S	100-MWS-09531-C1	PU-A48.2A/B	7.00	34.00	32.00	4.200	3.800	OP/HL	WINTERIZ/F	NOTE.01
50-MWS-09508-C1	M.W.S	80-MWS-09502-C1	PU-A48.3A/B	7.00	34.00	32.00	4.200	3.800	OP/HL	WINTERIZ/F	NOTE.01
50-MWS-09511-C1	M.W.S	100-MWS-09513-C1	PU-A51.1A/B	7.00	34.00	32.00	4.200	3.800	OP/HL	WINTERIZ/F	NOTE.01
100-MWS-09513-C1	M.W.S	100-MWS-09554-C1	HEADER	24.00	34.00	32.00	4.200	3.800	OP/HL	WINTERIZ/F	NOTE.01
50-MWS-09514-C1	M.W.S	100-MWS-09532-C1	PU-A51.2A/B	7.00	34.00	32.00	4.200	3.800	OP/HL	WINTERIZ/F	NOTE.01
200-MWS-09516-C1	M.W.S	300-MWS-09414-C1	150-MWS-09527-C1	162.00	34.00	32.00	4.200	3.800	OP/HL	WINTERIZ/F	NOTE.01
150-MWR-09518-C1	M.W.R	80-MWR-09557/9556/9557-C1	250-MWR-09628-C1	78.00	42.00	40.00	4.200	3.500	OP/HL	WINTERIZ/F	NOTE.01
100-MWS-09522-C1	M.W.S	300-MWS-09414-C1	40-MWS-09626/9628/9644-C1	11.00	34.00	32.00	4.200	3.800	OP/HL	WINTERIZ/F	NOTE.01
100-MWS-09524-C1	M.W.S	100-MWS-09552-C1	HEADER	23.00	34.00	32.00	4.200	3.800	OP/HL	WINTERIZ/F	NOTE.01
65-MWS-09525-C1	M.W.S	80-MWS-09524-C1	PU-A71A/B	7.00	34.00	32.00	4.200	3.800	OP/HL	WINTERIZ/F	NOTE.01
150-MWS-09527-C1	M.W.S	200-MWS-09516-C1	150-MWR-06704-C1	140.00	34.00	32.00	4.200	3.800	OP/HL	WINTERIZ/F	NOTE.01
250-MWR-09528-C1	M.W.R	100-MWR-09627-C1	300-MWR-09401-C1	266.00	46.20	43.00	4.200	3.500	OP/HL	-	NO.2/6021
65-MWS-09529-C1	M.W.S	150-MWR-06704-C1	REFRIGERANT CONDENSER E2505	26.00	34.00	32.00	4.200	3.800	OP/HL	WINTERIZ/F	NOTE.01
100-MWS-09530-C1	M.W.S	100-MWS-09553-C1	HEADER	23.00	34.00	32.00	4.200	3.800	OP/HL	WINTERIZ/F	NOTE.01
100-MWS-09531-C1	M.W.S	100-MWS-09553-C1	HEADER	23.00	34.00	32.00	4.200	3.800	OP/HL	WINTERIZ/F	NOTE.01
100-MWS-09532-C1	M.W.S	100-MWS-09554-C1	HEADER	24.00	34.00	32.00	4.200	3.800	OP/HL	WINTERIZ/F	NOTE.01

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Line No.	Service	From	To	Des. Flow Rate(Nm3 ,m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
40-MWS-09540-C1	M.W.S	100-MWS-09530-C1	PROCESS GAS COMPRESSOR CP-A48.1	7.00	34.00	32.00	4.200	3.800	OP/HL	WINTERIZ/F	NOTE.01
65-MWS-09541-C1	M.W.S	100-MWS-09530-C1	PROCESS GAS COMPRESSORCP-A48.1	3.00	34.00	32.00	4.200	3.800	OP/HL	WINTERIZ/F	NOTE.01
40-MWS-09542-C1	M.W.S	100-MWS-09531-C1	PROCESS GAS COMPRESSOR CP-A48.2	7.00	34.00	32.00	4.200	3.800	OP/HL	WINTERIZ/F	NOTE.01
65-MWS-09543-C1	M.W.S	100-MWS-09531-C1	PROCESS GAS COMPRESSOR CP-A48.2	3.00	34.00	32.00	4.200	3.800	OP/HL	WINTERIZ/F	NOTE.01
40-MWS-09544-C1	M.W.S	80-MWS-09502-C1	PROCESS GAS COMPRESSOR CP-A48.3	7.00	34.00	32.00	4.200	3.800	OP/HL	WINTERIZ/F	NOTE.01
65-MWS-09545-C1	M.W.S	80-MWS-09502-C1	PROCESS GAS COMPRESSOR CP-A48.3	3.00	34.00	32.00	4.200	3.800	OP/HL	WINTERIZ/F	NOTE.01
40-MWS-09546-C1	M.W.S	100-MWS-09513-C1	PROCESS GAS COMPRESSOR CP-AA51.1	8.00	34.00	32.00	4.200	3.800	OP/HL	WINTERIZ/F	NOTE.01
65-MWS-09547-C1	M.W.S	100-MWS-09513-C1	PROCESS GAS COMPRESSOR CP-AA51.1	3.00	34.00	32.00	4.200	3.800	OP/HL	WINTERIZ/F	NOTE.01
40-MWS-09548-C1	M.W.S	100-MWS-09532-C1	PROCESS GAS COMPRESSOR CP-AA51.2	8.00	34.00	32.00	4.200	3.800	OP/HL	WINTERIZ/F	NOTE.01
65-MWS-09549-C1	M.W.S	100-MWS-09532-C1	PROCESS GAS COMPRESSOR CP-AA51.2	3.00	34.00	32.00	4.200	3.800	OP/HL	WINTERIZ/F	NOTE.01
40-MWS-09550-C1	M.W.S	80-MWS-09524-C1	COOLING GAS COMPRESSOR CP-A71	7.00	34.00	32.00	4.200	3.800	OP/HL	WINTERIZ/F	NOTE.01
65-MWS-09551-C1	M.W.S	80-MWS-09524-C1	COOLING GAS COMPRESSOR CP-A71	3.00	34.00	32.00	4.200	3.800	OP/HL	WINTERIZ/F	NOTE.01
150-MWS-09552-C1	M.W.S	200-MWS-09501-C1	80-MWS-09502/9524-C1	48.00	34.00	32.00	4.200	3.800	OP/HL	WINTERIZ/F	NOTE.01
150-MWS-09553-C1	M.W.S	200-MWS-09501-C1	80-MWS-09530/9531-C1	48.00	34.00	32.00	4.200	3.800	OP/HL	WINTERIZ/F	NOTE.01
150-MWS-09554-C1	M.W.S	200-MWS-09501-C1	100-MWS-09513/9532-C1	48.00	34.00	32.00	4.200	3.800	OP/HL	WINTERIZ/F	NOTE.01
80-MWR-09555-C1	M.W.R	150-MWR-09518-C1	50-MWR-06214/00714-C1	26.00	42.00	40.00	4.200	3.500	OP/HL	WINTERIZ/F	NOTE.01
80-MWR-09556-C1	M.W.R	50-MWR-00514/00614-C1	150-MWR-09518-C1	26.00	42.00	40.00	4.200	3.500	OP/HL	WINTERIZ/F	NOTE.01
80-MWR-09557-C1	M.W.R	50-MWR-00814/914-C1	150-MWR-09518-C1	26.00	42.00	40.00	4.200	3.500	OP/HL	WINTERIZ/F	NOTE.01
100-MWS-09558-C1	M.W.S	200-MWS-09516-C1	65-MWS-06604-C1	26.00	42.00	40.00	4.200	3.500	OP/HL	WINTERIZ/F	NOTE.01

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Line No.	Service	From	To	Des. Flow Rate(Nm3 ,m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
200-MWS-09600-C1	M.W.S	FURNACE AREA MACHINERY BOOSTER PUMP PU-M16.2	200-MWS-09601-C1	180.00	34.00	32.00	7.400	7.000	OP/HL	-	NO.2/6021
200-MWS-09601-C1	M.W.S	FURNACE AREA MACHINERY BOOSTER PUMP PU-M16.1	BURDEN FEEDER TANK(TK-M05)	180.00	34.00	32.00	7.400	7.000	OP/HL	-	NO.2/6021
250-MWR-09602-C1	M.W.R	450-MWR-00214-C1	300-MWR-09401-C1	115.00	57.00	54.00	7.400	6.800	OP/HL	-	NO.2/6021
40-MWS-09626-C1	M.W.S	100-MWS-09522-C1	15-MWS-03010-C1	3.20	34.00	32.00	4.200	3.800	OP/HL	WINTERIZE/F	NOTE.01
100-MWR-09627-C1	M.W.R	40-MWR-03103/07009/03012-C1	150-MWR-09528-C1	11.00	42.00	40.00	4.200	3.500	OP/HL	WINTERIZE/F	NOTE.01
40-MWS-09628-C1	M.W.S	100-MWS-09522-C1	15-MWS-03104-C1	3.20	34.00	32.00	4.200	3.800	OP/HL	-	NO.2/6021
200-MWS-09634-C1	M.W.S	200-MWS-09426-C1	PU-M16.2	180.00	34.00	32.00	3.500	3.000	OP/HL	-	NO.2/6021
50-MWS-09635-C1	M.W.S	80-MWS-09639-C1	FURNACE EQUIPMENT HYDRAULIC UNIT HD-H99	5.00	34.00	32.00	7.400	6.800	OP/HL	WINTERIZE/F	NOTE.01
50-MWS-09636-C1	M.W.S	80-MWS-09639-C1	PDC EQUIPMENT HYDRAULIC UNIT HD-H98	3.70	34.00	32.00	7.400	6.800	OP/HL	WINTERIZE/F	NOTE.01
80-MWS-09639-C1	M.W.S	200-MWS-09601-C1	50-MWS-09635/9636-C1	8.70	34.00	32.00	7.400	6.800	OP/HL	WINTERIZE/F	NOTE.01
80-MWS-09640-C1	M.W.S	50-MWR-10801/10901-C1	250-MWR-09602-C1	8.70	44.00	42.00	7.400	6.500	OP/HL	WINTERIZE/F	NOTE.01
65-MWS-09641-C1	M.W.S	100-MWS-09405-C1	65-MWS-09529-C1	26.00	47.60	45.80	4.000	3.600	OP/HL	WINTERIZE/F	NOTE.01
40-MWS-09644-C1	M.W.S	100-MWS-09522-C1	32-MWS-07005-C1	5.30	34.00	32.00	4.200	3.800	OP/HL	WINTERIZE/F	NOTE.01
25-MWS-09651-C1	M.W.S	200-MWS-09601-C1	200-MWS-09601-C1	3.00	34.00	32.00	7.400	7.000	OP/HL	ET	NOTE.01
25-MWS-09652-C1	M.W.S	200-MWS-09600-C1	200-MWS-09600-C1	3.00	34.00	32.00	7.400	7.000	OP/HL	ET	NOTE.01
50-MWS-09650-C1	M.W.S	100-MWS-09405-C1	40-MWS-09644-C1	5.30	47.60	45.80	4.000	3.600	OP/HL	WINTERIZE/F	NOTE.01



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## MEGA MODULE PROJECT



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P&ID Sheet No.: M5-101											
Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
80-PWS-10102-C1	P.W.S	150-PWS-08504-C1	PRODUCT COOLER DUST COLLECTION SCRUBBER SR-H93	54.00	69.00	63.00	10.000	9.000	OP/HL	WINTERIZE/F	NOTE.01
80-PWS-10103-C1	P.W.S	150-PWS-08504-C1	50-PWS-10118/10123-C1	36.00	69.00	63.00	10.000	9.000	OP/HL	WINTERIZE/F	NOTE.01
40-PWS-10104-C1	P.W.S	150-PWS-08504-C1	HOSE STATION AT PUMPS FOR FLUSHING	5.00	69.00	63.00	10.000	9.000	OP/HL	WINTERIZE/F	NOTE.01
40-PWS-10105-C1	P.W.S	150-PWS-08504-C1	PRODUCT COOLER DUST COLLECTION SUMP TK-E21	17.00	69.00	63.00	10.000	9.000	OP/HL	WINTERIZE/F	NOTE.01
1000-DP-10106-C10	DEDUSTING PIPE	PRODUCT COOLER DUST COLLECTION SCRUBBER SR-H93	PRODUCT COOLER DUST COLLECTION FAN CP-H92	51500.00	60.00	49.00	0.000	-0.100	OP/HL	HC	NOTE.01
1000-DP-10107-C10	DEDUSTING PIPE	PRODUCT COOLER DUST COLLECTION FAN CP-H92	ST-H94	51500.00	62.00	60.00	0.002	0.002	OP/HL	HC1	NOTE.01
200-SL-10110-C7	SLURRY	PRODUCT COOLER DUST COLLECTION SUMP TK-E21	150-SL-10111/10112-C7	89.00	69.00	49.20	0.500	0.100	OP/HL	-	NO.2/6021(LIGHT)
150-SL-10111-C7	SLURRY	200-SL-10110-C7	PRODUCT COOLER DUST COLLECTION SUMP PUMP PU-E22.2	89.00	69.00	49.20	0.500	0.100	OP/HL	WINTERIZE/F	NOTE.01
150-SL-10112-C7	SLURRY	200-SL-10110-C7	PRODUCT COOLER DUST COLLECTION SUMP PUMP PU-E22.1	89.00	69.00	49.20	0.500	0.100	OP/HL	WINTERIZE/F	NOTE.01
150-SL-10113-C7	SLURRY	PRODUCT COOLER DUST COLLECTION SUMP PUMP PU-E22.2	150-SL-10114-C7	89.00	69.00	49.20	2.500	2.000	OP/HL	WINTERIZE/F	NOTE.01
150-SL-10114-C7	SLURRY	PRODUCT COOLER DUST COLLECTION SUMP PUMP PU-E22.1	FEED CHAMBER CLARIFIRE	89.00	69.00	49.20	2.500	2.000	OP/HL	WINTERIZE/F	NOTE.01
200-SL-10115-C7	SLURRY	PRODUCT COOLER DUST COLLECTION SUMP TK-E21	OVERFLOW TO TRENCH	110.00	69.00	49.20	0.000	0.000	OP/HL	-	NO.2/6021(LIGHT)
1000-DP-10116-C10	DEDUSTING PIPE	ST-H94	1000-DP-10106-C10	52000.000	62.000	60.000	0.002	0.002	OP/HL	HC1	NOTE.01
25-DW-10117-C1	DRAIN WATER	PRODUCT COOLER DUST COLLECTION FAN CP-H92	TO TRENCH	1.50	62.00	60.00	0.002	0.002	OP/HL	-	NO.2/6021
50-PWS-10118-C1	P.W.S	80-PWS-10103-C1	25-PWS-10119/10121-C1	18.00	69.00	63.00	10.000	9.000	OP/HL	WINTERIZE/F	NO.2/6021(LIGHT)
25-PWS-10119-C1	P.W.S	50-PWS-10118-C1	SR-H93 VENTURI THROAT SPRAY NOZZLE	9.00	69.00	63.00	10.000	9.000	OP/HL	WINTERIZE/F	NO.2/6021(LIGHT)
25-PWS-10120-C1	P.W.S	50-PWS-10123-C1	SR-H93 VENTURI THROAT SPRAY NOZZLE	9.00	69.00	63.00	10.000	9.000	OP/HL	WINTERIZE/F	NO.2/6021(LIGHT)
25-PWS-10121-C1	P.W.S	50-PWS-10118-C1	SR-H93 VENTURI THROAT SPRAY NOZZLE	9.00	69.00	63.00	10.000	9.000	OP/HL	WINTERIZE/F	NO.2/6021(LIGHT)
25-PWS-10122-C1	P.W.S	50-PWS-10123-C1	SR-H93 VENTURI THROAT SPRAY NOZZLE	9.00	69.00	63.00	10.000	9.000	OP/HL	WINTERIZE/F	NO.2/6021(LIGHT)
50-PWS-10123-C1	P.W.S	80-PWS-10103-C1	25-PWS-10122/10120-C1	18.00	69.00	63.00	10.000	9.000	OP/HL	WINTERIZE/F	NO.2/6021(LIGHT)



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Line No.	Service	From	To	Des. Flow Rate(Nm3 m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
25-PWS-10203-C1	P.W.S	150-PWS-08506-C1	CP-H96	124.00	69.00	47.80	3.000	2.500	OP/HL	WINTERIZE/F	NOTE.01
25-PWS-10204-C1	P.W.S	25-PWS-10203-C1	CONVEYING SYSTEM DUST COLLECTION	75.00	69.00	63.00	10.000	9.000	OP/HL	WINTERIZE/F	NOTE.01
50-DW-10216-C1	DRAIN WATER	CP-H96	TRENCH	50.00	69.00	63.00	10.000	9.000	OP/HL	WINTERIZE/F	NOTE.01
100-PWS-10201-C1	P.W.S	150-PWS-08506-C1	SR-H97	5.00	69.00	63.00	10.000	9.000	OP/HL	WINTERIZE/F	NOTE.01
50-PWS-10218-C1	P.W.S	100-PWS-10201-C1	TK-E24	24.00	69.00	63.00	10.000	9.000	OP/HL	WINTERIZE/F	NOTE.01
50-PWS-10219-C1	P.W.S	50-PWS-10218-C1	50-PWS-10218-C1	70000.00	61.00	46.00	0.000	-0.100	OP/HL	HC	NOTE.01
100-PWS-10202-C1	P.W.S	100-PWS-10201-C1	100-PWS-10201-C1	70000.00	61.00	59.00	0.002	0.002	OP/HL	HC1	NOTE.01
200-SL-10217-C7	SLURRY	TK-E24	TRENCH	124.00	69.00	47.80	0.500	0.100	OP/HL	-	NO.2/6021(LIGHT)
65-PWS-10205-C1	P.W.S	150-PWS-08506-C1	50-PWS-10208-C1	124.00	69.00	47.80	0.500	0.100	OP/HL	WINTERIZE/F	NOTE.01
200-SL-10220-C7	SLURRY	TK-E24	150-SL-10210/10211-C7	124.00	69.00	47.80	0.500	0.100	OP/HL	WINTERIZE/F	NOTE.01
150-SL-10211-C7	SLURRY	200-SL-10220-C7	PU-E24.1	124.00	69.00	47.80	3.000	2.500	OP/HL	WINTERIZE/F	NOTE.01
150-SL-10210-C7	SLURRY	200-SL-10220-C7	PU-E24.2	110.00	69.00	47.80	0.000	0.000	OP/HL	-	NO.2/6021(LIGHT)
50-PWS-10206-C1	P.W.S	65-PWS-10205-C1	150-SL-10210-C7	7000.00	61.00	59.00	0.002	0.002	OP/HL	HC1	NOTE.01
20-PWS-10207-C1	P.W.S	65-PWS-10205-C1	PU-E24.2	1.50	61.00	59.00	0.002	0.002	OP/HL	-	NO.2/6021
50-PWS-10208-C1	P.W.S	65-PWS-10205-C1	150-SL-10211-C7	25.00	69.00	63.00	10.000	9.000	OP/HL	WINTERIZE/F	NO.2/6021(LIGHT)
20-PWS-10209-C1	P.W.S	65-PWS-10205-C1	PU-E24.1	12.50	69.00	63.00	10.000	9.000	OP/HL	WINTERIZE/F	NO.2/6021(LIGHT)
150-SL-10212-C7	SLURRY	PU-E24.2	150-SL-10213-C7	12.50	69.00	63.00	10.000	9.000	OP/HL	WINTERIZE/F	NO.2/6021(LIGHT)
150-SL-10213-C7	SLURRY	PU-E24.1	FEED CHAMBER CLARIFIRE	12.50	69.00	63.00	10.000	9.000	OP/HL	WINTERIZE/F	NO.2/6021(LIGHT)

	<p style="text-align: center;"><b>KOWSAR GISD</b> <b>MEGA MODULE PROJECT</b></p>			
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P&ID Sheet No.: M5-103											
Line No.	Service	From	To	Des. Flow Rate(Nm3 ,m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
40-PG-10301-C6	PURGE GAS	40-PG-07436-C6	50-SG-06904-C6	85.00	45.00	38.00	1.200	0.469	OP/HL	-	NO.2/7032
900-VE-10302-C4	VENT	BOTTOM SEAL GAS BUBBLER SR-D36	VENT	500.00	800.00	26.00	0.000	0.000	OP/HL	-	NOTE.01
50-PWS-10303-C1	P.W.S	100-PWS-08417-C1	VENT	15.00	31.00	29.00	9.000	8.500	OP/HL	-	NOTE.01
50-PWS-10304-C1	P.W.S	100-PWS-08417-C1	BOTTOM SEAL GAS BUBBLER SR-D36	15.00	31.00	29.00	9.000	8.500	OP/HL	WINTERIZE/F	NOTE.01
50-PWS-10305-C1	P.W.S	100-PWS-08417-C1	100-SL-10306-C7	15.00	31.00	29.00	9.000	8.500	OP/HL	WINTERIZE/F	NOTE.01
100-SL-10306-C7	SLURRY	BOTTOM SEAL GAS BUBBLER SR-D36	50-PWS-10310-C7	60.00	31.00	29.00	2.000	1.500	OP/HL	WINTERIZE/F	NOTE.01
150-SL-10307-C7	SLURRY	50-PWS-10310-C7	TK-E93	60.00	31.00	29.00	2.000	1.500	OP/HL	-	NO.2/6021(LIGHT)
200-PWR-10308-C1	P.W.R	BOTTOM SEAL GAS BUBBLER SR-D36	VENT	60.00	31.00	29.00	2.000	1.500	OP/HL	WINTERIZE/F	NOTE.01
150-PWR-10309-C1	P.W.R	200-PWR-10308-C1	1300-PWR-08100-C1	60.00	31.00	29.00	2.000	1.500	OP/HL	-	NO.2/6021
50-PWS-10310-C7	P.W.S	50-PWS-10305-C1	150-SL-10307-C7	15.00	31.00	29.00	9.000	8.500	OP/HL	WINTERIZE/F	NOTE.01



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P&ID Sheet No.: M5-104											
Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
150-SL-10401-C7	SLURRY	B.S.G DUST COLLECTION SUMP PUMP PU-E29.2	FEED CHAMBER CLARIFIRE	124.00	69.00	47.80	3.000	2.500	OP/HL	WINTERIZE/F	NOTE.01
80-PWS-10402-C1	P.W.S	150-PWS-08501-C1	B.S.G DUST COLLECTION SCRUBBER SR-D46	75.00	69.00	63.00	10.000	9.000	OP/HL	WINTERIZE/F	NOTE.01
80-PWS-10403-C1	P.W.S	150-PWS-08501-C1	50-PWS-10418/10423-C1	50.00	69.00	63.00	10.000	9.000	OP/HL	WINTERIZE/F	NOTE.01
40-PWS-10404-C1	P.W.S	150-PWS-08501-C1	HOSE STATION AT PUMPS FOR FLUSHING	5.00	69.00	63.00	10.000	9.000	OP/HL	WINTERIZE/F	NOTE.01
40-PWS-10405-C1	P.W.S	150-PWS-08501-C1	B.S.G DUST COLLECTION SUMP TK-E28	24.00	69.00	63.00	10.000	9.000	OP/HL	WINTERIZE/F	NOTE.01
900-DP-10406-C10	DEDUSTING PIPE	B.S.G DUST COLLECTION SCRUBBER SR-D46	CP-D45	70000.00	61.00	46.00	0.000	-0.100	OP/HL	HC	NOTE.01
900-DP-10407-C10	DEDUSTING PIPE	CP-D45	ST-D47	70000.00	61.00	59.00	0.002	0.002	OP/HL	HC1	NOTE.01
200-SL-10410-C7	SLURRY	B.S.G DUST COLLECTION SUMP TK-E28	150-SL-10411/10412-C7	124.00	69.00	47.80	0.500	0.100	OP/HL	-	NO.2/6021(LIGHT)
150-SL-10411-C7	SLURRY	200-SL-10410-C7	B.S.G DUST COLLECTION SUMP PUMP PU-E29.1	124.00	69.00	47.80	0.500	0.100	OP/HL	WINTERIZE/F	NOTE.01
150-SL-10412-C7	SLURRY	200-SL-10410-C7	B.S.G DUST COLLECTION SUMP PUMP PU-E29.2	124.00	69.00	47.80	0.500	0.100	OP/HL	WINTERIZE/F	NOTE.01
100-SL-10413-C7	SLURRY	B.S.G DUST COLLECTION SUMP PUMP PU-E29.1	100-SL-10401-C7	124.00	69.00	47.80	3.000	2.500	OP/HL	WINTERIZE/F	NOTE.01
200-SL-10415-C7	SLURRY	B.S.G DUST COLLECTION SUMP TK-E28	OVERFLOW TO TRENCH	110.00	69.00	47.80	0.000	0.000	OP/HL	-	NO.2/6021(LIGHT)
350-DP-10416-C10	DEDUSTING PIPE	ST-D47	900-DP-10406-C10	7000.00	61.00	59.00	0.002	0.002	OP/HL	HC1	NOTE.01
25-DW-10417-C1	DRAIN WATER	B.S.G DUST COLLECTION FAN CP-D45	TO TRENCH	1.50	61.00	59.00	0.002	0.002	OP/HL	-	NO.2/6021
50-PWS-10418-C1	P.W.S	80-PWS-10403-C1	25-PWS-10421-C1	25.00	69.00	63.00	10.000	9.000	OP/HL	WINTERIZE/F	NO.2/6021(LIGHT)
25-PWS-10419-C1	P.W.S	50-PWS-10418-C1	SR-D46 VENTURI THROAT SPRAY NOZZLE	12.50	69.00	63.00	10.000	9.000	OP/HL	WINTERIZE/F	NO.2/6021(LIGHT)
25-PWS-10420-C1	P.W.S	50-PWS-10423-C1	SR-D46 VENTURI THROAT SPRAY NOZZLE	12.50	69.00	63.00	10.000	9.000	OP/HL	WINTERIZE/F	NO.2/6021(LIGHT)
25-PWS-10421-C1	P.W.S	50-PWS-10418-C1	SR-D46 VENTURI THROAT SPRAY NOZZLE	12.50	69.00	63.00	10.000	9.000	OP/HL	WINTERIZE/F	NO.2/6021(LIGHT)
25-PWS-10422-C1	P.W.S	50-PWS-10423-C1	SR-D46 VENTURI THROAT SPRAY NOZZLE	12.50	69.00	63.00	10.000	9.000	OP/HL	WINTERIZE/F	NO.2/6021(LIGHT)
50-PWS-10423-C1	P.W.S	80-PWS-10403-C1	25-PWS-10422-C1	25.00	69.00	63.00	10.000	9.000	OP/HL	WINTERIZE/F	NO.2/6021(LIGHT)

	<p align="center"><b>KOWSAR GISD</b> <b>MEGA MODULE PROJECT</b></p>			
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P&ID Sheet No.: M5-108											
Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
50-MWR-10801-C1	M.W.R	HD-H99	80-MWR-09640-C1	5.00	44.00	42.00	7.400	6.500	OP/HL	F	NOTE.01

	<p style="text-align: center;"><b>KOWSAR GISD</b> <b>MEGA MODULE PROJECT</b></p>			
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P&ID Sheet No.: M5-109											
Line No.	Service	From	To	Des. Flow Rate(Nm3 ,m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
50-MWR-10901-C1	M.W.R	HD-H98	80-MWR-09640-C1	3.70	44.00	42.00	7.400	6.500	OP/HL	F	NOTE.01

	<p align="center"><b>KOWSAR GISD</b> <b>MEGA MODULE PROJECT</b></p>			
<b>DOCUMENT TITLE</b>	<b>Document No:</b>		<b>Rev.</b>	<b>DATE: Apr.2015</b>
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P&ID Sheet No.: M5-123											
Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
80-PA-12300-C1	PLANT AIR	CP-G01.3	SR-G03	600.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
80-PA-12301-C1	PLANT AIR	SR-G03	TK-G01.2	600.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
80-PA-12302-C1	PLANT AIR	TK-G01.2	FL-G05	600.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
80-PA-12303-C1	PLANT AIR	FL-G06	HEADER	600.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
50-PA-12306-C1	PLANT AIR	80-PA-12303-C1	80-IA-12406-C5	600.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012

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Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
80-IA-12401-C5	INSTRUMENT AIR	INSTRUMENT AIR COMPRESSOR CP-G01.1	SR-G01	600	50	40	8	7.5	OP/PL	-	NOT NEED TO PAINT
80-IA-12402-C5	INSTRUMENT AIR	INSTRUMENT AIR COMPRESSOR CP-G01.2	SR-G02	600	50	40	8	7.5	OP/PL	-	NOT NEED TO PAINT
80-IA-12403-C5	INSTRUMENT AIR	SR-G01	80-IA-12405-C5	600	50	40	8	7.5	OP/PL	-	NOT NEED TO PAINT
80-IA-12404-C5	INSTRUMENT AIR	SR-G02	80-IA-12405-C5	600	50	40	8	7.5	OP/PL	-	NOT NEED TO PAINT
50-IA-12405-C5	INSTRUMENT AIR	80-IA-12403/12404-C5	AIR RECEIVER TK-G01.1	600	50	40	8	7.5	OP/PL	-	NOT NEED TO PAINT
80-IA-12406-C5	INSTRUMENT AIR	TK-G01.1	50-IA-12407/12408-C5	600	50	40	8	7.5	OP/PL	-	NOT NEED TO PAINT
50-IA-12407-C5	INSTRUMENT AIR	80-IA-12406-C5	FL-G02.1/2	600	50	40	8	7.5	OP/PL	-	NOT NEED TO PAINT
50-IA-12408-C5	INSTRUMENT AIR	80-IA-12406-C5	FL-G01.1/2	600	50	40	8	7.5	OP/PL	-	NOT NEED TO PAINT
50-IA-12409-C5	INSTRUMENT AIR	DR-G061.2	FL-G04	600	50	40	8	7.5	OP/PL	-	NOT NEED TO PAINT
80-IA-12410-C5	INSTRUMENT AIR	FL-G03	40-IA-12663-C5	600	50	40	8	7.5	OP/PL	-	NOT NEED TO PAINT
50-IA-12411-C5	INSTRUMENT AIR	DR-G061.1	FL-G03	600	50	40	8	7.5	OP/PL	-	NOT NEED TO PAINT



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Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
50-PA-12501-C1	PLANT AIR	80-PA-12303-C1	REDUCTION FURNACE AREA HOSE STATIONS	400.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
20-PA-12502-C1	PLANT AIR	50-PA-12501-C1	BURDENFEEDER SEALS CENTRALIZED LUBRICATION SYSTEM	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
20-PA-12506-C1	PLANT AIR	40-PA-12545-C1	HOSE STATION AT PROCESS PUMP AREA(COLD)	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
20-PA-12507-C1	PLANT AIR	40-PA-12545-C1	HOSE STATION AT PROCESS PUMP AREA(HOT)	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
20-PA-12508-C1	PLANT AIR	40-PA-12545-C1	HOSE STATION AT CLARIFIER CENTER DISCHARGE TRENCH	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
20-PA-12509-C1	PLANT AIR	20-PA-12508-C1	HOSE STATION AT CLARIFIER CENTER DISCHARGE TRENCH	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
20-PA-12510-C1	PLANT AIR	50-PA-12501-C1	HOSE STATION AT LOWER SEAL LEG SLIDE GATE	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
20-PA-12511-C1	PLANT AIR	50-PA-12501-C1	HOSE STATION AT GRADE EAST SIDE OF STRUCTURE	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
20-PA-12512-C1	PLANT AIR	50-PA-12501-C1	HOSE STATION AT GRADE WEST SIDE OF STRUCTURE	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
20-PA-12513-C1	PLANT AIR	50-PA-12501-C1	H.S. AT PRODUCT COOLER MIDDLE BURDENFEEDER	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
20-PA-12514-C1	PLANT AIR	50-PA-12501-C1	H.S. AT PRODUCT COOLER LOWER BURDENFEEDER	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
20-PA-12515-C1	PLANT AIR	50-PA-12501-C1	HOSE STATION AT LOWER BURDENFEEDER	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
20-PA-12516-C1	PLANT AIR	50-PA-12501-C1	HOSE STATION AT MIDDLE BURDENFEEDER	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
20-PA-12517-C1	PLANT AIR	50-PA-12501-C1	HOSE STATION AT TOP GAS SCRUBBER	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
20-PA-12518-C1	PLANT AIR	50-PA-12501-C1	HOSE STATION AT UPPER BURDENFEEDER	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
20-PA-12519-C1	PLANT AIR	50-PA-12501-C1	HOSE STATION AT TOP GAS OFFTAKE	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
20-PA-12520-C1	PLANT AIR	50-PA-12501-C1	HOSE STATION AT UPPER SEAL LEG SLIDE GATE	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
20-PA-12521-C1	PLANT AIR	50-PA-12501-C1	HOSE STATION AT CHARGE HOPPER	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
25-PA-12522-C1	PLANT AIR	80-PA-12303-C1	20-PA-12525/12526-C1	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
20-PA-12523-C1	PLANT AIR	25-PA-12543-C1	HOSE STATION NEAR ANALYZER BUILDING AND SEAL GAS COMPRESSOR AT GRADE	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
20-PA-12524-C1	PLANT AIR	25-PA-12522-C1	HOSE STATION AT REDUCTION FURNACE DUST COLLECTION	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012

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20-PA-12525-C1	PLANT AIR	25-PA-12522-C1	REFORMER NORTH END HOSE STATION AT BOTTOM	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
20-PA-12526-C1	PLANT AIR	25-PA-12522-C1	REFORMER NORTH END HOSE STATION AT TOP	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
25-PA-12527-C1	PLANT AIR	80-PA-122303-C1	20-PA-12528/12529-C1	60.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
20-PA-12528-C1	PLANT AIR	25-PA-12527-C1	REFORMER SOUTH END HOSE STATION AT TOP	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
20-PA-12529-C1	PLANT AIR	25-PA-12527-C1	REFORMER SOUTH END HOSE STATION AT BOTTOM	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
25-PA-12530-C1	PLANT AIR	80-PA-122303-C1	HEAT RECOVERY AREA HOSE STATION	60.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
20-PA-12531-C1	PLANT AIR	25-PA-12530-C1	HOSE STATION AT EJECTOR STACK	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
20-PA-12532-C1	PLANT AIR	25-PA-12530-C1	H.S. AT BOTTOM OF HEAT RECOVERY(TRAIN NO.1)	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
20-PA-12533-C1	PLANT AIR	25-PA-12530-C1	H.S. AT BOTTOM OF HEAT RECOVERY(TRAIN NO.2)	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
20-PA-12534-C1	PLANT AIR	25-PA-12530-C1	HOSE STATION AT TOP OF HEAT RECOVERY(TRAIN NO.2)	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
20-PA-12535-C1	PLANT AIR	25-PA-12530-C1	HOSE STATION AT TOP OF HEAT RECOVERY(TRAIN NO.1)	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
40-PA-12536-C1	PLANT AIR	80-PA-122303-C1	HOSE STATION AT MAIN AIR BLOWER	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
20-PA-12537-C1	PLANT AIR	80-PA-122303-C1	HOSE STATION AT PROCESS GAS COMPRESSOR STAGE 2	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
20-PA-12538-C1	PLANT AIR	20-PA-12541-C1	HOSE STATION AT PROCESS GAS COMPRESSOR STAGE 1	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
20-PA-12539-C1	PLANT AIR	80-PA-12500-C1	HOSE STATION AT COOLING GAS COMPRESSOR	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
20-PA-12540-C1	PLANT AIR	20-PA-12541-C1	HOSE STATION AT WORK SHOP	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
20-PA-12541-C1	PLANT AIR	80-PA-122303-C1	20-PA-12538/12540-C1	60.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
20-PA-12542-C1	PLANT AIR	25-PA-12543-C1	HOSE STATION AT REFORMED GAS COOLER	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
25-PA-12543-C1	PLANT AIR	25-PA-12522-C1	20-PA-12542-C1	60.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012
25-PA-12544-C1	PLANT AIR	80-PA-122303-C1	HOSE STATION AT LABORTOARY	60.00	50.00	40.00	8.000	2.050	OP/PL	-	NO.2/5012
40-PA-12545-C1	PLANT AIR	80-PA-12303-C1	20-PA-12506/12507/12508-C1	150.00	50.00	40.00	8.000	7.500	OP/PL	-	NO.2/5012

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P&ID Sheet No.: M5-126											
Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
80-IA-12600-C5	INSTRUMENT AIR	80-IA-12410-C5	40-IA-12651-C5	600.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
20-IA-12601-C5	INSTRUMENT AIR	80-IA-12410-C5	AREA 400 MANIFOLD #402	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
20-IA-12602-C5	INSTRUMENT AIR	80-IA-12603-C5	AREA 500 MANIFOLD #501	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
20-IA-12605-C5	INSTRUMENT AIR	80-IA-12410-C5	AREA 400 MANIFOLD #404	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
20-IA-12606-C5	INSTRUMENT AIR	80-IA-12410-C5	AREA 500 MANIFOLD #502	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
20-IA-12607-C5	INSTRUMENT AIR	80-IA-12410-C5	CONTROL BUILDING	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
20-IA-12608-C5	INSTRUMENT AIR	80-IA-12410-C5	AREA 400 MANIFOLD #403	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
10-IA-12609-C5	INSTRUMENT AIR	25-IA-12610-C5	PV-C07	20.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
25-IA-12610-C5	INSTRUMENT AIR	80-IA-12410-C5	HEAT RECOVERY AREA	60.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
10-IA-12611-C5	INSTRUMENT AIR	25-IA-12610-C5	TV-B36.1	20.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
10-IA-12612-C5	INSTRUMENT AIR	25-IA-12610-C5	TV-C02.1	20.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
10-IA-12613-C5	INSTRUMENT AIR	25-IA-12610-C5	TV-B36.2	20.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
10-IA-12614-C5	INSTRUMENT AIR	25-IA-12610-C5	TV-C02.2	20.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
10-IA-12615-C5	INSTRUMENT AIR	80-IA-12410-C5	HV-A23	20.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
20-IA-12616-C5	INSTRUMENT AIR	80-IA-12620-C5	AREA 100 MANIFOLD #119	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
20-IA-12617-C5	INSTRUMENT AIR	80-IA-12620-C5	AREA 100 MANIFOLD #123	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
20-IA-12618-C5	INSTRUMENT AIR	40-IA-12624-C5	AREA 100 MANIFOLD #113	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
20-IA-12619-C5	INSTRUMENT AIR	80-IA-12620-C5	AREA 100 MANIFOLD #115	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
80-IA-12620-C5	INSTRUMENT AIR	80-IA-12410-C5	HADER	600.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
20-IA-12621-C5	INSTRUMENT AIR	80-IA-12620-C5	AREA 100 MANIFOLD #116	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
10-IA-12622-C5	INSTRUMENT AIR	80-IA-12620-C5	TV-M11	20.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
20-IA-12623-C5	INSTRUMENT AIR	40-IA-12624-C5	AREA 100 MANIFOLD #112	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT

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40-IA-12624-C5	INSTRUMENT AIR	80-IA-12620-C5	20-IA-12618-C5	160.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
20-IA-12625-C5	INSTRUMENT AIR	80-IA-12620-C5	AREA 100 MANIFOLD #111	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
10-IA-12626-C5	INSTRUMENT AIR	80-IA-12620-C5	FV-E16	20.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
10-IA-12627-C5	INSTRUMENT AIR	80-IA-12620-C5	FV-A58.1	20.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
20-IA-12628-C5	INSTRUMENT AIR	80-IA-12620-C5	AREA 100 MANIFOLD #109	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
20-IA-12629-C5	INSTRUMENT AIR	40-IA-12630-C5	AREA 100 MANIFOLD #110	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
40-IA-12630-C5	INSTRUMENT AIR	80-IA-12620-C5	20-IA-12628-C5	160.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
20-IA-12631-C5	INSTRUMENT AIR	80-IA-12620-C5	AERA 100 MANIFOLD #108	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
40-IA-12632-C5	INSTRUMENT AIR	80-IA-12620-C5	10-IA-12633-C5	160.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
10-IA-12633-C5	INSTRUMENT AIR	40-IA-12632-C5	PV-D91	20.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
10-IA-12634-C5	INSTRUMENT AIR	40-IA-12632-C5	PV-P14	20.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
40-IA-12635-C5	INSTRUMENT AIR	80-IA-12620-C5	20-IA-12636-C5	160.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
20-IA-12636-C5	INSTRUMENT AIR	40-IA-12635-C5	AREA 100 MANIFOLD #103	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
10-IA-12637-C5	INSTRUMENT AIR	40-IA-12635-C5	FV-A59	20.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
10-IA-12640-C5	INSTRUMENT AIR	80-IA-12620-C5	LV-E41	20.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
40-IA-12641-C5	INSTRUMENT AIR	80-IA-12410-C5	20-IA-12642-C5	160.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
20-IA-12642-C5	INSTRUMENT AIR	40-IA-12641-C5	AREA 100 MANIFOLD #118	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
10-IA-12643-C5	INSTRUMENT AIR	40-IA-12641-C5	LV-E54	20.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
20-IA-12644-C5	INSTRUMENT AIR	40-IA-12663-C5	AREA 600 MANIFOLD #601	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
10-IA-12645-C5	INSTRUMENT AIR	40-IA-12663-C5	SOV-M66	20.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
20-IA-12646-C5	INSTRUMENT AIR	80-IA-12620-C5	AREA 100 MANIFOLD #120	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
25-IA-12648-C5	INSTRUMENT AIR	80-IA-12410-C5	SOV-E42	60.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT

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Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
10-IA-12649-C5	INSTRUMENT AIR	80-IA-12600-C5	FV-B06.1	20.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
20-IA-12650-C5	INSTRUMENT AIR	40-IA-12651-C5	AREA 200 MANIFOLD #204	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
40-IA-12651-C5	INSTRUMENT AIR	80-IA-12600-C5	20-IA-12653-C5	160.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
20-IA-12652-C5	INSTRUMENT AIR	40-IA-12651-C5	AREA 200 MANIFOLD #203	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
20-IA-12653-C5	INSTRUMENT AIR	40-IA-12651-C5	AREA 200 MANIFOLD #206	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
40-IA-12654-C5	INSTRUMENT AIR	40-IA-12651-C5	20-IA-12655-C5	160.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
20-IA-12655-C5	INSTRUMENT AIR	40-IA-12654-C5	AREA 200 MANIFOLD #201	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
20-IA-12656-C5	INSTRUMENT AIR	40-IA-12654-C5	AREA 200 MANIFOLD #205	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
10-IA-12657-C5	INSTRUMENT AIR	40-IA-12654-C5	FV-E49	20.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
20-IA-12658-C5	INSTRUMENT AIR	40-IA-12654-C5	AREA 200 MANIFOLD #202	40.00	50.00	40.00	8.000	7.500	OP/PL	-	NOT NEED TO PAINT
10-IA-12659-C5	INSTRUMENT AIR	40-IA-12663-C5	AREA 600 MANIFOLD #602	20.00	50	40	8	7.5	OP/PL	-	NOT NEED TO PAINT
25-IA-12660-C5	INSTRUMENT AIR	40-IA-12651-C5	SEAL GAS COMPRESSOR CP-D03	20.00	50	40	8	7.5	OP/PL	-	NOT NEED TO PAINT
20-IA-12662-C5	INSTRUMENT AIR	80-IA-12410-C5	LABORATORY	40.00	50	40	8	7.5	OP/PL	-	NOT NEED TO PAINT
40-IA-12663-C5	INSTRUMENT AIR	80-IA-12410-C5	WATER TREATMENT AREA	160.00	50	40	8	7.5	OP/PL	-	NOT NEED TO PAINT

	<p align="center"><b>KOWSAR GISD</b> <b>MEGA MODULE PROJECT</b></p>		
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Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
25-AC-13501-C1	COMPRESSED AIR	50-AC-10511-C5	OXIDE COATING SLIDE GATE SG-F63	50.00	50.00	40.00	7.000	6.000		-	NO.2/5012
50-AC-13502-C1	COMPRESSED AIR	50-AC-10511-C5	VENT	100.00	50.00	40.00	7.000	6.000		-	NO.2/5012
50-PWS-13503-C1	P.W.S	65-PWS-08448-C1	32-PWS-13504/13505-C1	20.00	31.00	29.00	7.200	6.500	OP/HL	WINTERIZE / F	NOTE.01
32-PWS-13504-C1	P.W.S	50-PWS-13503-C1	OXIDE COATING BLENDING TROUGH TK-F63	8.00	31.00	29.00	7.200	6.500	OP/HL	WINTERIZE / F	NO.2/6021
32-PWS-13505-C1	P.W.S	50-PWS-13503-C1	OXIDE COATING BLENDING TROUGH TK-F63	12.00	31.00	29.00	7.200	6.500	OP/HL	WINTERIZE / F	NO.2/6021
25-AC-13511-C5	COMPRESSED AIR	50-AC-10511-C5	BIN VENT FILTER FL-F60	20.00	50.00	40.00	7.000	6.000		-	NO.2/5012

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200-RW-15001-C1	RAW WATER	CLIENT	FIRE WATER STORAGE TANK TK-S10	200.00	31.00	29.00	2.000	1.500	OP/HL	-	NO.2/6021
80-FW-15002-C12	FIRE WATER	250-FW-15077-C12	50-FW-15005/15006-C12	6.00	31.00	29.00	0.500	0.300	OP/HL	-	NO.2/6021
200-FW-15003-C12	FIRE WATER	250-FW-15077-C12	FIRE WATER ELECTRICAL PUMP PU-S10	350.00	31.00	29.00	0.500	0.300	OP/HL	-	NO.2/6021
200-FW-15004-C12	FIRE WATER	250-FW-15077-C12	FIRE WATER DIESEL PUMP PU-S11	350.00	31.00	29.00	0.500	0.300	OP/HL	-	NO.2/6021
50-FW-15005-C12	FIRE WATER	80-FW-15002-C12	FIRE WATER JOCKEY PUMP PU-S12.A	6.00	31.00	29.00	0.500	0.300	OP/HL	-	NO.2/6021
50-FW-15006-C12	FIRE WATER	80-FW-15002-C12	FIRE WATER JOCKEY PUMP PU-S12.B	6.00	31.00	29.00	0.500	0.300	OP/HL	-	NO.2/6021
250-FW-15012-C12	FIRE WATER	PU-S10-12	315-FW-15015-P2	350.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NO.2/6021
200-DW-15014-C1	DRAIN WATER	FIRE WATER STORAGE TANK TK-S10	FUNNLE	120.00	31.00	29.00	0.45	0.38	OP/PL	-	NO.2/6021
315-FW-15015-P2	FIRE WATER	250-FW-15012-C12	315-FW-15019-P2	350.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NOT NEED TO PAINT
315-FW-15017-P2	FIRE WATER	315-FW-15016/15018-P2	315-FW-15015-P2	350.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NOT NEED TO PAINT
315-FW-15018-P2	FIRE WATER	315-FW-15019-P2	315-FW-15017-P2	350.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NOT NEED TO PAINT
315-FW-15019-P2	FIRE WATER	315-FW-15015/15023-P2	315-FW-15016/15018-P2	350.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NOT NEED TO PAINT
150-FW-15020-C12	FIRE WATER	180-FW-15073-P2	100-FW-15022-C12	117.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NOTE.01
100-FW-15021-C12	FIRE WATER	180-FW-15073-P2	65-FW-15031/15032-C12	40.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NOTE.01
100-FW-15022-C12	FIRE WATER	150-FW-15020-C12	HOSE REELS ON REDUCTION FURNACE STRUCTURE	60.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NOTE.01
315-FW-15023-P2	FIRE WATER	315-FW-15019-P2	315-FW-15019-P2	350.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NOT NEED TO PAINT
65-FW-15024-C12	FIRE WATER	100-FW-15022-C12	HOSE REEL ON PLATFORM EL.93750	20.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NO.2/6021
65-FW-15025-C12	FIRE WATER	100-FW-15022-C12	HOSE REEL ON PLATFORM EL.83350	20.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NO.2/6021
65-FW-15026-C12	FIRE WATER	100-FW-15022-C12	HOSE REEL ON PLATFORM EL.76050	20.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NO.2/6021
65-FW-15027-C12	FIRE WATER	100-FW-15022-C12	HOSE REEL ON PLATFORM EL.70150	20.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NO.2/6021
65-FW-15028-C12	FIRE WATER	150-FW-15020-C12	HOSE REEL ON PLATFORM EL.65850	20.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NO.2/6021
65-FW-15029-C12	FIRE WATER	150-FW-15020-C12	HOSE REEL ON PLATFORM EL.56170	20.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NO.2/6021
65-FW-15030-C12	FIRE WATER	150-FW-15020-C12	HOSE REEL ON PLATFORM EL.50500	20.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NO.2/6021
65-FW-15031-C12	FIRE WATER	100-FW-15021-C12	HOSE REEL ON PLATFORM EL.26245	20.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NO.2/6021
65-FW-15032-C12	FIRE WATER	100-FW-15021-C12	HOSE REEL ON PLATFORM EL.15060	20.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NO.2/6021

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Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
180-FW-15033-P2	FIRE WATER	315-FW-15017-P2	PUMP HOUSE HYDRANT HY01	117.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NOT NEED TO PAINT
180-FW-15035-P2	FIRE WATER	315-FW-15023-P2	HY02	117.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NOT NEED TO PAINT
75-FW-15036-P2	FIRE WATER	315-FW-15023-P2	LABORATORY FIRE BOX	20.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NOT NEED TO PAINT
180-FW-15038-P2	FIRE WATER	315-FW-15019-P2	HY03	117.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NOT NEED TO PAINT
75-FW-15039-P2	FIRE WATER	315-FW-15023-P2	SUFTENING BULDING FIRE BOX	20.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NOT NEED TO PAINT
180-FW-15040-P2	FIRE WATER	315-FW-15023-P2	SUFTENING BULDING HY04	117.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NOT NEED TO PAINT
75-FW-15041-P2	FIRE WATER	315-FW-15019-P2	WARE HOUSE FIRE BOX	20.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NOT NEED TO PAINT
180-FW-15042-P2	FIRE WATER	315-FW-15019-P2	HY05	117.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NOT NEED TO PAINT
75-FW-15043-P2	FIRE WATER	315-FW-15019-P2	OFFICE BUILDING FIRE BOX	20.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NOT NEED TO PAINT
180-FW-15044-P2	FIRE WATER	315-FW-15019-P2	OFFICE HY06	117.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NOT NEED TO PAINT
180-FW-15045-P2	FIRE WATER	315-FW-15023-P2	HEAT RECOVERY HY07	117.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NOT NEED TO PAINT
180-FW-15046-P2	FIRE WATER	315-FW-15018-P2	REFORMER HY08	117.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NOT NEED TO PAINT
180-FW-15047-P2	FIRE WATER	315-FW-15018-P2	GAS ANALYZER BUILDING HY09	117.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NOT NEED TO PAINT
180-FW-15048-P2	FIRE WATER	315-FW-15018-P2	INERT GAS GENERATOR HY10	117.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NOT NEED TO PAINT
180-FW-15049-P2	FIRE WATER	315-FW-15017-P2	HY11	117.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NOT NEED TO PAINT
75-FW-15050-P2	FIRE WATER	315-FW-15017-P2	MAIN ELEC & CONTROL ROOM FIRE BOX	20.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NOT NEED TO PAINT
180-FW-15051-P2	FIRE WATER	315-FW-15023-P2	HY12	117.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NOT NEED TO PAINT
180-FW-15052-P2	FIRE WATER	250-FW-15017-P2	COMPRESSOR AREA HY13	117.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NOT NEED TO PAINT
180-FW-15053-P2	FIRE WATER	315-FW-15023-P2	MAIN AIR BLOWER HY14	117.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NOT NEED TO PAINT





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Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
180-FW-15054-P2	FIRE WATER	315-FW-15016-P2	EMERGENCY PILE HY21	117.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NOT NEED TO PAINT
180-FW-15055-P2	FIRE WATER	315-FW-15016-P2	OXIDE COATING & SCREEN HY20	117.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NOT NEED TO PAINT
180-FW-15056-P2	FIRE WATER	315-FW-15016-P2	REMET OPEN STORAGE YARD HY19	117.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NOT NEED TO PAINT
180-FW-15057-P2	FIRE WATER	315-FW-15016-P2	PRODUCT OPEN STORAGE YARD HY18	117.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NOT NEED TO PAINT
180-FW-15058-P2	FIRE WATER	315-FW-15016-P2	PRODUCT OPEN STORAGE YARD HY17	117.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NOT NEED TO PAINT
180-FW-15059-P2	FIRE WATER	315-FW-15016-P2	PRODUCT OPEN STORAGE YARD HY16	117.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NOT NEED TO PAINT
180-FW-15060-P2	FIRE WATER	315-FW-15016-P2	PRODUCT SILO HY15	117.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NOT NEED TO PAINT
100-FW-15061-C12	FIRE WATER	100-FW-15022-C12	CHANGE HOAPPER FIRE WATER SUPPLY	30.00	31.00	29.00	3.000	2.500	15 BAR/HP	-	NOTE.01
250-FW-15077-C12	FIRE WATER	200-FW-15075/15076-C12	200-FW-15002/15003/15004-C12	350.00	31.00	29.00	0.50	0.30	15 BAR/HP	-	NO.2/6021
200-FW-15075-C12	FIRE WATER	200-FW-15075/15076-C12	200-FW-15002/15003/15004-C12	350.00	31.00	29.00	0.50	0.30	15 BAR/HP	-	NO.2/6021
200-FW-15076-C12	FIRE WATER	FIRE WATER STORAGE TANK TK-S10	250-FW-15077-C12	350.00	31.00	29.00	0.50	0.30	15 BAR/HP	-	NO.2/6021
180-FW-15073-P2	FIRE WATER	250-FW-15017-P2	150-FW-15068-P2	117.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NOT NEED TO PAINT
100-FW-15068-P2	FIRE WATER	150-FW-15020-C12	REDUCTION FURNACE BOOSTER PUMP PU-E99	50.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NOT NEED TO PAINT
65-FW-15074-C12	FIRE WATER	250-FW-15012-C12	PUMP HOUSE FIRE BOX	20.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NO.2/6021
75-FW-15072-P2	FIRE WATER	315-FW-15019-P2	CANTEEN, LOCKER&SHOWER FIRE BOX	20.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NOT NEED TO PAINT
75-FW-15070-P2	FIRE WATER	315-FW-15019-P2	WARE HOUSE FIRE BOX	20.00	31.00	29.00	10.500	10.000	15 BAR/HP	-	NOT NEED TO PAINT
250-RW-15067-C1	RAW WATER	FIRE WATER STORAGE TANK TK-S10	TRENCH	200.00	31.00	29.00	0.000	0.000	OP/PL	-	NO.2/6021

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<b>DOCUMENT TITLE</b>	<b>Document No:</b>		<b>Rev.</b>	<b>DATE: Apr.2015</b>
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Line No.	Service	From	To	Des. Flow Rate(Nm3 .m3/hr)	Des. Temp. (°C)	Opp. Temp. (°C)	Des. Press. (Kg/cm2G)	Opp. Press. (Kg/cm2G)	TEST PRESS/TYP	Insulation code	Painting code
40-PG-15101-S3	PURGE GAS	PURGE GAS ACCUMULATOR TK-G23	150-OX-15104-S3	180.00	45.00	38.00	10.000	8.000	OP/PL	-	NO.2/7032
50-OX-15103-S3	OXYGEN	150-OX-15104-S3	VENT TO SAFE LOCATION	510.00	35.00	25.00	6.000	1.489	9 BAR/HP	-	NOT NEED TO PAINT
150-OX-15104-S3	OXYGEN	OXYGEN BY CLIENT	REFORMED GAS MIXER	5412.00	35.00	25.00	6.000	1.489	9 BAR/HP	-	NOT NEED TO PAINT