



Golgohar Iron & Steel Development Co.

GISDCO

Golgohar Iron &
Steel Development CO.
Public Relations and International Affairs



بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



Company Overview

Golgohar Iron and Steel Development Company (GISDCO) was established in 2013 in Golgohar Mining and Industrial Zone, located 55 km from Sirjan, with a foreign investment of 71 million euros, an investment of 4,370 billion Iranian rials a total investment of 1,353 billion euros. Gohar and Kowsar Mega-Modules were commissioned successfully as part of GISDCO's Direct Reduction Iron (DRI) production projects. Construction of the Tooba Mega-Module as the third direct reduction plant started in 2019 and was commissioned in 2024. "The vision of Golgohar Iron & Steel Development Company (GISDCO) is to rank among the top three steel companies on the stock exchange in terms of profitability and productivity."

At the moment, GISDCO, as the largest supplier of DRI in Iran and one of the top product exporter companies in Iran, completes the steel value 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 steel production. Steel products will attract investment and effectively support downstream industries.

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GISDCO.

Our Mission & Vision



Mission: Creating added value across the iron and steel value chain to contribute to the nation's sustainable development.



Vision: To rank among the top three steel companies listed on the stock exchange in terms of profitability and productivity.

Shareholders of Golgohar Iron and Steel Development Company

Shareholder's Names	Shareholding (%)
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%

GOHAR KOWSAR AND TOOBA PLANTS



Gohar, Kowsar, and Tooba Plants

The two Gohar and Kowsar Direct Reduction Iron (DRI) mega-module plants were constructed with annual production capacities of 1.7 million tons and 1.85 million tons, respectively. The project involved an investment of 71 million euros in foreign currency and 4,370 billion Iranian rials in local currency, totaling 13,530 billion Iranian rials. Additionally, construction of the third mega-module, named Tooba, with an annual production capacity of 1.85 million tons—capable of producing Hot and Cold DRI (HDRI and CDRI) began in 2020 (1399) and commenced operations in the winter of 2024 (1402). The primary feedstock for these plants is iron ore pellets.

Iron ore pellets containing approximately 66% iron are reduced to produce Direct Reduced Iron (DRI) with a metallization degree of approximately 90%.

The thermal efficiency of this process, known as MIDREX, is highly favorable and operates with minimal natural gas consumption. The MIDREX direct reduction process is based on a low-pressure moving bed furnace, where the reducing gas flows from the bottom to the top through the iron ore lumps or pellets. Hydrogen and carbon monoxide serve as the reducing gases in the MIDREX process and these reducing gases are generated within the reforming system.

Furthermore, water and electricity consumption in these plants is highly optimized, ensuring complete environmental compatibility and the lowest greenhouse gas emissions among conventional iron production methods.



Product ▶ Hot DRI (HDRI) and Cold DRI (CDRI)



Construction Duration ▶ “Gohar” 3 years / “Kowsar” 3 years / “Tooba” 32 months



Annual Production Capacity ▶ 5.5 million tons



Commissioning Date ▶ “Gohar” 2016 (1395) / “Kowsar” 2018 (1397) / “Tooba” 2024 (1402)



Number of Employees ▶ 880 direct / 2,700 indirect



Steelmaking Plant & Endless Strip Production

In this plant, hot direct reduced iron (HDRI) produced in the direct reduction plants (described in the previous sections) at approximately 700°C is directly charged into a 200-ton Electric Arc Furnace (EAF). The 88% HDRI charge ratio contributes to the production of low-carbon (green) steel by significantly reducing energy consumption and carbon emissions. Following melting and secondary metallurgical treatment, the molten steel is refined to achieve the required chemical composition and quality. It is then continuously cast into thin slabs, which are transferred directly to the Endless Strip Production (ESP) line without intermediate cooling or reheating.

The final product of the line is Hot Rolled Coil (HRC) with widths ranging from 1,000 to 1,800 mm and thicknesses from 0.8 to 20 mm.

One of the plant's key advantages is its single-stage production process, which enables an annual production capacity of 3 million tons of Hot Rolled Coil (HRC). Hot charging of Direct Reduced Iron (DRI) into Electric Arc Furnaces significantly reduces energy and material consumption, making it a unique process in Iran.



Product ▶ Hot Rolled Coil (HRC)



Width ▶ 1,000 - 1,800 mm



Thickness ▶ 0.8 - 20 mm



Annual Production Capacity ▶ 3 million tons



Project Start Date ▶ 2016

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STEELMAKING PLANT & ENDLESS STRIP PRODUCTION

Hadid Power Substation

This substation was constructed on a 49,680 square site in the complex site with five (400 kV) bay lines and five (270 MVA) transformers investment 40 million euros and 400 billion Iranian rials by GISDCO.

The construction of this project started its began in 2018 and is currently in operation. Hadid Substaion one GISDCO's facilites, 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 notable feature 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.



Purpose ▶ Converting electricity from 400 kV to 33 kV to feed DRI and steelmaking factories



Project Duration ▶ 24 months



Total Capacity ▶ 1000 MWA



Commissioning Date ▶ Sep, 2021

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Hadid Power Substation

Air Separation Unit (ASU)

Oxygen, nitrogen, and argon are essential gases in the steelmaking process, especially in the production of quality steel. For example, the use of oxygen in the furnace helps to adjust the chemical composition (due to the reaction of oxygen with carbon), and by increasing the temperature of the melt, it helps to reduce electricity consumption 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 deoxidation and homogenization of the temperature and chemical composition.

The most economical method of producing oxygen is through air separation, 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.



Products Supply of ▶ Supply of oxygen, nitrogen and argon for DRI and steelmaking plants



Project Duration ▶ 37 months



Production Capacity ▶ **Oxygen: 30000** Nm³/h | **Nitrogen: 31600** Nm³/h | **Argon: 300** Nm³/h



Liquid Storage Capacity ▶ **Oxygen 900** m³ | **Nitrogen 1200** m³



Project Operation Date ▶ Apr, 2023

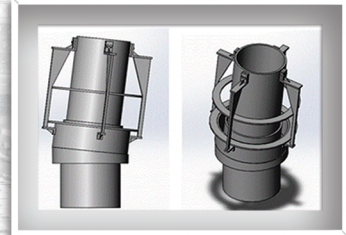
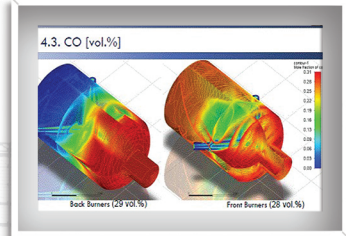
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ASU

Major Initiatives of the Research, Innovation, and Digitalization Management

- . Development of an industrial-scale technology for producing oxide briquettes from pellet fines and direct reduced iron (DRI) sludge.
- . Development of an innovative **green steel** production technology through flash ironmaking.
- . Design, development, and implementation of an innovative stack ejector nozzle modification system for direct reduction (DR) plants.
- . Development of a technology for iron recovery and reclamation from steelmaking slag.
- . Optimization of the reformer thermal balance and extension of reformer tube service life.
- . Waste heat recovery and power generation to enhance energy efficiency in direct reduction and steelmaking plants.
- . Redesign and performance optimization of cooling towers in direct reduction plants.
- . Process simulation, mechanical analysis, and optimization of process compressor piping and supporting structures in direct reduction plants.
- . Optimization of top gas scrubber performance and efficiency in direct reduction plants.
- . Rolling and continuous casting simulation.
- . Simulation, performance analysis, and optimization of the product cooler in direct reduction plants.
- . Design and deployment of a robotic hammering system to prevent blockage and improve the operational stability of direct reduction furnaces.
- . Development of an intelligent weighing system based on online monitoring and data analytics.



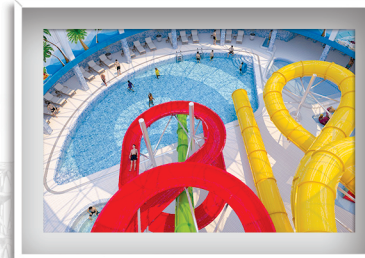


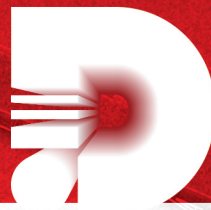
Honors and Achievements

- The largest supplier of Direct Reduced Iron (DRI) in Iran.
- Recipient of the "National Exemplary Exporter" title in 2024.
- Recipient of the "National Exemplary Workgroup" title at the 36th National Emtenan Festival honoring outstanding contributors in the labor and production sector.
- Winner of three Crystal Trophies from the National Organizational Excellence Award.
- Ranked 7th among ferrous metal companies in the IMI-100 ranking of Iran's Top 100 Companies.
- Gold Medal winner at the Nuremberg International Invention Exhibition, Germany.
- Gold Medal winner at the Romania International Invention Exhibition.
- Registration of two inventions, both selected among the top projects at Sharif University's Iranian Top Innovation Festival.
- Recipient of trophies and top honors for three sustainable development projects at the National Responsible Production and Productivity Event.
- Recipient of the "Top Industrial Unit" trophy in the Basic Metals category at the 22nd National Festival of National Production, National Pride.
- Recipient of the Golden Trophy at the National Health-Oriented Industry Festival.
- Recipient of the Iran National Steel Award trophy for implementing technology-driven projects and localization initiatives across the iron and steel production chain.
- Recipient of the Leading Technology and Innovation Trophy at the National Festival in Support of Domestic Production.
- Recipient of the "Provincial Exemplary Workgroup" title at the Provincial Emtenan Festival honoring outstanding contributors in the labor and production sector.
- Recipient of the National Energy Management Trophy from the National Energy Management Award.
- Recipient of the Golden Customer Satisfaction Trophy at the National Customer Satisfaction Summit.
- Recognized as the Provincial Exemplary Industrial Unit and the Top Provincial Research and Development Unit.
- Recipient of the First-Class Resilient Economy Medal at the Provincial Resilient Economy Festival.

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.





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