



Golgohar Iron & Steel Development Co.

# GISDCO

**GOLGOHAR IRON &  
STEEL DEVELOPMENT CO.**  
Public relations and international affairs



Registration number: 3136

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ





## Company Overview

GolGohar Iron and Steel Development Company (GISDCO) were established in GolGohar mining and industrial zone, located 55 km from Sirjan in 2013, with a foreign exchange investment of 71 million euros, an investment of 437 billion tomans and a total investment of 1,353 billion tomans. Gohar and Kausar Mega-Modules were launched seriously and quickly in this company as DRI production projects. The construction of Toubā Mega-Module as the third direct reduction plant started in 2019 and was put into operation in 2024.

The vision of Gol Gohar Iron and Steel Development Company is to complete the steelmaking chain and reach the annual production of 6 million tons of sponge iron, 3 million tons of steel and 1.5 million tons of final products with high added value.

At the moment, GISDCO, as the largest supplier of DRI in Iran and one of the top product exporter companies in Iran, completes the production chain in the GolGohar zone and is on the way to creating lasting values for all stakeholders, which in the near future will lead to competitive production of steel products. Steel products will attract and direct capital and effectively support downstream industries.

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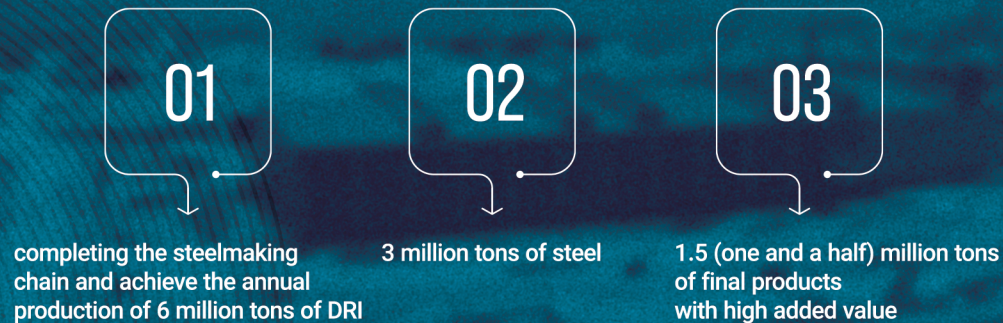
GISDCO.



## Mission and vision of Gol Gohar Iron and Steel Development Company

**Mission:** play an effective role in the steel industry with the aim of improving the level of welfare and sustainable development of the society.

**Vision:**





## Stockholders of GolGohar Iron and Steel Development Company

Shareholder's Names	Share percentage
GolGohar Mining and Industrial Company	35%
Golgohar Investment and Development Company	15%
Iranian Ghadir Iron and Steel Company	10%
National bank employees' pension fund	10%
Ghadir Industries and Mines Development Company	10%
Mining and Metals Investment and Development Company	10%
Omid Investment Management Company	10%





## Two mega-modules, Gohar and Kausar

the capacity of 1.7 million tons, and 1.8 million (oxygen enrichment) tons per year. The investment of 71 million euros, and 437 billion Tomans, the total investment is 1353 billion Tomans.

The raw material of these plants is supplied from GolGohar Mining and Industrial Company.

The process of converting to DRI in these Plants is that the iron pellets are regenerated in the furnaces and 66% iron is converted to 90% sponge iron at the output of the factory.

Thermal recovery in this process, which is known as Midrex, is very desirable and is done with very low gas consumption. Also, the consumption of water and electricity in these factories is very optimal.



**Plants yield** ▶ Hot and cold DRI



**Project duration** ▶ 3 years per each



**Annual total capacity** ▶ 3.550 MT



**Operation starting year** ▶ Gohar 2015 and Kausar 2017



**Number of employees** ▶ direct 600 people, indirect 1800 people





## The 3rd direct reduction plant, Touba

The construction of the third Mega-Module, named Touba, with the capacity to produce one million and 850 thousand tons of DRI per year and the ability to produce two products, cold DRI (CDRI) and hot DRI (HDRI), started in 2019 and was put into operation in the winter of 2024. The technology of this factory is Midrex and its raw material is pellets. The Midrex direct reduction process uses a low-pressure moving bed furnace in which the reducing gas is passed from the bottom up through lumps or pellets of iron ore. Hydrogen and carbon monoxide are regenerative gases in the Midrex process, which must be produced industrially.

As soon as the pellets enter, they are exposed to reducing gases and perform chemical and thermal exchange. In the heat exchange, the reducing gases lose their temperature to some extent, and the temperature of the cold pellet increases. In chemical exchange, the percentage of reducing agents decreases and on the other hand, the percentage of oxygen in the pellet decreases.



**Plants yield** ▶ Direct Reduced Iron (DRI)



**Project duration** ▶ 32 months



**Annual total capacity** ▶ 1.850 million tons



**Project Operation Date** ▶ Jan, 2024



**Number of employees in project time** ▶ direct 220 people, indirect 900 people

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# Touba Mega Module



## | Power Substation Factory (Hadid power post)

This power post was constructed on a land of 49,680 square meters in the complex site with 5 (400 kV) bay lines and 5 (270 MVA) transformers with a credit of 40 million Euros and 400 billion Rials by GISDCO.

The construction of this project started its technical stages in 2018 and is currently in operation. Hadid Post is one of the infrastructure factories of GISDCO, which is responsible for increasing the stability of the network, reducing the voltage drop of the factories, increasing the power supply capability and also supplying the consumption demand of the factories, industrial uses, and ancillary facilities.

Another prominent point of this factory is the supply of substation equipment from domestic manufacturers in order to support domestic industries, which can be an effective and useful step on the part of GISDCO in order to supply electricity needed by factories and accelerate the supply of energy infrastructure for the projects which are in progress.



**Plants yield** ▶ Converting electricity from 400 to 33 kW to feed DRI and steelmaking factories



**Project duration** ▶ 24 months



**Annual total capacity** ▶ 1000 MWA



**Project operation date** ▶ Sep, 2021



**Number of employees in project time** ▶ 18 people

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# Power substation project (Hadid power post)



## Air separation Unit (ASU)

Oxygen, nitrogen, and argon are essential gases in the steelmaking process, especially the production of quality steel. For example, the use of oxygen in the furnace helps to adjust the chemical analysis (due to the reaction of oxygen with carbon), and by increasing the temperature of the melt, it helps to reduce the cost of electricity and reduce the melting time. One of the uses of nitrogen and argon in the ladle arc furnace is where the alloy melting takes place: for deoxygenation and homogenization of the temperature and chemical composition.

The best and the most economical way to obtain pure oxygen is to use ambient air, which first takes the ambient air with powerful compressors, and then this compressed air enters the turbine. This turbine cools the air to a very low temperature and enters the separating part so that after separating the liquids, each of them is stored in separate tanks.



**Plants yield** ▶ required argon, nitrogen and oxygen for DRI and steelmaking plants



**Project duration** ▶ 37 months



**Production capacity** ▶ 240 NM3/ArH | 31600 NM3/NH | 30000 NM3/O2H



**Ability to store liquid** ▶ Oxygen 900 cubic meters | Nitrogen 1200 cubic meters



**Project operation date** ▶ Apr, 2023



**Number of employees in project time** ▶ 50 people

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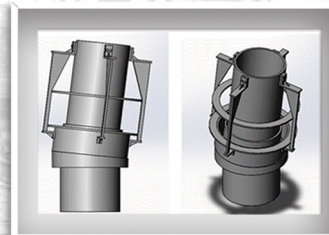
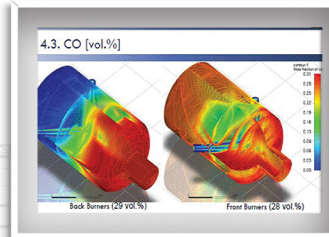
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# OXYGEN PLANT



## The main actions of the research and development department in 2023 and 2024 are as follows:

- . Carrying out the industrial phase of production of oxide briquettes from fine pellets and DRI sludge on an industrial scale.
- . Conducting the laboratory phase of green steel production with instant reduction technology using hematite and magnetite concentrates.
- . Carrying out the laboratory phase of extracting iron and vanadium pentoxide from steelmaking slag and carrying out the laboratory phase of cold processing of slag for use in other industries.
- . Performing Executive reforms of the reformer for thermal balance, increasing the lifespan of the reformer tubes, and reducing gas consumption.
- . Studying the technical and economic feasibility of post-heat auxin and coil modification in order to create added value in hot-rolled sheet.
- . Producing electricity and using the waste heat optimally in reduction and steelmaking factories.
- . Studying the change in graphite electrode size of electric arc furnaces from 760 to 700 mm Technically and economically.
- . Preparing future development plans of the company in steel and non-steel fields comprehensively.
- . Providing a solution to change water spray nozzles and pack top gas scrubber to reduce gas consumption.
- . Investigating all alternative methods of methane in the Midrex process and studying the technical and economic feasibility of each method.
- . Studying the technical and economic feasibility of investment in the field of renewable energy and solar panel production chain.
- . Reporting the technical and economic analysis of investment in LNG, oil field flare gas.
- . Implementing the product dust collector ducting reforms in the Touba module.
- . Studying the feasibility of cooling tower waste steam recovery.
- . Reporting the technical and economic analysis of coated sheet production.
- . Studying the technical and economic feasibility of spiral seamed-pipe production.
- . Analyzing the gas and electricity supply and demand mismatch in the future.
- . Investigating the capacities of ports in Iran and the Middle East in order to develop coastal and offshore industries.
- . Preparing the technical and economic report on investment in low-carbon ferromanganese.
- . Compiling the circular economy document for optimal use of all production process wastes.
- . Analyzing the top 10 steel companies in the world and comparing the steel industry of Iran and Türkiye.
- . Investigating the effect of iron concentrate quality on melt production efficiency in steelmaking.
- . Investigating the use of low-sulfur concentrates for the production of oxide briquettes.
- . Investigating the hydrogen production methods.
- . Investigating the research approaches of the oil company and petrochemical industry.







## Successes and achievements

- . The largest supplier of DRI in the country.
- . Received a crystal statuette from the 21st National Award for Organizational Excellence in 2023.
- . Received the top national and provincial ranking of the sample unit in the 34th festival of gratitude from the elites of the work and production society in 2023.
- . Ranked 8th in the group of ferrous metal companies and ranked 49th among the top 100 companies in Iran at the IMI100 conference in 2023
- . Received the title of the best research and development unit of Kerman province and the certificate of research and development ability ranking 2nd in Iran in 2023.
- . Patented the Oxide Briquette design and RGC Box design and was selected in the best Iranian innovation festival of Sharif University in 2023.
- . Received the Selected golden statue of the province from the health-oriented employer's gratitude festival in 2023.
- . Received the 4 stars of excellence in the 5th Safety, Health, and Environment Excellence Festival in 2023.
- . Received an honorary diploma at the Public Relations Publication Festival of Iran.
- . Received a crystal statue from the 20th National Award for Organizational Excellence in 2022.
- . Ranked 39th among the top 100 companies in Iran in 2022.
- . Iran's top exporter in 2022.
- . Selected as the leading company in technology development and economic growth from the Ministry of Security in 2022.
- . Selected as a top company in the festival of gratitude from the elites of the work and production community of Kerman province in 2022.
- . Received a one-star golden statue from the fifth national festival of health-oriented industries in 2022.
- . The top industrial company chosen by the House of Industry, Mining, and Trade of Kerman Province in 2021.
- . Received a one-star empowerment-level appreciation letter for the National Technology and Innovation Award in 2020.
- . The first rank in the export of DRI in 2019 and 2020.

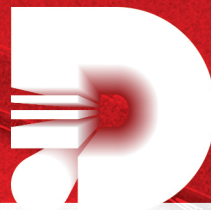


## Social Responsibilities

- . Restoring and reconstructing the historical house of Dr. Sadeghi in Sirjan .
- . Supporting the golden raven, the national bird of Iran.
- . Constructing more than 70 hectares of green space.
- . Standardizing and improving the Dolphin Water Park.
- . Constructing the Sirjan conference hall.
- . Empowering and creating employment for women in the villages of Sirjan.
- . Producing green steel, as a pilot, in GolGohar Iron and Steel Development Company.
- . Participating in the construction project of Gohar Park.
- . Participating in the construction project of Fatima Al-Zahra Hospital.
- . Participating in the asphalt renewal project of Sirjan roads.
- . Participating in Sirjan's City of Light project.







GHAR IRON  
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