

# Steel in the Flow of Life

Sustainability Report **2022** 



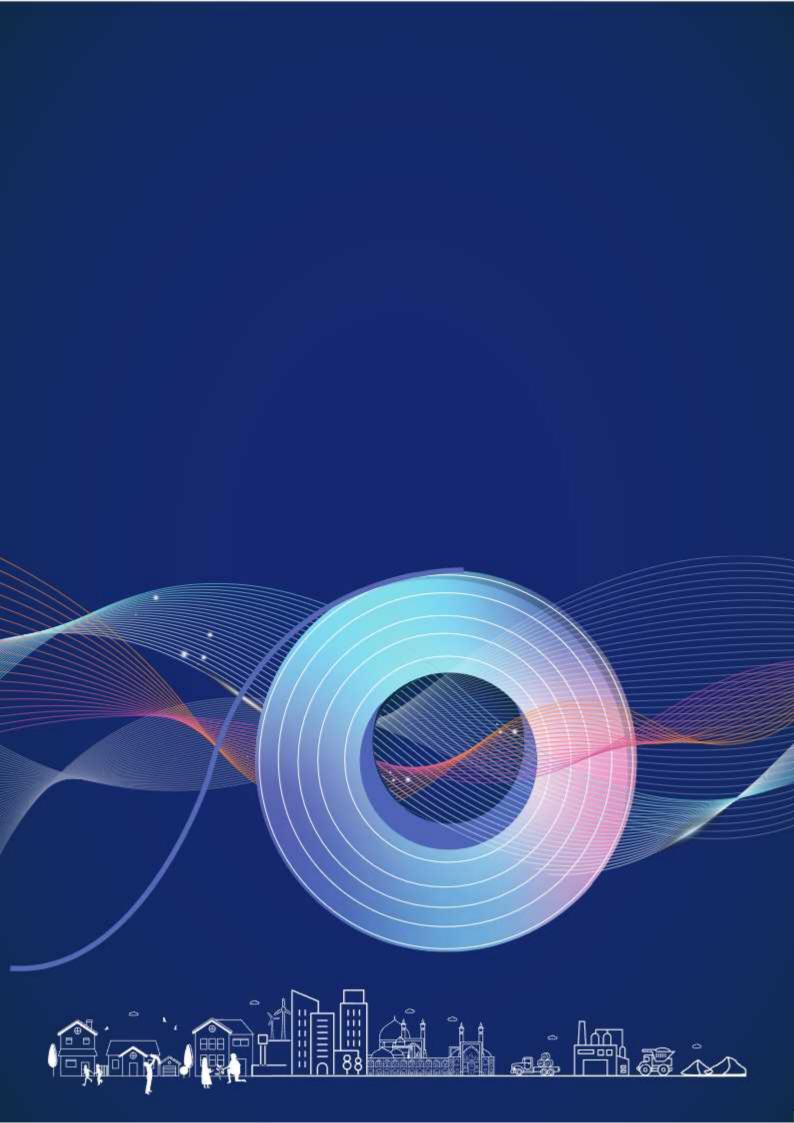
# IN THE NAME OF GOD

# Steel in the Flow of Life

Sustainability Report **2022** 







# STEEL IN THE FLOW OF LIFE

# SUSTAINABILITY REPORT, 2022

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**Empowerment of Suppliers** 







## About this report



Esfahan's Mobarakeh Steel Company, shortly MSC, as the largest steel producer in the Middle East, has paid specific attention to social responsibility since the beginning of its establishment, and the actions, approaches, and activities of the company reflect this accountability. Over the years, we have sought to plan and take measures in the field of social responsibility based on our values, goals, and strategies. In the last two years, we have attempted to plan and pursue our actions and measures based on the mission of Responsible Corporate Citizenship to Create a Better Future. Hence, we are determined to take stronger steps to establish and realize a better future for the stakeholders by complying our performance with the principles and measures of sustainability in economic, social, and environmental areas. Given our responsibility at MSC, we are committed to informing our stakeholders of our performance in the economic, social, and environmental aspects. Thus, we decided to publish a report every year under the title of Sustainability Report on the performance and impacts of the company's activities to present to stakeholders. The first MSC's sustainability report was published in 2018 under the title of Steel in the Flow of Life in accordance with GRI standards. The second report of Steel in the Flow of Life was prepared and published in 2021 with some structural changes compared to the previous report and also considering the company's mission of Responsible Corporate Citizenship to Create a Better Future. Steel in the Flow of Life is a report rooted in our values and our new vision, reflecting our commitment to our stakeholders. In this report, we have attempted to illustrate our performance, measures, and activities based on the material issues in three economic, social, and environmental dimensions. This report has been prepared and compiled in accordance with GRI standards and reports around

material issues according to the Core approach.

This report is published on the official website of the company and can be downloaded. And Stakeholders who are willing to provide feedback on the report can express their views and suggestions through the channels introduced in this report as well as the company's website.



# MSC at a glance

## Company Name

Isfahan Mobarakeh Steel Co. (MSC)

### **Business Areas**

Ironmaking, steelmaking, production and sale of steel flat products

## Main Products

Hot-rolled steel, hot steel plates, pickled steel coils, cold-rolled steel, cold steel plates, narrow steel strips, tin-plated steel coils, tin-plated steel plates, galvanized steel coils, pre-painted steel coils.



CFO

Mohammad Yaser Tayebnia

Founded

01/13/1993

**Number of Employees** 

12295

Website

www.msc.ir

شركت فولاد مباركه اصفهان

Headquarters: 75 km southwest of Isfahan, Mobarakeh,

Mobarakeh Steel Complex

Other Offices: First of Saadat Abad Ave, Azadi Square, Isfahan 2, Gol Azin

Alley, Koohestan St., Ketab Square, Saadat Abad, Tehran





Purpose

Responsible Corporate Citizenship To Create a Better Future

Production of steel products types in order to develop the country's infrastructures

Mission

National model of business, the top position in the regional steel industry and a world-class organization

Vision

National model of business

 MSC Group income
 A position in Iranian top companies ranking (IMI 100)

- A pioneer steel company in circular econom

The top position in the regional steel industry

- A share of Iran's crude steel production - Amount of production in industry's value chain (production of iron ore concentrate, pellet, DRI, crude steel, hot rolled steel, cold A world-class organization

- Aposition in Iranian's Excellence Award and international awards

Strategic Goals

Strategic Directions Circular economy and social responsibility Balanced development of value chain

Operational excellency Digital transformation New management approaches

Code of Conduct

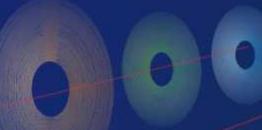
Ethical excellence in the workplace Ethical excellence in the market Ethical excellence in society

Islamic and human value

Safe, timely and high-quality work Excellence, continuous improvement, innovation and organizational involvement Customer orientation, respecting colleagues and stakeholders

Social responsibility & environmental protection

Values





## Responsible Corporate Citizenship to Create a Better Future



#### MSC Integrated Management System Policies

- Continuous improvement of integrated management system performance
- · Environmental protection, including prevention · Eliminating risks, reducing safety and of pollution and other specific related commitments
- · Compliance with all applicable legal requirements and any other relevant requirements
- · Ensuring accessibility of the necessary information and resources to achieve the defined goals and objectives

- · Aligning risk management with the corporate goals, strategies, and culture
- occupational health risks, and using the consultation and involvement of all employees
- Providing safe and healthy working conditions to prevent work-related hazards and illnesses
- · Creating a balance between knowledge protection and knowledge sharing
- · Quantitative and qualitative development of products and services
- · Improving the level of customer satisfaction, effective and timely handling of complaints and claims, and developing joint collaboration
- · Identification, application, and protection of the knowledge required by the corporate to develop and enhance the capabilities of employees, creating a knowledge-based culture, developing knowledge sharing infrastructures and protecting organizational knowledge
- . Development of employees involvement as the main assets of the company in all processes of the integrated management system

#### Our Operational Strategies

Our principles

- · Emphasis on prevention of defects and waste and elimination of non-value added activities
- · Achieving higher levels of product standards and reducing quality risks
- · Developing cooperation and collaboration with customers, contractors, suppliers, and other relevant stakeholders with emphasis on related social responsibilities
- · Utilizing and developing domestic research, designing, engineering, and manufacturing capabilities
- . Optimal use of natural resources and energy and promotion of recycling and re-using of products with a proper understanding of the environmental impacts of products over their life cycle





### Corporate governance structure



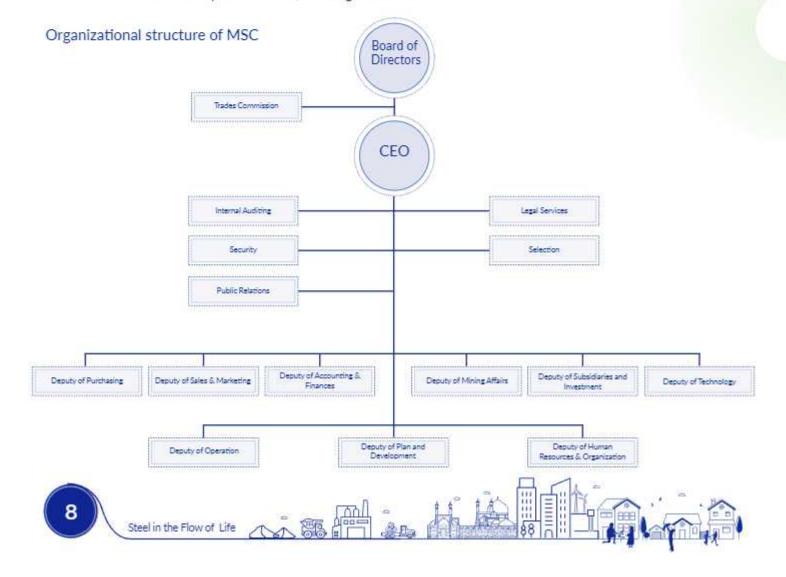
Systematic leadership has been one of the factors for the success of MSC in recent years, and the systematic and change structure has led to the establishment of a robust framework for organizational governance in the company. In this context, the MSC leaders have set a clear and shared vision while providing the necessary support to direct, coordinate, and align employees. The company's

governance structure includes the members of the board of directors, the CEO, and the members of the council of deputies. In fact, MSC has a functional organizational chart including deputies and their subunits, based on which all processes and activities are carried out. Besides, the transformation structure of company has been established to manage the cycle of continuous improvement effectively

### **Board of Directors**

MSC (Public Joint-Stock Company), which is now one of the largest industrial units in Islamic Republic of Iran, was registered as a

private joint-stock company on 03.19.1991, with a registration number of 7841 in the Isfahan Registration Office for Companies and Industrial Property. According to the minutes of the Extraordinary General Meeting on 10/04/2006, the company was transformed from a private stock into a public stock, and its name was listed as the 435th stock company. The Board of Directors is recognized as the highest governing body in MSC. The members of the board of directors are elected once every two years from among the shareholders. The election of these individuals through the votes of all shareholders is mandatory. Voting must take place at an ordinary general meeting, in which stakeholders contribute to the election of the highest governing body. In this election, one or more of the members of the previous board of directors must be dismissed from office. New members must also be selected through elections. The election of other official and legal executives should also be done by voting, like the members of the board of directors.



#### Mobarakeh Steel Group Policies Concerning Corporate Governance

In accordance with the regulations published by the Securities and Exchange Organization (SEO) Mobarakeh Steel Group has designed and implemented Corporate Governance System and several processes and approaches to ensure the effective implementation of corporate governance system.

The following table presents a summary of

these approaches. The effectiveness of the approaches is evaluated through the feedback received from shareholders and as well as Legal and regulatory bodies, including legal inspector and independent auditor, audit committee, SEO, general inspection organization, etc.

#### Mobarakeh Steel Group Policies Concerning Corporate Governance

Dimensions of organizational governance	Existing approaches		
Number of board members and their selection	Appointing board members based on the articles of association in the group companies		
Management independence and authority delegation	Management independence in line with the rules of corporate governance of the stock exchange  Determining the limits of the CEO's authority by the board of directors and defining authorized Signatories  Development of trading regulations and determination of authorized limits for approvals		
Stock ownership commitment	Commitment to the ownership of the share of each board member the group companies according to the Commercial Code and the Articles of Association		
Disclosure and transparency of performance	Periodic performance reports, including balance sheet and income statement (quarterly and annually) Publication of the corporate performance indicators listed on the stock exchange in Comprehensive Data Base Of All Listed Companies (CODAL) Various approaches related to transparency and accountability regarding the company performance towards stakeholders and community. Establishing effective governance over the affairs of the company in line with the interests of shareholders		
Committees of board of directors	Establishment of audit committees in group companies		
Independent and internal auditing	Election of a legal inspector and an independent auditor by the General Asser of Shareholders Establishment of internal auditing unit in Mobarakeh Steel Group companie		
Observing the rights of capital owners and other stakeholders	Observance of the provisions of Article 128 of the I.R. Iran Commercial Code regarding the fair distribution of profits Observance of the provisions of Article 129 of the I.R. Iran Commercial Code regarding transactions with relevant parties		



#### MSC Transformation Structure

Regarding today's competitive business world, Each organization needs to manage and implement transformation to increase its competitive advantages. To this end, MSC has established a platform for effective managing of continuous improvement cycle within organization through Comprehensive Transformation System.

In MSC's transformation structure, the highest body is the Supreme Transformation Committee, which is responsible for the management of continuous improvement together with the main and departmental transformation committees, as well as transformation and improvement teams.



MSC Transformation Structure

#### The main transformation committees are:

Name of Committee Name of Committee		Name of Committee	
Iron Making	Central Workshop	Human Resource Management & Organization	
Steel Making and Continuous Casting	Transportation and Support	Purchase and Suppliers	
Hot Rolling	Technical Inspection, Automation, and Instrumentation	Sales and Marketing	
Cold Rolling Mill	Maintenance Technical Office	Technology	
Saba Steelmaking and Continuous Rolling	Accounting and Finances	Subsidiaries and Investment	
Energy and Fluids	Communications and Social Responsibilities	Planning and Production Control	
Central Maintenance	Plan and Development	Mining Affairs	

### MSC strategic management process



The strategic management process in MSC is a five step process carried out every year through meetings with the full participation of leaders (including CEOs, deputies, and managers) and employees at different corporate levels...

#### Step 1

This step is allocated to the identification and analysis of the needs and expectations of stakeholders, review/validation of the statements of existing philosophy, mission, vision, and strategic objectives, review/validation of organizational values, analysis of the macro-environment, analysis of industry environment, and analysis of internal environment. The core strategy of the company is compiled/revised after development of the SWOT-BSC matrix.

#### Step 2

The BSC (Balanced Scorecard) approach is used for effective translation of the strategy, and the business-level strategy plan is developed/revised in alignment with the corporate mission and vision. The key performance indicators (KPIs) and strategic initiatives are defined after formulating the strategic objectives. Scenario planning is carried out for variables under uncertainty conditions, and the strategic risks and opportunities are identified and managed to increase the probability of strategy success.

#### Step 3

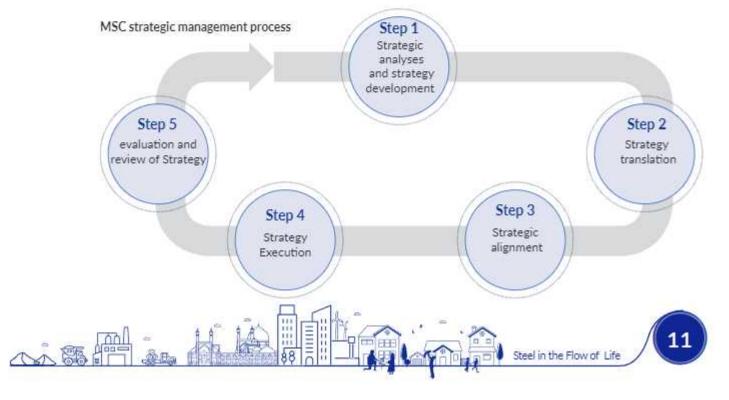
Functional-level strategic maps are developed with the participation of leaders and members of the main transformation committees (21 committees) in line with the business-level strategy map cascading execution of strategies and strategic objectives at different corporate levels and to ensure organizational alignment. In this step also the key performance indicators and strategic initiatives are defined at main transformation committee level. Besides, key performance indicators and related strategic initiatives are developed for departmental transformation committees (over committees) in alignment with the strategic map of the main transformation committee

#### Step 4

The core strategy and business-level and functional-level strategic maps formulated in steps 2 and 3 are e through processes, structures, and managerial and collaborative systems. MSC also uses the Comprehensive SEM System for effective management of its strategy and continuous monitoring of the key indicators and strategic initiatives.

#### Step 5

The realization of strategic objectives and the progress of strategic initiatives are monitored in this step over monthly periods while also performing quarterly evaluations. The results of the evaluations are analyzed in the transformation committees in the form of various reports (such as the evaluation report of strategic objectives and initiatives, the performance evaluation report of the transformation committees, etc.).



## MSC affiliate companies



The Corporate ownership of the subsidiaries is as follows based on the financial statements of 2021:



Mobarakeh Steel Engineering 99.24%



Hormozgan Steel Co. 95.21%



Amir Kabir Steel Co.

52.57%



Sangan Mining Industries Co. 99.999%



Felez Tadarok Co.



Foolad Sang Mobarakeh Co. 99.19%



International Systems & Automation Engineering Co. (IRISA) 74.99%



Metil Steel Co.

69.93%

99.9%



TAMCO

37.68%



Chaharmahal & Bakhtiari Automotive sheet Co.

93.07%



Foolad-e Mobarakeh Sepahan Sports Co.

95%



Seid Dasht Steel Company of Chaharmahal & Bakhtiari

64 99%



TUKA Foolad Co. 40.44%



Supporting & Technology & Innovation Development (STID) Co.

99.999%



Chadormalu Mining and Industrial Co.

10.44%



Gol Gohar Mining and Industrial Co.

10.08%



Mines & Metals Development Investment Co. (MMDIC)

47.49%



Atieh Foulad N. J. Co.

28.75%



Ardakan Novin Electrode Co. 37.54%



Andimeshk Zagros Steel Co.

25%



Amin Teb Sepano Co.

83.95%



Setorg Steel Co.

31%



Taamin Ab Co.

28.57%



Taamin Ab saney-va-Maaden Co.

20%



Steel in the Flow of Life









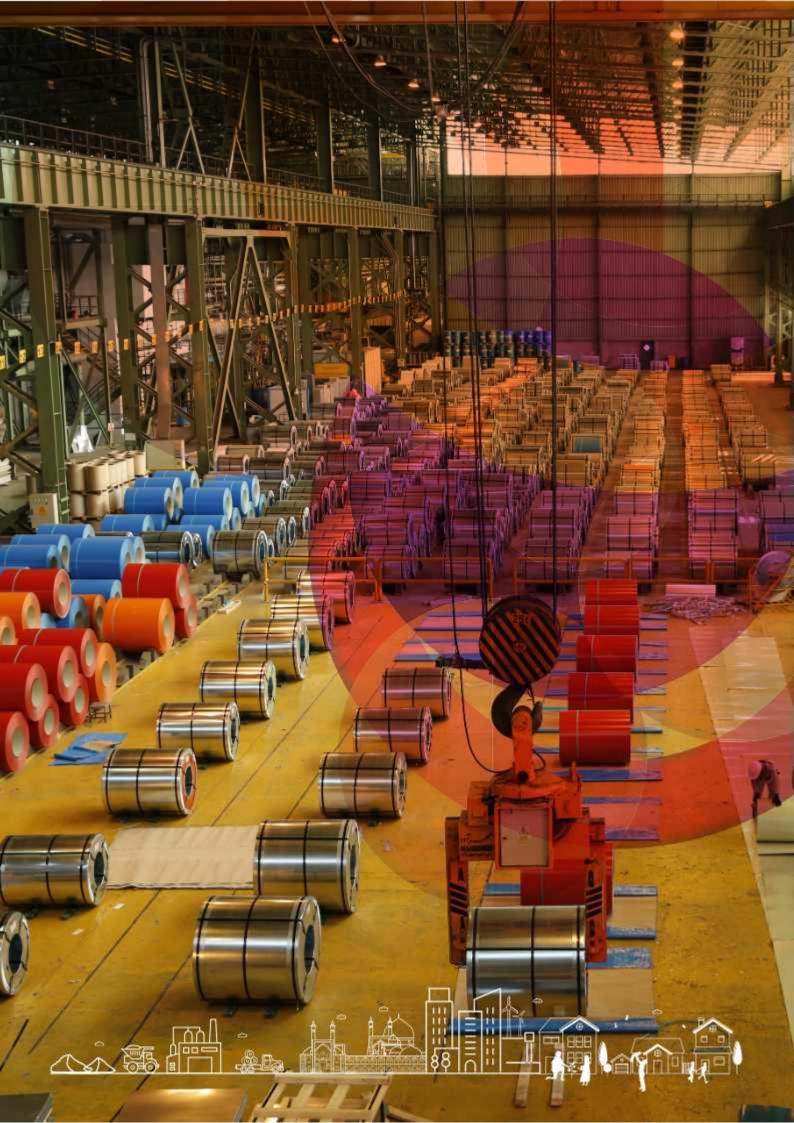






- **IMIDRO**
- Edalat Stocks (Direct method ownership)
- Refah Capital Development Co.
- Natural Person Shareholders
- Other Legal Shareholders

- Tejarat Bank
- Sadr Tamin Investment Co.
- Social Insurance Fund for Farmers, Villagers & Nomads
- Behsazan Energy Tadbir Zangan Co.
- Retirement Fund for Bank's Personnel Ins.







# **Economic and Financial Statements of the Company**

ltems	Unit	2019	2020	2021
Total Sales	Billion Rials	391,459	774,037	1,456,266
Domestic Sales	Billion Rials	327,377	640,793	1,254,916
Foreign Sales	Billion Rials	64,082	133,244	201,351
Net profit	Billion Rials	147,960	328,461	774,955
Return on Equity (ROE)	96	46.6	65.04	81.4
Dividends	Billion Rials	39,000	47,025	
DPS	Rials	225	400	
EPS	Rials	505	1,313	2,645
Hot Rolled Coil Production	Million Tons	6.45	6.44	6.25
Exports	Million Tons	1.5	1.25	1.26
Current Assets	Billion Rials	401.003	814.313	1,384,497
Non-Current Assets	Billion Rials	181.816	232.161	323.1767
Total Assets	Billion Rials	582.819	1,046,474	1,708,264
Return on Assets (ROA)	96	30.5	47	56.3
Debt Ratio	%	36.2	33.8	29.1













# MSC as vast as Iran



**Oman Sea** 



## A message to stakeholders



Mohammad Yaser Tayebnia CEO of MSC

We have defined a new vision in Mobarakeh Steel Co. based on Responsible Corporate Citizenship to Create a Better Future, which reflects our path towards sustainability. Hence, we should step forward with more preparation and strength to improve our economic, social and environmental performance. values illuminate the way, as well as defined strategies, our guide to reach our destination. Although this path is accompanied by special difficulties, we never stop trying to make our society a better place to live. To achieve this goal, we have taken actions and activities and we have planned some to do in the future. Therefore, in this report, we intend to bring them to the attention of you, the stakeholders.

Although the outspread of COVID-19 in early 2020 brought about challenges for our company the same as other companies worldwide, we could maintain the health of the MSC employees as a family by an emphasis on the full observance of health protocols and preventive and control measures in the first place. Then, we relied on the capabilities and capacities of the company employees and managers to continue and even transform the business. In addition, due to our commitment to the society and our stakeholders, we tried to use our available facilities to help them overcome the challenge of the corona virus pandemic. In this regard, we helped the hospitals and medical centers of Isfahan province and other provinces by supplying the required oxygen.

Today, Mobarakeh Steel Group is one of the largest producers of direct reduced iron (DRI) in the world and crude steel in the West Asia region. Currently, 7.2 million tons of steel are produced inside the company, and the production capacity of Mobarakeh

Steel Group (including Mobarakeh Steel Co., Hormozgan Steel CO. and Saba Steel Complex) has increased to about 10.3 million tons. Also, about 2800 companies in the country supply goods, parts and equipment, materials and services of MSC, and about 3000 factories and workshops use the products of this company in their production lines and convert MSC sheets into final products.

In addition to being an industrial enterprise. MSC is also a large economic enterprise that has a very important and influential role in the national economy market, By focusing on four areas: 1. balanced quantitative and qualitative development, 2. development of human capital and productivity growth, 3. development of innovation and technology, and 4. attention to sustainable growth and green steel, we are trying to improve our competitiveness in order to be present in global markets and by understanding and paying attention to the needs and expectations of our stakeholders, move towards a world class company big steps.

One of our important strategies is the optimal use of water and energy resources. In this regard, we have made many investments in order to implement projects with the aim of water and wastewater management, such as water recycling and treatment and reuse of urban wastewater, as well as reducing energy consumption, such as the development of solar power plants.

In fact, with the actions and achievements we have had in recent years, we have seriously tried to take a positive and effective step towards turning MSC into a responsible corporate citizen and also creating a better future for our stakeholders. We have not and will not stop trying to achieve this goal.











## Measures executed in order to business continuity and transformation during COVID-19



The COVID-19 pandemic has affected MSC like other major manufacturing organizations and companies worldwide. The company, with a total number of 12000 employees, took measures and planned seriously in line with other organizations and companies across the world to continue the business and deal with the virus outspread from the first days of the

pandemic. These measures can be divided into proactive and reactive measures. The first step taken by MSC in response to the COVID-19 pandemic was the establishment of the COVID-19 Crisis Management Committee, consisting of deputies and managers and headed by the company CEO to organize, plan, and manage control actions and measures.



#### Quick and Prompt Measures

In response to the rapid outbreak of the COVID-19 virus, Mobarakeh Steel planned and implemented quick and prompt response measures. Accordingly, a working group under the title of Prevention and Combating COVID-19 was formed including deputy of Human Resources and Organization, deputy of Operations, Public Relations, Health, Safety, and Environment (HSE), Security, Administrative Affairs, Urban Management, Public Services. and other departments in MSC to continuously prepare the necessary instructions in the company

and supervise distribution, notification, and proper implementation of the plan.

The committee decisions were in accordance with the instructions received from the Ministry of Health and Medical Education, including minimizing employees' contact, reduction or temporary closure of activities, disinfection of the environment equipment, Preparation of health packages for employees, procurement of infrared thermometers, supply of hygiene items, etc. The prompt and quick measure of the company are categorized as follows:



Disinfection of the surfaces



#### Prompt and Quick Measures to Combat COVID-19



Reducing employees' contact



Disinfection of the surfaces



Provision of sanitary ware



Consideration, monitoring, and control of employees' health status

#### Reducing Employees' Contact

MSC took prompt measures following the guidelines of the World Health Organization (WHO) and the Ministry of Health and Medical Education to focus on the main ways of virus transmission and minimize the risk of infection. In this regard, the following decisions were made, announced, and implemented to minimize the employees' contact:

- Cancellation of unnecessary meetings and holding necessary meetings virtually using videoconference as much as possible
- Cancellation of domestic and international missions until further notice
- Cancellation of all receptions of domestic and international guests and the reception of necessary guests only by observing the health criteria
- Closure of all restaurants, canteens, and pantries of the company as the main potential for virus transmission
- Reduction of working hours of the day-shift company employees to eliminate lunch and prevent staff gathering in restaurants
- · Remote working of administrative and

day-shift staff and absence from the company to reduce employees' contact and disrupt the virus transmission chain.

- Cancellation of attendance at seminars, conferences, and exhibitions until conditions return to normal
- Closure of Sports Halls to reduce virus transmission
- Cancellation of training courses for employees and contractors until conditions return to normal and providing trainings online
- · Cancellation of reception in meetings
- Forbidding the presence of suppliers in the company until further notice, and requiring the submission of invoices and related documents to the company office in Isfahan city
- Suspension or restriction of activities that lead to the accumulation of human force in the discretion of the relevant managers
- Cancellation of the vehicle transport between MSC, subsidiaries, and other companies
- Delivery of newsletters and newspapers of the Public Relations Unit only through social



Proficiency exam of selected employment candidates of MSC; B.A. of Industrial Engineering



Recruitment exams in compliance with health protocols

#### media and website

- Training, notifying, and culture-building in the form of developing and publishing posters, brochures, banners, text messages, and other communication channels
- Possibility of the absence of vulnerable employees with underlying diseases in the workplace at their discretion

# Disinfection of all trucks entering MSC with disinfectants at the company's entrances



Disinfection of employees' enterance gates

#### Disinfection of the Surfaces

Sterilization and disinfection of the surfaces and traffic areas where employees usually work can be one of the main ways to reduce the risk of viral disease. Thus, the following measures were taken after approval by the working group:

- Disinfection of passages and equipment with appropriate disinfectants
- Disinfection of toilets thoroughly and regularly
- Disinfection of the locker rooms at the beginning and end of each working shift
- Recording employee attendance using ID cards instead of finger print and through mobile apps in some cases
- Disinfection of all door handles, railings, ATMs and elevator buttons, and contact surfaces several times a day
- Disinfection of employee commuter buses before and after each trip
- Provision of disinfectants for all employees, masks, and gloves for shift workers, and separate gloves and washable masks for use in the commuter bus
- Preparation of checklists for public places such as locker rooms and toilets to record the frequency of disinfection and cleaning
- Disinfection of the interior of administrative buildings and daily offices
- Continuous disinfection of control pulpits, control rooms, overhead cranes, etc.



Observation of health protocols at Food Catering Center No.3 during covid-19 outbreak



Disinfection of employees' enterance gates













COVID-19 screening of employees

#### Provision of Sanitary Ware

The company has taken the following measures to provide the necessary sanitary ware and health packages for the employees:

- Provision of individual health supplies in the form of packages for transport staff and drivers
- Procurement of infrared thermometers for the required sites
- Installation of thermal cameras in the entrance gates of the employees for online thermometry
- Provision of medical items and brief health instructions at the entrances of the company for the drivers of heavy machinery



COVID-19 screening of employees

#### Consideration, Monitoring, and Control of Employees' Health Status

The following measures were taken to consider, monitor, and control the health status of employees:

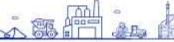
- Prohibition of the presence of employees suffering from certain OR difficult diseases with the approval of the Occupational Health unit until further notice and confirmation of their performance through administrative affairs
- Performing of more than 25000 covid-19 screening tests and detecting covid-19 suspects among MSC's and contractors' employees.



Monitoring, and Control of Employees' Health Status



Monitoring, and Control of Employees' Health Status











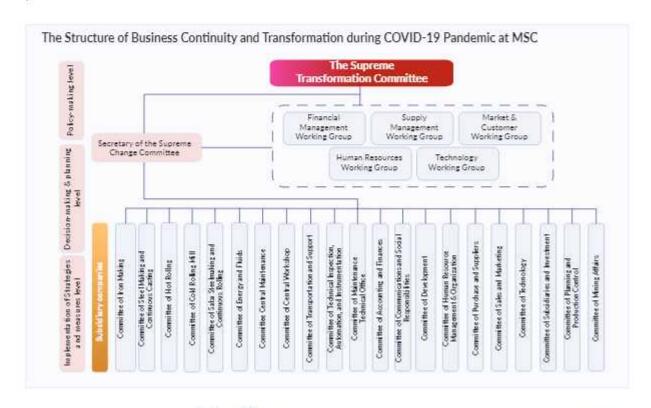
Monitoring, and Control of Employees' Health Status

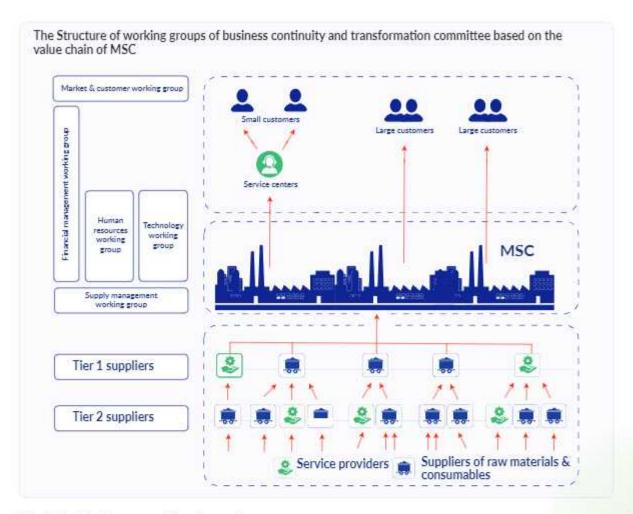
#### Organizing the "Business Continuity and Transformation" Committee and Related Working Groups

Given that the COVID-19 crisis is beyond just a viral disease and has such extensive dimensions that affect different aspects of the social and economic lives of communities and businesses worldwide, there was a need to adopt a comprehensive and inclusive approach in MSC to control the pandemic effects while continuing and transforming the business in such conditions. The establishment of the Business Continuity and Transformation Committee was the first step in developing such an approach to defining strategies along with planned and proactive measures aimed at the business

continuity at MSC during the COVID-19 pandemic.

This committee is also known as "The Supreme Transformation Committee" and consists of deputies, senior managers, and other company managers, with the CEO as the main pillar of the transformation structure. The committee formed five main working groups under the titles of "Human Resources", "Supply Management", "Financial Management", "Market & Customers", and "Technology" to identify and define the approach to dealing with the COVID-19 pandemic and also provide strategies and measures for business continuity and transformation.





# Model of business continuity and transformation

The fact is that the future ahead with the outspread of COVID-19 will be different from what is expected. Accordingly, MSC took a step towards defining a comprehensive model in line with business continuity and transformation during the pandemic and management of its effects through benchmarking while also relying on the structure of strategic and transformational planning. This model was designed and implemented based on the 5R model proposed by the McKinsey Institute which is combined with scenario planning as one of the pillars of the MSC strategic planning system.

This model aimed at defining and developing strategies and measures for business continuity and transformation in uncertain and ambiguous conditions caused by the COVID-19 pandemic. The model of business Continuity and Transformation includes the following five steps:

- 1. Resolve
- 2. Resilience
- 3. Return
- 4. Re-imagination
- 5. Reform



Given that the implementation of this model depends on the prevalence of coronavirus in the country and the world, some steps have already been taken, and some will be implemented at the appropriate time concerning the relevant conditions.

#### Step 1: Resolve

This step resolves the immediate challenges that the coronavirus poses to the workforce, customers, and business partners. It includes rapid response to the crisis and the definition of primary actions proportional to the severity of the issue. It should be noted that the immediate and prompt actions taken in response to the outbreak of the coronavirus in MSC are included in this step.

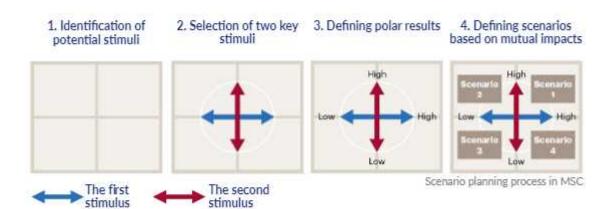
#### Step 2: Resilience

The shock to our lives is due to the economic consequences of measures taken to control

the virus, which has been unprecedented in the recent century. Resilience is very important in the face of such a challenge. This step includes determining the scenarios ahead and analyzing the future conditions based on the available statistics and up-to-date information across the world, after which the required measures for business sustainability and actions proportional to this objective are determined in each scenario. The following measures were taken in this step:

#### Scenario planning

MSC relied on the scenario planning approach, which is one of the fundamental steps of the company's strategic planning, to manage the consequences of the pandemic and define the effective strategies and measures for its control. The scenario planning approach of MSC to the control and management of the crisis and business continuity and transformation in these conditions is as follows:



#### · Identification of Potential Stimuli

The five working groups in the COVID-19 crisis management structure of MSC identified the stimuli/uncertainties through regular and continuous meetings to review the conditions of the country, analyze the organizational status, and review the leading international models. Then, the key stimuli were determined and defined to develop the potential scenarios. Hence, the first key stimulus in all five groups

was the "outbreak". It is a general stimulus that is not affected within the corporate and is totally dependent on the general and external corporate context.











#### The end of the outbreak: Late summer, 2020

The end of the shock for the industry: Fall or winter, 2020/2021 Human resources issues, the decline in demand and sales Supply chain problems



# The end of the outbreak: Early spring, 2021 The end of the shock for the industry:

Summer or fall, 2021

Human resources crisis, the severe decline in demand and sales, numerous financial problems

lemsSupply and production chain problems

The Second Stimulus/Uncertainty: Human Resources Resilience - Human Resources example



#### Optimistic view

#### Human Resources Resilience

Within the scope of human resources resilience



#### Pessimistic view

#### Human Resources Non-Resilience

Out of the scope of human resources resilience

#### Determining Resilience Criteria

Each working group determined the resilience criteria related to its field based on the organizational and national conditions and given the benchmarking carried out to develop scenarios as well as the related core subjects, actions, and strategies. The resilience criteria for the five mentioned areas in MSC are as follows:

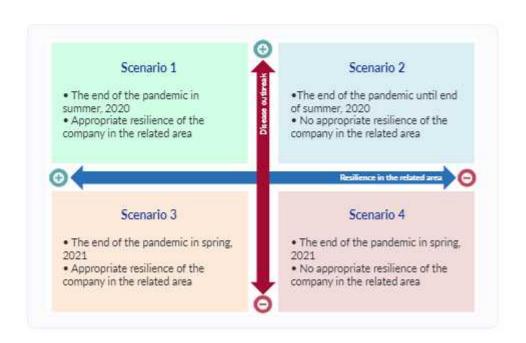


#### The Resilience Criteria of MSC five areas

Area	Resilience Criterion		
	The ratio of employees who tested positive for covid-19		
Human Resources	Number of deaths due to covid-19		
	The ratio of absentees due to concerns about covid-19 (within a week		
Market & Customers	Domestic sales (monthly)		
	Exports (monthly)		
Supply	Stability limit of strategic items		
	Stability limit of key items		
	Ratio of Rial resources and expenditures		
Financial	Ratio of currency resources and expenditures		
	Debt to equity ratio		
Technology	IT services standby		
	Ratio of hardware capacities (processing) used to the total		
	Ratio of hardware capacities (storage) used to the total		
	The ratio of the bandwidth used to the total		

#### Development of Scenarios

Based on the meetings held and the discussions, each working group defined the scenarios for dealing with the crisis according to the identified stimuli. It should be noted that four scenarios were developed for each of the five areas.





### Defining core subjects of Business continuity and transformation

This step identified and classified the core subjects of business continuity and transformation in different domains and five working groups (human resources, financial management, supply management, market & customer, and technology) using investigations and benchmarking based on the leading global models and approaches. Accordingly, the approaches and models of the McKinsey & Company, the Boston Consulting Group (BCG), and the EY Institute were examined.

#### Core subjects of each domain

	Employee culture & communications	Employee preparedness & empowerment	Employee health & hygiene
Human Resources	* Health and hygiene promotion of the employees, contractors, and other related stakeholders	Speeding up smart (virtual) work Reducing the risk of employee absence Workforce flexibility management Employee training and empowerment	* Open and transparent communication combined with empathy * Collaboration
Financial	Liquidity flow management Budget discipline Investment management and	d shareholders	
©⊕ <sup>©</sup> Supply	Stable supply of strategic and Diversification of supply cha Stability of transport and log Smartization of purchasing p	in partners (strategic and key items) istics	
Market & Customer	- 1 (a) (b) (b) (c) (c) (c) (c) (c) (c) (c) (c) (c) (c		
Technology	business continuity) Speeding up the digital trans	of digital preparedness (to support o formation (smart factory, the Fourth hts of stakeholders (in the use of dig or smart work	n Industrial Revolution)

#### Step 3: Return

The most important issue in this step for companies like MSC is planning to normalize activities along the value chain (from supplier to the customer), particularly in topics related to human resources. The relevant working groups should determine the required arrangements for this step and before its start.

#### Steps 4 & 5: Re-Imagination and Reform

In the future, we will face changes in interactions, processes, and activities, which will be very different from those in the past. In general, businesses, particularly production companies, have to redefine and reimagine their processes and activities in the post-Corona era because of the extensive changes and developments that are sometimes beyond

what is expected for the next ten years. Reform should take place after re-imagination of the processes, procedures, and activities based on the corona crisis and its consequences to ensure business continuity, progress, and transformation. Hence, MSC seeks to establish a different future for itself and all its stakeholders by understanding this important matter and the existing conditions, defining the core subjects, and taking the required measures.



- Speeding up the promotion of digital preparedness (to support organizational processes and business continuity)
- · Speeding up the digital transformation (smart factory, the Fourth Industrial Revolution)
- Changing attitudes and insights of stakeholders (in the use of digital technologies.
- Management of processes for smart work (remote working)
- Open and transparent communication combined with empathy
- Speeding up smart work
- · Workforce flexibility management
- · Employee training and empowerment with digital approaches
- · Smartization of purchasing processes and supply chain
- Digitalization of the sales and marketing process (smart work, marketing, and customer relationship)

# Materiality analysis



To compile MSC sustainability report, materiality analysis primarily starts with creating a pool of issues based on the inputs and feedbacks from the stakeholder engagement system. Then, the issues collected from the analysis of the stakeholders' needs

and expectations are prioritized, leading to the extraction of material issues. Finally, the format and type of sustainability report are selected and approved before its preparation.



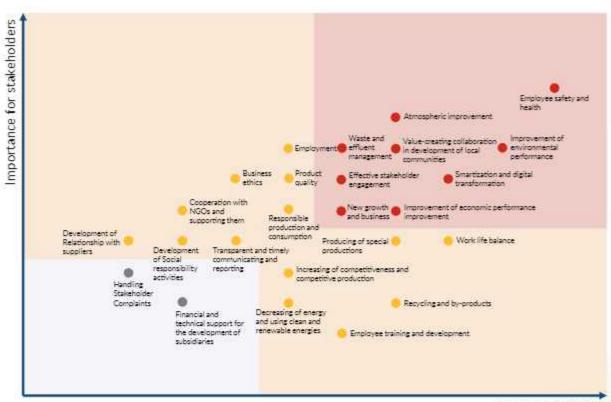
The collected and prioritized needs and expectations of the stakeholders were examined as the first input to create the pool of issues as the first step in materiality analysis. Also, benchmarking of the world's leading companies active in the similar field aimed at identifying the material issues in the industry. In addition, international standards and initiatives (such as the GRI and SDG)

were reviewed to identify relevant issues. According to these inputs, a pool was formed with 25 issues, which were then prioritized according to the criteria of "importance for stakeholders" and "impact on business". Finally, 9 issues were selected as the most important ones.









Impact on business

According to the materiality analysis, the material issues of MSC are listed in the table below. As indicated, "employee safety and health" had the highest materiality. Given the coronavirus outbreak in the last two years, this issue has greatly affected the company's business and special importance for stakeholders (particularly employees). In addition, safety is one of our values and

our priorities in carrying out the organizational activities and the duties of employees. Therefore, the selection of this issue as a high priority issue indicates our commitment in this regard.

Priority	Material issues	
1	Employee safety and health	
2	Improvement of environmental performance	
3	Smartization and digital transformation	
4	Atmospheric improvement	
5	Waste and effluent management	
6	Value-creating collaboration in development of local communities	
7	Improvement of economic performance	
8	Effective stakeholder engagement	
9	New growth and business	

Steel in the Flow of Life

# Stakeholder engagement



In MSC we value our stakeholders and their needs, expectations, and concerns, Expectations and concerns of stakeholders and the feedbacks we get from them through different mechanisms are major inputs for our stakeholder engagement system, and our strategies are also developed based on them at different organizational levels. To engage with stakeholder, we have developed a six-step model according to the AA1000 standard and the EFQM 2020 and we are willing to implement it in 2021, Stakeholders are identified and classified in the first step, after which they are prioritized based on the criteria of "stakeholder dependency on company" and "stakeholder impact on company".

Then, the needs and expectations of stakeholders are identified. This step seeks

to actively identify the needs, expectations, and perceptions of the stakeholders and consider their future concerns in the current decisions. The fourth step prioritizes the needs and expectations of stakeholders based on the criteria of "impact on the company" and "importance for stakeholders". Then, the stakeholder engagement program (SEP) is developed in the next step to respond to their needs and expectations at different levels. The last step evaluates the corporate performance in meeting the needs and expectations while also investigating the process of stakeholder engagement in terms of proportion and compliance of the purpose and scope. In addition, stakeholder engagement programs are evaluated and stakeholders are surveyed.







#### Methods for stakeholder engagement

Stakeholder group	Shareholders	Customers	Suppliers	Employees	Society and legal entities	MSC Group companies
Communication Channels	- Approvals and proceedings of the General Assembly - Board meetings - Official correspondence - Shareholder Surveys - Face-to-face contacts (in-person and meetings) - Phone & e-mail - Stock Exhibitions - Company websits	- Customer Relationship Management System (CRM) - Customer Surveys - Visiting customers' site and vice versa - Holding technical and commercial meetings - Holding joint conferences, exhibitions and seminars - Claims, complaints and other customer feedback - Presence of resident expert at the customer's site - Office correspondence, e-mail, phone and fax - Social media	- In-person meetings and visits to the suppliers' site  - Formal correspondence, email, and phone conversations  - Supplier Relationship Management System (SRM)  - Supplier surveys  - Attending exhibitions and conferences for suppliers  - Authorized communication networks	- Meetings of the deputy of human resources with the MSC zones and the deputy of operation  - Meetings of Transformation and Management Review Committees  - Correspondence and face-to-face meetings with the CEO, deputy and managers of human resources  - Employees' performance management system  - Employees surveys  - MSC Newsletter  - Complaint system  - Virtual systems and networks (such as staff portal, Poupack app and Corona management)  - Family training sessions  - Consulting services for families  - Regreement - Association	- Formal correspondence and requests in-person meetings and agreements - Public media and exhibitions - Receiving and handling complaints - Public reports - Society Surveys - Comprehensive Data Base of All Listed Companies (CODAL) - Iran Mercancile Exchange (IME) - Interviews (Mass Media) - Community representatives' visits to the company - Public media - Comprehensive system of media of the country (e-rasaneh.ir)	- Meetings and visits  - Formal correspondence and requests  - Members of the board of directors and audit committee of companies















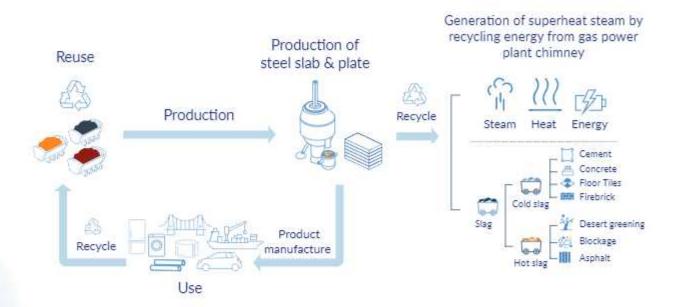


# Steel life cycle



Steel is the most recyclable product among man-made products. Steel products can be used, recycled, and returned to the production cycle.

Producing steel products brings some impacts such as the generation of waste and polluting gases. However, life cycle of steel products can be more sustainable by proper management of such impacts in order to reduce carbon and recycle waste materials.



#### Production

At this stage, by- products such as slag and undesirable gases are generated during the process of steel production. These by-products can be used in the steel production cycle and also production of other products which are used in various industries such as construction, agriculture, etc. This can have a great effect on environmental preservation and savings in the use of resources.

#### Use

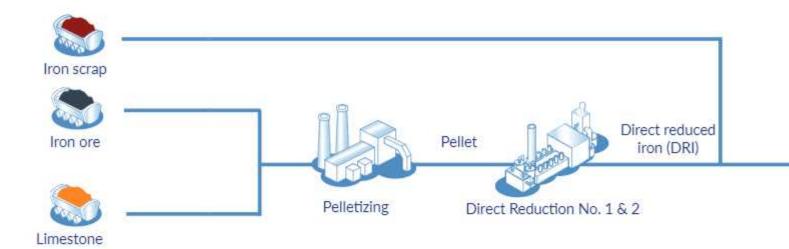
IF steel is a highly-tensile automobile steel, which includes improved DC06 and DC05 grades and does not lead to the problem of rupture or waste generation during production compared to DC04 grade- The SPFC440 grade has a longer service life and is used in high-strength parts and seat rails of vehicles- API steel is particularly used for sour gas and oil pipelines. The API steel slab produced MSC is turned into pipes with the cooperation of Oxin Steel Co. (which produces steel plates from MSC slabs), Ahvaz Pipe Mills Co., Iran Arvin Co., Mahshahr Pipe Mills Co., and Safa Rolling & Pipe Mills (which

produce pipe). The produced pipes are then used in the strategic pipeline of Goreh-Jask oil transfer and plays an important role in the industrial, economic, and social development of the Makran region in the southeast of Iran. In addition, the high-strength DR8 grade is particularly used in food cans.

#### Reuse

Steel products can be recycled and returned into the production cycle. MSC supplies a part of its required raw materials from scrap generated from its production process and bought from outside the factory. Also, the by-products such as slag (hot and cold) are processed and used in various products such as cement, asphalt, and concrete. The processed cold slag is also used for desert greening and has been substituted for oil derivatives in this field.

#### The Process of Steel Production



Ironmaking |



#### Ironmaking

Iron ore powder used by the factory is supplied from the mines of Gol Gohar, Chadormalu, Bafq, Zarand, Sirjan Iranian, and Sangan complex located in provinces of Kerman, Yazd, and Khorasan Razavi through railways. Also, some part of the pellet required by the company is going to supply from Gol Gohar, Ardakan, and Sangan complex in the near future. Coarse-grained concentrate of iron ore with a purity of 67.5% turned into 8-16 mm pellets in 8 rotating discs after mixture with fine-grained iron ore concentrate, glue (bentonite powder), and sludge from duct collectors in the pelletizing unit. Pellets then are dried, preheated, baked in the furnace, hardened, and finally transferred to a direct reduction unit after cooling. In the next step, the oxide pellet

is converted into direct reduced iron (DRI) with a minimum of 92% iron concentration (metallization) and 1.8% carbon. The DRI with a minimum of 92% iron concentration is taken out of the furnaces, stored in special silos, and finally transferred to the steelmaking area.

# Hot-rolled steel and pickled steel coil



Re-rolling, pipes and profiles for construction and manufacturing of machineries, fluid transfer pipes, pressure vessels, containers and storage tanks for liquefied petroleum gas, offshore structures, building structures, vehicle chassis, and tensile products

# Cold-rolled steel

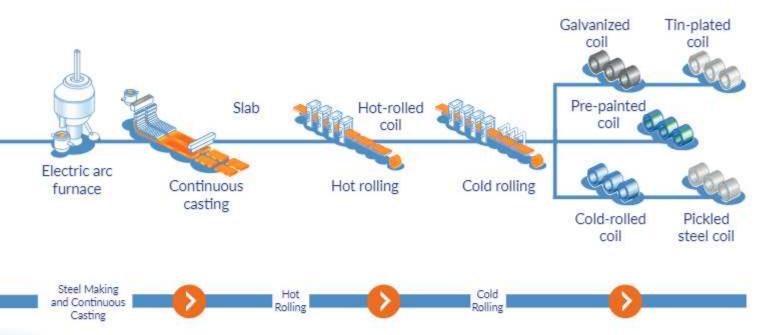


Visible and invisible surfaces of automobile body and related parts, home appliances, light weight pipes, radiators, barrels, glazing, electrical industries, tensile products, light industrial structures

# Tin-plated steel coils



Food packaging industries, chemical packaging industries



# Steel Making and Continuous Hot Rolling Casting

The steelmaking area has eight electric arc furnaces, each with a nominal capacity of 200 tons, capable of producing molten steel. The metal charge ratio in MSC's arc furnaces is a maximum of 10% scrap and 90% DRI, which is changeable depending on the conditions of the organization and the market. The DRI and scrap iron turn into molten steel in electric arc furnaces. The molten steel produced at this stage is transferred to casting machines and converted to steel slabs.

hot rolling unit after cooling. In this unit, they are reheated and rolled through different stages to produce coils with a thickness slabs with a thickness of 200 mm into hot coils according to the customers' demands.

# Cold Rolling

The slabs are transferred to the The product is then sent to the cold rolling unit for complementary operations and thickness reduction up to 0.18 mm. It is then packaged in the form of coil and sheets and supplied to domestic and international markets. Some part of 1.5 mm to 16 mm. The hot of the products is converted into galvanized, rolling production line turns the pre-painted, and tin-plated coils in other units.

#### Galvanized Coil



Construction, home appliances, automobiles

# Pre-painted Coil



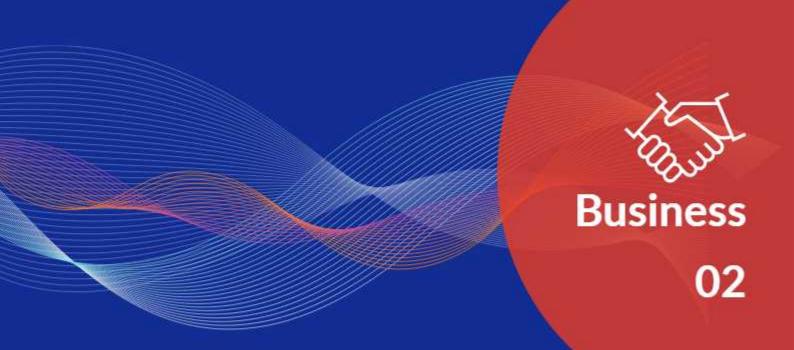
Construction, home appliances

# Checker plate Coil



Offshore Industries vessels Industrial Stairs, locomotive wagons, and automotive industry







# Marketing and product development approaches for future



MSC has a significant share of steel products market in Iran. A wide range of domestic industries are customers of MSC products. Active customers of MSC overally consist of about 1500 direct and more than 5000 indirect customers among factories and

manufacturing plants. Major customers of MSC in various industries and fields of activity are categorized as follows:

#### Customer groups of MSC in various industries

Customer group
7. Metal structures
8. Transportation (Automotive and related parts)
9. Home appliances
10. Packaging industries
11. Metal industries
12. Commercial companies

### Product Portfolio Development

The product portfolio of MSC is provided with a futuristic view (macro trends) to changes in the needs and expectations of customers in domestic and international target markets, according to which the expected products are determined. To this end, the identified products are evaluated and prioritized in two dimensions of "market attractiveness" and "business strength" using the GE matrix. This

approach is integrated with the technology roadmap. The development of the product portfolio in accordance with the customers' expectations increased their satisfaction with flexibility in product development. IF steel for automakers, API steel for the oil and gas industry, and DR8 and T5 grades for the packaging industry are among the products designed and manufactured to develop the product portfolio.

#### Satisfaction with flexibility in product development (%)

2018	2019	2020	2021	
78	76	76	64	



Product produced in Hot-rolling plant

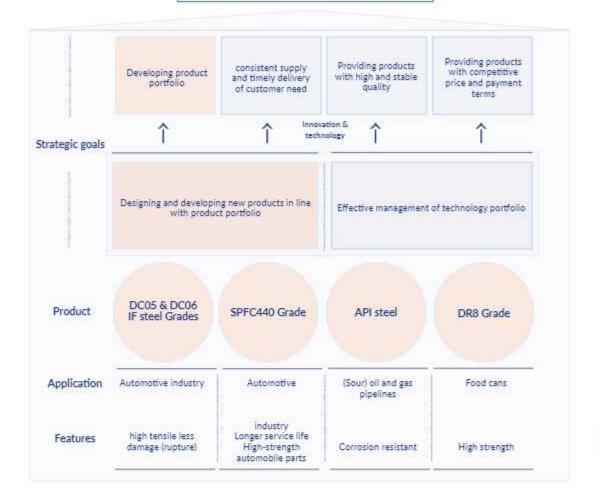
محصول توليد شده در واحد تورد گرم







#### Increasing Customer Satisfaction



Commercial grade	Application
DX56D	High-tensile automotive steel (galvanized)
ST-52 (FAT)	Fatigue resistant steel
HX220YD	High-strength formable steel- automative application
HE445D	Automotive industry (High-strength)
HCT600X	Automotive industry (with cooperation of CBASCO )
550YC	Automotive industry (High-strength)

# Goreh-Jask Pipeline

Sour crude oil is one of the liquids transported by the pipelines. It is a type of crude oil with a sulfur content of more than half a percent. Sour oil has corrosive properties due to the presence of hydrogen sulfide. Accordingly, the pipes required to transport this type of crude oil must have special conditions and should be corrosion-resistant. Previously, sour liquid transfer pipes were supplied from European countries, China, or South Korea. However, MSC could produce suitable steel slabs for this purpose with the help of experts and after a lot of efforts. By producing this strategic product, MSC has played a very important role in reducing the country's dependence on similar foreign products and an annual saving of \$ 270 million, along with the implementation and development of Goreh-Jask Pipeline as one of the most important national projects. The corrosion-resistant slab is produced at MSC, delivered to Khuzestan Oxin Steel Co., and turned into steel plates to operationalize the Goreh-Jask Sour Crude Oil Pipeline project. The produced steel plates is then sent to pipe mill companies such as Ahvaz pipe mills Co., Iran Arvin Co., Mahshahr Pipe Mills Co., and Safa Rolling & Pipe Mills Co. and converted into suitable pipes for use in the Goreh-Jask Pipelines.



Goreh-Jask Pipeline, one of the most strategic national projects, is under construction with the aim of transporting 1 million barrels of sour crude oil per day in a distance of 1000 km from Goreh in Bushehr province to Jask in the eastern part of Hormozgan province and the vicinity of Makran in Sistan and Baluchistan province. In this national plan, crude oil is transferred to the Jask export terminal and stored in storage tanks with a capacity of 10 million barrels of oil. This 42-inch pipeline, which is one of the largest oil transmission lines in the Middle East, has resulted in numerous important economic and political achievements in addition to acting following the Supreme Leader's instructions to develop the Makran coasts. Some examples include decentralization from Kharg Oil Terminal as Iran's largest oil export terminal in the Persian Gulf, Reduction of the transit distance of oil tankers compared to the distance from Kharg to the Oman Sea, construction and development of refineries, petrochemicals, and petroleum refineries with an approach to completing value chains and preventing the sale of crude oil and gas, sustainable employment and business prosperity for Iranian manufacturers, contractors, and craftsmen by localizing the construction of various types of sheets, pipes, pumps, oil stop valves, goods, and equipment. This pipeline has also the potential of transferring gas condensate. Another important economic achievement is the transfer of gas condensate to the east of the Strait of Hormuz and the production of downstream products from this feed in the refineries and petroleum refineries of the Makran region, rooted in the stable and sustainable energy security in Iran. Some of the social and economic achievements of this project are as follows:

- · Moving the population to the east of Hormozgan province and creating employment opportunities
- · Creating opportunities for transformation and prosperity of production
- · Reducing risk and ensuring continuous crude oil exports
- Improving the living standards and dignity of the residents of the Makran region





# Goreh-Jask Pipeline

#### Geographical location

The pipeline starts in Goreh in the city of Ganaveh, in Bushehr province. It passes through Bushehr, Fars, and Hormozgan provinces from 60 km west of Jask city (Mobarak mount) and joins the newly established terminal and offshore facilities in the vicinity of the Makran region.

#### Establishment of NACE (sour oil) pipe production chain for the first time in the country





Pumping station 4

Bandar Abbas

**Oman Sea** 

Makran

Pigging 2

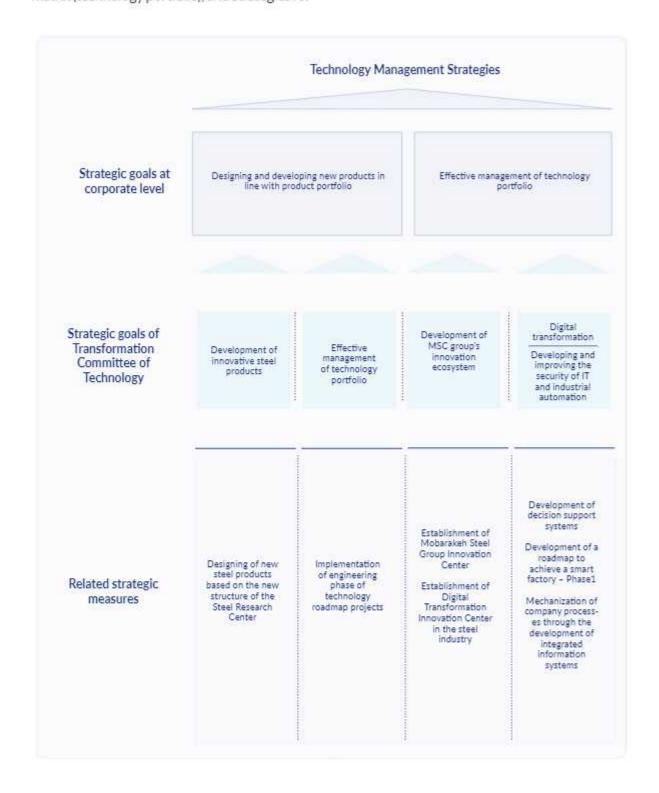
Minab

Jask Terminal

#### Technology management strategies

MSC in order to formulate its technology strategies in operational level used the Julie model to develop indicators and Morin model to formulate strategies. Accordingly, technologies are located in four areas of the matrix (technology portfolio), and strategies for

improving and upgrading each technology level are determined based on their position on the matrix. Also, processes related to this approach are recorded in process management software.





#### Customers value proposition

MSC follows its strategic management process and defines the proposed value for different target customers based on their key needs and expectations when designing a business strategy plan, which is reviewed and validated annually. The key indicators and related strategic actions are defined, implemented, and monitored for the effective realization of the proposed value.

Objectives in line with the proposed value to customers	Related strategic measures
	Design and implementation of indirect customer satisfaction measurement system (service centers)
Increasing of custmer satisfaction and loyalty	Customer Loyalty Assessment Project
	Provide analytical report of survey results to related units
Developing the centralized system of domestic sales of MSC group companies' products	Establishment of centralized system of domestic sales of galva- nized products using the potential of group companies
Effective management of customer data	Customer's data mining Project
Improvement of MSC's brand	Measuring the position and potency of MSC brand from the customers' point of view
Development of information systems	Improving the call center system

# Customer Relationship Management (CRM)



MSC's CRM System stores and processes the information of customers. This system is one of the most critical tools in communicating with customers and providing them with the required information. In addition to customer information management, this system supports the technical and commercial

claims made by them and submits various reports such as product transport status, orders and pre-invoices, statements, and financial information. CRM system is also a powerful tool for obtaining customer feedback through surveys.



MSC's CRM system



#### Informing customers

MSC provides technical advice on how to use the products, publishes technical booklets, holds technical and business meetings and specialized seminars (for some groups of customers) in line with accountability and provision of information as well as technical and commercial guidance. These measures are evaluated through surveys and indicators of satisfaction with technical guidance, satisfaction with commercial guidance, the number of training courses, and technical advice for customers. In addition, experts are assigned to products, and the product booklet is updated according to the feedback received from customers (mechanical properties of different grades, packaging, and defects).

## Active Relationships with Customers

To develop its relationships with customers, MSC has designed and taken different approaches such as providing technical advice to customers, regular and periodic visits (with a maximum time interval of three years for each customer), face-to-face interviews, etc.

#### Number of technical advices provided to customers

2018	2019	2020	2021
48	97	70	73

#### Accountability and providing information and commercial and technical guidance

We evaluate the customers' satisfaction with accountability, information, and guidance based on three criteria:

#### Customers' satisfaction with accountability:

Customers' satisfaction has increased through customer relationship management, the establishment of effective communication channels, and implementation of improvement programs such as increasing stability, the establishment of a commercial complaints system in the CRM system, the establishment of an electronic admission system for customers, holding regular meetings of the admission committee, and reducing the waiting time for applicants for review in the admission committee.

#### Satisfaction with accountability (%)

2018	2019	2020	2021
86	76	82	86

Satisfaction with commercial and technical guidance: MSC has ensured customers' satisfaction in this area by allocating technical experts to each field of activity, providing the customers with their required technical guidance, visiting the factories of some customers, and holding training courses for them to introduce the products and promote their technical knowledge.

# Satisfaction with technical advices provided to customers (%)

2018	2019	2020	2021
85	82	83	83











#### Satisfaction with handling of customer claims:

The company provided the customers with claim registration through the CRM system in 2016 to improve the process of registration and handling of customer claims. However, many false claims were registered due to the convenience of this system.

Given the necessity of in-person visits, the geographical distribution of customers, and their distance, the claim consideration time increased. MSC could address this issue by allocating experts to each area of activity, in-person handling of some claims, and other measures. The claim handling time decreased in 2017 and 2018 as a result of these measures, leading to more customer satisfaction.



# **Customer Survey**



MSC evaluates customer satisfaction annually according to the ISO10004 standard using a survey (in the form of questionnaire) through the CRM system. The system defines and implements the programs required for the enhancement of customers' satisfaction. Accordingly, the reports are sent to the relevant units (such as production, quality control, marketing & sales, etc.) after collection, processing, and analysis of data. In-person meetings are held to find out the roots of low satisfaction of the customers who report the lowest level of satisfaction. Face-to-face interviews are also conducted to ensure that we are fully aware of key customers' views. the company has also conducted a comprehensive analysis of the survey results in this area and designed a guideline for customer interviews. In addition, survey process has been systematized to increase the response rate of customers. Hence, this process is currently performed through the CRM system. The result has been an increase in the number of questionnaires obtained from customers. Besides, it is possible to show corrective steps through the CRM system based on the survey results to increase the response rate of customers. Additionally, it should be noted that response rate of customers to survey is 76% in 2021.

#### The rate of customers' resonses to survey (%)

2018	2019	2020	2021
62	41	77	76

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A view of survey section in CRM system



#### **Customer Satisfaction and Loyalty**

MSC has been able to maintain a complete customer satisfaction process and increase customers' intent to repurchase and recommend the company to others. This was possible through management of the production operations, improvement of product quality, planning and controlling of product transport, customer relationship management, and diversity of payment terms. Also, the percentage of dissatisfied customers has shown a downward trend in terms of different levels of satisfaction.

#### Customers total satisfaction (%)

2018	2019	2020	2021
83	85	84	85

Satisfaction with the Payment Terms: MSC has taken steps to increase credit sales to our customers, which will consequently increase their satisfaction with the payment terms. Accordingly, all customers have been provided with long-term LCs since 2017.

#### Satisfaction with Payment Terms (%)

2018	2019	2020	2021
82	72	74	77

Satisfaction with desirability of price: The recession prevailing in the industry, the inappropriate liquidity conditions of the company and increase in US Dollar exchange rate against Iranian Rials in 2020 decreased customer satisfaction with the prices. Also, raising prices for energy carriers increased the cost of steel products. In 2021 MSC was able to prevent the price increase by continuously offering of product on Iran Mercantile Exchange and meeting all the needs of customers, which led to the import of hot rolled products by the company itself, which in turn increased customer satisfaction.

#### Satisfaction with desirability of price (%)

2018	2019	2020	2021
76	75	73	77







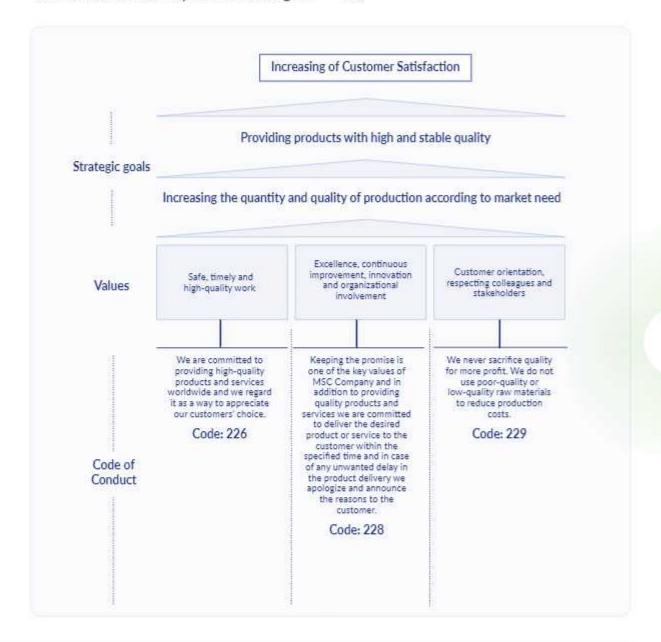


# Provision of high-quality and sustainable products

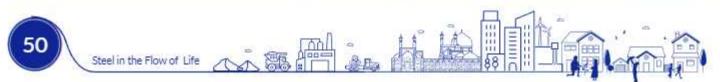


MSC has been able to improve customers' satisfaction with the product quality through the establishment of quality control and the implementation of numerous projects to improve the quality of production processes based on the results of customer surveys, such as "root cause analysis and removing the

defects related to improper surface structure in automotive industries" within the cold rolling unit, "launching automatic grinding on coiler pinch rolls" and "improving the performance of loopers" in the hot-rolling unit, "reducing dimensional tolerances in tin-plated products", etc.



Indicator	Unit	2018	2019	2020	2021
Satisfaction with product quality	%	88	88	87	85
Satisfaction with timely product delivery	%	83	78	78	82
Satisfaction with stable supply of customer demands	%	79	77	78	82



# Product life cycle management



MSC considers environmental, safety, social, and legal consequences in the process of product design and optimization while identifying and managing the risk of the relevant aspects. Unlike consumer products, steel products have a long-life cycle, and despite the design and production of new products, the old ones can still be recycled, produced, and reused. In order to study the

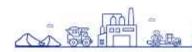
general trend of material consumption, energy, emissions and environmental effects caused by the steel industry, the life cycle of steel products should be evaluated and if its approach is based on the principles of circular economy (recycle, reuse, etc.) It can be claimed that the environmental consequences have been minimized.

#### The life cycle of steel products and some of its consequences for health, safety, and environment

Sections	Employee health	Safety	Environment
Raw Materials	Dust from storage, transportation, and handling of iron ore and lime-burning site	Risks due to transport of raw materials (conveyors), production of reducing gases (CO), and the presence of explosives in the incoming scrap	Air pollution (dust), wasting of resources, and storaged chemicals and consumables, pollution of soil and water resources
Steel Production Operations	Harmful chemical, physical, and ergonomic factors (noise pollution, heat stress, metal fumes, gases, vapors, etc.)	Risks due to unsafe work and behavior (presence of high-temperature molten materials, explosion, falling objects, falling from heights, dangers related to product loading and carrying, etc.)	Generating waste, soil pollution and wasting resources, generating effluent and water pollution, generating dust and air pollution, generating vapors and chemical gases, wasting energy
Recycling		Risk of cutting body parts with sharp edges of metal scraps	Contamination by coated steel plates and sheets, contamination with organic elements and heavy metals (grease, oil, catalyst)

#### Effective health, safety, and environment management approaches in the product life cycle from delivery to recycling

Life cycle stage	Environmental approaches	Public safety and health approaches
Delivery to customers	Increased focus of the organization on railway transportation	Preparation of instructions and supervision on product shipping Preparation of a brochure for safety instructions of product shipping Fixing control and secure restraint of finished and coated products on trucks and wagons Providing warehousing instructions to customers to reduce risk
Usage of the product by customers and consumers	Production of products with anti-corrosion coatings that increase their useful life Collection and recycling of steel waste in customer production lines	Preparation and distribution of safety and health brochures for coated products Training customers on product warehousing Ensuring no delivery of non-conforming tin-plated products for food applications
End of product life	Steel scrap recycling The obligation of scrap suppliers to separate the scraps Control over the entrance of contaminated scrap (containing oil and grease, explosives, asbestos, silica, etc.)	Deployment of SS at the material transfer and scrap preparation site Monitoring harmful factors in the workplace





MSC has considered the requirements of international standards concerning Food Contact Material and EC NO 1935:2004 regarding tin-plated products with food applications to ensure the health of the final consumers of these products. The most important part of this standard is the use of a food-grade tin and we are committed to use this element according to the standard of

ASTM B339-12.

The company also succeeded in obtaining National Standard Certification for tinned products. MSC also avoids selling second-hand products with specific defects that could endanger the health of consumers and re-uses them as scrap in the steel making process.

# Handling of customer claims and complaints



Customer claims and complaints are recorded in the CRM system and reviewed by experts. Decisions are then made, and appropriate actions are taken to consider the complaints and respond to the customers. Also, necessary preventive and corrective actions are taken, and the final result is communicated to the customers to prevent the recurrence of the problem and eliminate the root causes.

The Customer Technical Assistant Unit (CTA), as the unit in charge of reviewing and analyzing customer complaints and claims, reviews the trend and defects created in the products and provides the necessary feedback to the production areas in order to prevent the recurrence of defects by taking corrective measures.

Improving product packaging using wrappers instead of paper, installing X-Ray thickness and laser width gauges, improving chemical analysis control, installing new MLC system to control mold melt surface on casting machines, reducing mechanical defects by preventing allocation of standard coils with near border conditions and improving the temperature control of coiler and finishing

of hot-rolling, improvement of annealing cycle, design and testing of new grade in hot-rolled product to reduce sheet surface breakage defect, installation and commissioning of automatic wave meter in Saba steel production line for optimal control of production process, installation and commissioning of rolling station No. 7 in the production line of Saba Steel and the possibility of controlling the thickness tolerance, controlling the amount of surface chromium applied, are some of the measures taken in this field.

# Percentage of product claims accepted to the total tonnage delivered (%)

2018	2019	2020	2021	
0.59	0.23	0.12	0.17	

The failure of the UT test of the slab product (Goreh to Jask project) as well as improper lubrication, surface dirt and defects in mechanical properties in cold products are the main reasons for the increase in the percentage of accepted claims of products to the total tonnage delivered in 2021.



A view of MSC factory



#### The process of technical handling of customer claims and complaints

- 1. Receiving the claim/complaint through the CRM system
- 2. Preliminary review, evaluation of the complaint/claim, and collection of preliminary information
- Prompt contact with the customer to receive further information and determine the appointment date of in-person visit
- 4. Technical inspection of the product at the customer's site
- Identifying possible defects and providing the customer with different solutions
- 6. Agreement and preparation of minutes with the representative of the customer
- Reporting the defect to the relevant department to take corrective and preventive measures and avoid recurrence
- Follow up on corrective measures (through joint meetings, expert meetings, etc.)
- Informing customers, receiving feedback on the results of actions, and communicating the received feedback to the relevant areas

#### Approaches to customer claims and complaints management

- 1. Management of customer claims and complaints based on the standard of ISO10002
- 2. Customer 7\*24 (7 days of week and 24 hours) access to the online system of claim registration and follow-up with a private account
- 3. Prioritizing customer claims and complaints in line with customer satisfaction and social responsibilities
- 4. Systematic management of customer claims and complaints
- 5. Response to and provision of the required business and technical information and guidance for customers
- 6. Defining and prioritizing corrective actions based on the reasons for customer claims and complaints



#### Prioritization of claims

After the registration of customer complaints/ claims in CRM system and reaching to the stage of entering to the customer CTA unit, prioritization is carried out according to the following table and based on three parameters

of complexity, severity and impact three levels of H, M, and L. The consideration and response time will be 47, 57, and 72 days, respectively.

Criterion	Related parameter		Н	M	L
Complexity	Customerse	ensitivity	Follow-up and expression of Follow-up by the sensitivities by the customer customer		Customer's failure to follow up
	Management (and s department) opinio		Management emphasis	Emphasized	Not emphasized
		Hot-rolled	>500 tons	100-500 tons	<100 tons
Severity	Tonnage Cold-rolled impact	>100 tons	50-100 tons	<50 tons	
		Coated	>80 tons	20-80 tons	<20 tons
Impact		ealth and safety of brand (MSC and	Food industries Automotive industries	Fluid pipelines	Other fields of activity

## Statistics on claims prioritization

Prioritization of customers' claims and complaints has been implemented systematically since 2019, and the relevant statistics are as follows:

But the second of the business	Mean time of handling (days)		Number of Claims	
Prioritization of claim handling	2020	2021	2020	2021
н	122	51	378	604
М	127	122	305	140
L	112	81	652	750

<sup>•</sup> The main reason for the high consideration time of claims in 2020 and 2021 is the lock downs and national restrictions due to the outbreak of Covid-19.

The reasons behind the high consideration time of M-priority claims are complexity, high tonnage, the need for laboratory examinations, quasi-public corporate bureaucracy, or export claims.

#### Handling and response time to the claims

The process of claims and complaints handling has improved with the establishment of the ISO10002 standard since 2016. The main reason for this improvement is the claims handling through the CRM system, access to the resident technical experts in automotive companies, allocation of experts to each field of activity, etc. The ultimate objective behind applying of these approaches is to increase the speed with which claims are handled while also to provide better technical guidance.

#### Handling and response time to the claims (Days)

2018	2019	2020	2021
139	99	120	74

# Customer training



MSC has conducted numerous training courses and specialized seminars for customers, along with the allocation of experts to each field of activity to increase customers' awareness and enhance their satisfaction with business and technical guidance.



- Introduction of MSC production areas
- Introduction of the production process, grades, and technical applications of products used by the customer
- Introduction of the technical standards of the products used by the customer
- Familiarity with the defects of the products used by the customer
- Familiarity with the specialized safety of the products used by the customer
- Related issues and customer questions

All materials in the customer training courses are provided based on the technical information booklets and instructions of MSC products.

#### Number of training courses held for customers

2019	2020	2021	
12	5	6	

 Continuation or cessation of lock down and national restrictions due to the outbreak of COVID-19 affects the number of training courses.







#### Training courses held for the customers

Type of course	Title	Year	Customer
Training Course	Technical information on tin-plated products	2020	khavarmiyaneh Arvand Can Ind. Co.
Training Course	Steel plates production process	2020	Aria Sahand Tabriz Co.
Training Course	Steel plates production process	2020	Gostaresh Foulad Hamed Co.
Training Course	Technical information on tin-plated products	2020	Tavanavar Steel Industries Co.
Training Course	Technical information on tin-plated products	2020	Borujerd Packaging Co.
Training Course	Introduction to standards of steel plates used in the automotive industries	2021	HOSCO
Training Course	Reduction of oxide scale defect of mill	2021	Esfahan Steel Co.
Training Course	Technical information on tin-plated products	2021	Fajr Golestan Co.
Training Course	Technical information on tin-plated products	2021	Omidan Toos Co.
Training Course	Technical information on Hot-Rolled products and welding topics	2021	Akam Folad Co.
Training Course	Technical information on colored products	2021	Nobough Sarmayesh Co.

# Engaging with customers as business partners



In order to engage as much as possible with stakeholders, the Sales and Marketing department of MSC organizes conferences and think-tank meetings with the company's customers as business partners and one of the key stakeholders of the organization. In these conferences, which are formed with the presence of customers from various fields of activity, the needs and expectations

of customers are expressed and some of their concerns and questions are answered. Also, at the end of each conference, in order to honor this cooperation, all present customers are honored with a letter of commendation. It should be noted that in 2021, four conferences were held with customers from packaging, auto parts, home appliances and pipe and profile field of activity.



MSC and Business partners (Pipe and profile customers) think-tank meeting, 2021

# Customer experience management



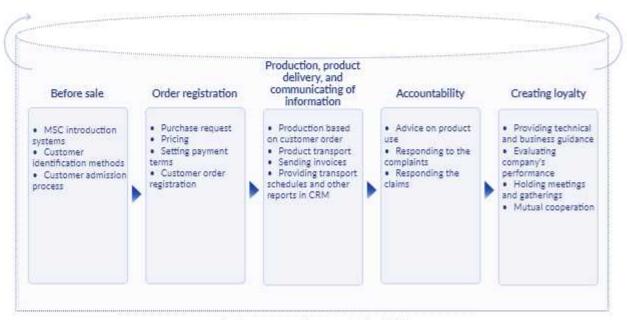
Customer experience management is one of the approaches of MSC to improve the customer experience and loyalty. To this end, a project has been executed in three stages:

- Evaluation and redesign of the customer experience management model
- Implementation of customer experience management
- Measurement of customer experience management

This approach has designed and implemented various approaches such as the development of competence and authority of employees, increasing customers' awareness, periodic customer visits, development of the CRM

system, establishment of management systems, etc. According to this approach, trust and confidence in MSC, the company's flexibility in meeting customer expectations and ease of access can be mentioned as the most significant features of customer experience. Also, MSC has found out through benchmarking of large steel companies such as POSCO, MMK and ArcelorMittal that management of the company brand experience is necessary to create the best experience for customers. To this end, "MSC Brand Management Project" is in the implementation stage.





Customer experience cycle in MSC



# Designing new products



The process of new product design in MSC includes designing new products and changing the characteristics of current products. This process includes identification and prediction of the market needs for products and their prioritization (according to product portfolio), design of the production processes, prototyping, customer approval, corrections, standardization, and registration in the system. The design and production of S550MC and

SPFC440 grades different steel belts, and sour gas slabs are among the latest measures taken by the company in this field.

It is worth mentioning that approaches such as the definition of joint projects, professional meetings with clients, seeking customers' technical comments about new products, research projects with universities, and suggestion systems aim to engage stakeholders in the design and manufacture of new products.

# Smartization and digital transformation



The key issues in Mobarakeh Steel Company strategies documents include: the fourth industrial revolution and Digital Transformation in steel industry.

MSC started Digital Transformation roadmap and Smartization project in August 2016 in order to create new values and variety in products, making them cheaper and also presenting these products innovatively in the country and in the world as some of the main achievements of this plan. In addition, the 26th of July 2020 was named as the Digitalization day in MSC calendar.

The main topics that have been considered as the inputs of Digital Transformation plan in MSC includes international trends in Industry especially in Steel, competitors' behavior and technological developments. In this regard, MSC has stablished a strategic destination called "membership in the Global Lighthouse Network" based on its value creation system and in line with the vision of "world-class organization".

MSC Digital Transformation roadmap began with the slogan "Tomorrow Steel, smart from stone to color" from 2020 to the horizon of 2025 in order to achieve the mentioned strategic destination.

The Inputs include Global trends in the steel industry, current challenges and consideration of key enabler technologies of 4.0 industry such as cloud computing, artificial intelligence (AI), augmented reality (AR), virtual reality (VR), big data, blockchain, IoT data analysis and etc. To implement the roadmap, MSC's portfolio of digital transformation projects was formed based on the existing challenges and

requirements of the smart factory, entitled 'Steel +22'. The projects include:

- Communication infrastructure of connected factory
- ITIL4 service management deployment
- Smart logistics
- Smart refractory thickness estimation
- Remote support using augmented reality (AR)
- Automation of overhead cranes
- Tracking and calculation the volume of raw materials using drones.

Other innovative and large-scale activities that have been taken to promote the MSC Digital Transformation plan are as follows:

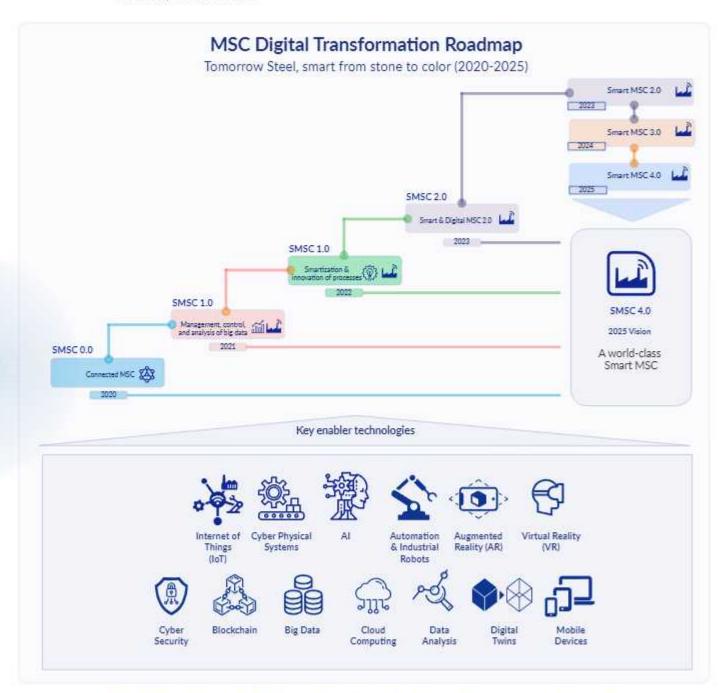
- MSC has constructed a digital transformation innovation center in the Science and Technology Park of the University of Tehran with the aim of creating a digital transformation start-up studio in the steel industry and in order to establish innovative cores and technology companies in the country.
- MSC held three reverse pitch events in order to express its existing challenges and receive smartization solutions to solve them and make maximum use of all the engineering capabilities of the country. By holding these events, it has expressed its challenges with start-ups and science-based companies and received their innovative ideas.

Other activities taken include:

- Holding training courses for digital leaders in cooperation with the University of Isfahan and benefiting domestic and foreign professors, with the aim of acquainting MSC managers with the principles, foundations and frameworks of digital transformation
- Promoting the culture of digital transformation in the organization



- Formation of a common digital ecosystem for managers to create a favorable environment for the implementation of projects and programs of the fourth generation of industry.
- MSC has set up a 4.0 generation laboratory at Isfahan University of Technology in order to:
- Create sustainable and common value
- Create the necessary infrastructure in university environments
- · Create knowledge-based networks
- Going through the path of smartening with more success and speed.
- MSC has launched the first 5G industrial site in one of the areas of Mobarakeh Steel Plant in order to create the communication infrastructure required by a smart factory and providing services to other digital transformation projects.



# Problem-based, future-oriented, and creative research and development



As one of its main missions, MSC has defined all research and development activities as knowledge-based. These activities are the basis of our close cooperation and relationship with universities, research centers, and national and international scientific and research centers.



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Mission	Playing a key role in supporting knowledge and problem-based, future oriented, and creative research at MSC. Dissemination and application of the generated knowledge to create value and meet the needs of stakeholders inside and outside the corporate using networking and open innovation approach.									
Vision		Excellency in research and innovation of the country's steel industry and value creation through the national and global open innovation network								
Insights			center on decentralizat e-oriented, and creative							
Strategic issues	Being problem- based and product development	Preparedness for future	Support systems	Networking	strategy and management in the holding level					
Measures	1. Redesigning of the problem definition process to apply the results of research projects 2. Structural redesigning of research & development at the organization/intra-department level 3. Empowerment & attitude creation in R&D staff 4. Identifying internal human capacities, networking and motivation for engagement	5. Preparation of a research priority portfolio (problem-based, idea-based, and future-oriented) 6. Process preparation, strategic intelligent workflow, and technology 7. Designing of company foresight process 8. Development of strategic foresight based on technology portfolio and research & development	9. Designing and organization of the company intellectual property management process 10. Establishment & enhancement of technical/ science databases 11. Planning to use incentives and external facilities (barter, tax exemption, etc.) 12. Improvement of the production & dissemination of knowledge based on priorities 13. Enhancement of laboratory & consulting	14. Designing of open innovation system and corporate innovation ecosystem 15. Process design and workflow Ideation to commercialization 16. Targeting and directing dissertations and visits 17. Participation in the establishment of Iran Iron and Steel Research and Technology Center	18. Creating common research & development infrastructure & resources to increase synergy at the holding fevel 19. Design and implementation of integrated research & development strategie & processes in the holding level					

In addition to problem-based activities, idea-based and future-oriented projects have also been added to the R&D area. Future-oriented macro projects such as the study and examination of deep waters, the investigation, designing, and construction of needle coke and graphite electrodes, and idea-based projects such as the replacement of anthracite with petroleum coke for charging in electric arc furnaces, using of slag instead of mulch to prevent desertification, using of slag from electric arc furnaces in road materials and urban planning including new jersey barrier, roadbed, etc. are the result of this approach.

#### Supporting & Technology & Innovation Development (STID)

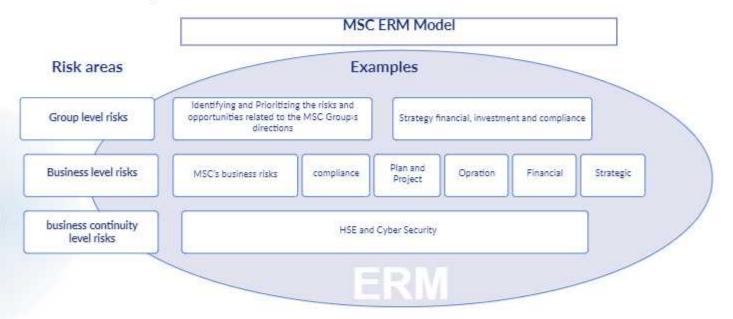
Mobarakeh Steel Supporting & Technology & Innovation Development (STID) was established with the aim of developing the business model of Mobarakeh Steel Group for the horizon of 2036. The development of the group is aimed at diversifying products and achieving the latest global technologies in the field of steel and other basic metals. In this direction, attention to the concept of circular economy (CE) as a guiding light for the development of Mobarakeh Steel Group is considered. Planning to solve the basic challenges of MSC and its group, including the lack of magnetic iron mines, the increase in the price of energy carriers, and environmental problems by relying and focusing on new technologies is also one of the executive priorities of this company. In order to achieve this goal, the development of a technical-knowledge network of technical and engineering and knowledge-based companies and experts is a basic necessity, which, while creating the possibility of agile and independent movement, all the technological and innovative needs of Mobarakeh steel Group's development in the supply of new products and technologies will be covered. Some of the specialized areas of the company's activity are: creating a coherent knowledge-technical ecosystem in the field of steel industry technologies, laying the foundation for the development of process innovations in the steel industry, transferring and localizing new technologies in the field of steel industry, developing products with new technologies, developing specialized knowledge-based companies with innovative ideas/plans, reverse engineering of key technologies available in the country and proposing development programs in the field of the country's steel industry.

# Enterprise risk management (ERM)



Learning from the ISO 31000 standard and the COSO enterprise risk management framework, MSC has designed its own ERM, identifying, evaluating, and managing group level, business level and business continuity level risks. In this approach, in each level according to related workflows, the risks are identified and procedures to manage them determined and in case of need to transfer the risks to the "Company Risk Steering Committee" based on the chart below, they are re-evaluated and if the result of this evaluation is a high priority, the risk management steering committee will manage how to deal with them.

The necessary precautionary or contingency measures are identified and implemented for effective management of risks and opportunities. The key related indicators (KRIs) are monitored regularly regarding critical opportunities and risks. Also, in line with effective risk management in the company, the risk management system is designed based on the ISO 31000:2018 standard, COSO 2017 framework, and in compliance with the policies of the Audit Committee and Securities and Exchange Organization's (SEO) corporate governance instructions. Accordingly, the MSC's ERM model is as follows:





In each of ERM model areas, six main steps of risk management are executed (according figure in the left side). According to the ERM approach, the results in case of need are communicated to the "Company Risk Steering Committee". This committee after the evaluation of the severity dimensions of the risk decides to take related control actions.

The company has also developed procedures for the identification, evaluation, and management of the identified risks to assess and manage financial and operational risks

#### Some risk management approaches in operational and financial areas

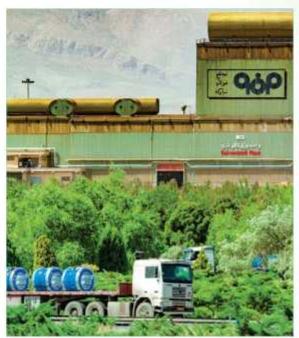
Risk management area	Approach				
Financial resources and fixed assets	Identification, evaluation, and prioritization of financial risks Insurance of physical assets (including fire insurance of equipment and materials, insurance of materials, insurance of materials and goods, car insurance, etc.)				
nformation Technology (IT)	Identification, evaluation, and prioritization of risks related to information security based on ISO 27001 standard				
Safety	Identification, evaluation, and prioritization of safety risks using the severity-probability method based on ISO 45001:2018 standard				
Environment	Identification, evaluation, and prioritization of environmental aspects using the severity -probability method based on ISO 14001 standard				
investment & development projects	Technical and economic feasibility of investment projects and development plans with CAMFAR software Identification and evaluation of systematic and non-systematic investment risks (sensitivity analysis)				
Objectives and strategies	Identification, evaluation, and prioritization of risks in business area				

# **Environmental management**



# Efforts to establish a green and environment friendly factory

MSC pays special attention to environmental issues in all decisions, processes, and activities because "protection of the environment" is one of our core values. As mentioned in the company's strategic plan, the improvement of environmental performance is one of our central strategies at the forefront of our purpose, namely, "Responsible Corporate Citizenship to Create a Better Future". In addition, an important part of our company's code of conduct is allocated to the environment and our performance in this area. Therefore, considering the importance of this issue, MSC tries to set regular goals and actions to minimize the environmental impact of its processes and activities and to improve our planet to a better place for life.



MSC factory green space

#### MSC integrated environment and energy management policy

MSC, as a responsible corporate citizen, implements the following principles and strategies to achieve a better future through environmental protection:

#### Principles:

- Environmental protection including pollution prevention and other specific related commitments
- Compliance with all applicable legal and any other related requirements

#### Operational strategies:

- Development of partnerships and collaborations with customers, contractors, suppliers, and other stakeholders by focusing on related social responsibilities
- Optimal use of natural resources and energy, promotion of recycling and reusing of products, along with a proper understanding of the environmental impact of products over the life cycle

#### Environmental strategies

Mobarakeh Steel Group Innovation and Technology Fund aims to finance and invest in development and commercialization projects. Also, Mobarakeh Steel Group Innovation Center mainly focuses on startups, accelerators, and studio startups which includes smaller sponsorships of projects. MSC has recently decided to pursue both issues through Mobarakeh Steel Group Innovation and Technology Center. Accordingly, this center is established as a privately held company by MSC, and its legal registration process is underway.

Purpose Responsible Corporate Citizenship to Create a Better Future Strategic Goal Improvement of Environmental Performance - Responsible use of natural resources (raw materials, energy and water) Pursuing excellence in environmental performance (controlling, monitoring) and eliminating emissions and pollution of soil, air and water, preventing global warming by reducing the production and emission of greenhouse gases (GHG), especially CO, recycling and the use of new energy) - Waste management with a circular economy approach MSC's Macro - Biodiversity protection Environmental - Development and marketing of ECO products Goals - Raising the level of environmental awareness of stakeholders - Cooperation and interaction with organizations, associations, and regulatory authorities to participate in public culture-building and environmental controls as part of the company's social responsibilities





#### Environmental management system

MSC has considered environmental conservation as one of the advantages of its management system in line with the industrial development of the country and the policies of the Islamic Republic of Iran. The company has been implementing the environmental management system, particularly since 1996, and could obtain the international certificate of ISO 14001 standard as the first large national industrial complex in March 1998.

The environmental management system at MSC consists of identifying valuable environmental aspects of the market, risk assessment, internal and external audits, pollutants monitoring system, performing SCADA (Supervisory Control And Data Acquisition) in the field of environment effluent and waste management, and design and implementation of improvement actions. This system is designed based on ISO14001 standard and covers all production and support units. Also, the list of environmental research priorities has been systematically compiled with the collaboration of universities and research centers. The effectiveness of this approach is evaluated through various indicators, such as the ratio of greenhouse gas emitted to products produced, the emission amount of NOx, SOx, etc. Adding aspects related to the product life cycle in the booklet of environmental aspects and the compilation of a department-based environmental report at the company level are among the improvements made in this area.

#### Environmental position

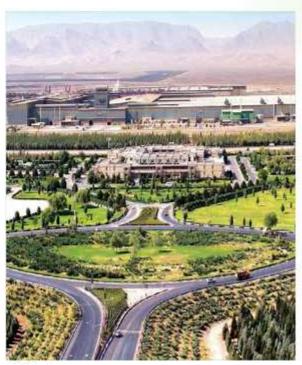
MSC is located 75 km southwest of Isfahan and has an area of 35 square kilometers. This area includes more than 300 rangeland plant species, including trees, shrubs, and perennial and annual plants. The region also has surface water in the form of spring runoff, regional well water, and rangeland ecosystems with average quality. The company has not only preserved the number of plant and animal species in the area but has also increased the diversity of species through activities such as plantation and prohibition of livestock grazing, particularly in pastures. In addition to the natural species found in the region, the company has planted many areas under its

ownership, allocating more than 40% of its total area to green space.

This space is equivalent to 1600 hectares and more than twice the legal requirement. The company has also created artificial forests, most of which are coniferous trees used for the development of green space. According to a study conducted, the trees planted in the area of MSC have absorbed 3370 tons of CO2 from the atmosphere during 17 years. In other words, artificial forest around the factory has been an environmental initiative to reduce greenhouse gas emissions. At present, the water needed to irrigate the trees and green space is supplied from the treated effluents of the factory and the surrounding cities and also in the form of drip irrigation.

#### Green space

MSC has gone beyond the law of Clean Air, allocating 10% of the total area of the company to green space and has allocated 1600 hectares (about 45% of the total space) to green space in line with its social responsibilities to preserve the environment. Concerning the optimal use of water resources, 98% of the company's green space is irrigated by the drip irrigation system, which saves water at a rate of 0.37 m3/hour/hectare (0.1 liter/second/hectare).



MSC factory green space

#### Environmental investment

MSC has made many investments to protect the environment, which have been spent on purchasing, installing and operating equipment and improving the company's environmental performance.. In 2018 a very proper investment has been made in the field of installation, startup, and operation of dust control equipment in MSC and also Saba Steel Complex. The project includes completion of dust collectors of iron-making and steel making and dust distribution control from direct reduction modules, Saba Steel Complex duct collector equipment and completion of the project for the transfer and treatment of urban effluents from nearby cities. It is important to note that the total investment of the company in the field of environment is estimated at more than one billion dollars so far.

#### Management of air pollutants

We have always tried to monitor the air pollutants released during production activities and processes at MSC and keep it within the standard permissible range. The company has controlled the emission of pollutants through planning and implementing various actions and approaches. The company is constantly conducting improvement projects to reduce greenhouse gas emissions. Heat recovery from the chimney outlet of the gas power plant and heat recovery from the outlet of the direct reduction unit stacks are some examples of these projects.

MSC focuses mainly on the production of flat steel products. During the steel production process, sulfur, which is present as an impurity in raw materials such as iron ore, is combined with oxygen presents in air and nitrous oxides (NOx) and produces air pollutants such as sulfur oxides (SOx). We have taken various measures to reduce the emission of these pollutants and improve atmospheric conditions.

We measure the rate of pollutant gases in the environment and the dust in the air at 35 and 22 points, respectively, out of which 10 points are allocated to online monitoring of pollutant gases and 4 points to exhaust dust from the chimneys. In addition to SO2, NOx, CO, and dust, at least 21 other parameters are measured and examined by a reliable laboratory of Iran's Department of Environment.



Artificial forests planted in the factory

	Measurement unit	2018	2019	2020	2021
Co <sub>2</sub> intensity	tons of CO <sub>2</sub> /tons of crude steel	1.9	1.98	1.98	2.59
NOx intensity	tons of NOx/tons of crude steel	0.59	0.61	0.33	0.75
SOx intensity	tons of SOx/tons of crude steel	1.19	1.55	0.7	1.66
Environmental dust at MSC	mg/Nm³	67	64	39	33

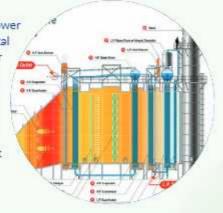


Ten different projects were implemented in 2019 to control dust and reduce pollutant emissions in the iron and steel industry. Also, 33 different environmental projects were defined in 2020 and are currently implemented to reduce pollutants at MSC. Moreover, 14 plans have been prioritized for 2021 and included in the budget list for next year. In addition, 12 environmental projects have been defined in the areas of iron making, steel making, and Saba Steel Complex to reduce air pollutants.

6 of these projects were operationalized by the end of 2018 and the remaining at the end of 2020. There have been good investments in the installation, startup, and operation of the dust control equipment at Saba Steel Complex in 2018, some examples of which are dust collector equipment, completion of iron making and steel making dust collectors, and control of dust distribution from direct reduction modules.

#### Launching Heat Recovery Steam Generators (HRSG) at MSC Power Plant

The use of Heat Recovery Steam Generators (HRSG) in MSC's power plant is the largest direct project related to energy and environmental management in MSC, which uses the waste heat of the gas power plant chimney to produce steam and use it in the company's steam power plant. This project has saved more than 12,000 normal cubic meters of natural gas per hour and it has been considered as a CDM (Clean Development Mechanism) project by United Nations Convention on Climate Change due to the reduction of CO<sub>2</sub> emissions, which can cover part of our country's commitment to reduce CO<sub>2</sub> emissions.



# Participation in greenhouse gas reduction programs through CDM projects

The project of production of superheat steam with recover energy from the gas plant chimney and use it in steam power plant that can reduce at least 120 thousand tons of carbon dioxide per year. This project was then selected for registration in the Executive Board of the Clean Development Mechanism (CDM) projects under the Kyoto protocol and was internationally registered. This project aims to save on natural gas consumption in the power plant unit (about 90 million cubic meters of natural gas per year) and to reduce

greenhouse gas (GHG) emissions. MSC was also awarded a certificate by the Worldsteel Association because of participation in the Greenhouse Gas Reduction Program.



Carbon emission	Measurement unit	2019	2020	2021
Scope 1	tons of CO <sub>2</sub>	6,823,171	7,515,028	7,558,239
Scope 2	tons of CO <sub>2</sub>	3,871,978	1,366,158	2,824,750
Scope 3	tons of CO <sub>2</sub>	1,486,120	4,398,934	7,650,288

## Water management



A considerable part of the water consumption of MSC is supplied by the effluent retreatment and return to the production cycle, as well as treating the wastewater of nearby cities and its usage in the production process. The rest of company's consuming water consumption is supplied from the Zayanderud River. The right of water withdrawal (Demand) from the river was about 40 million m³ in the initial design of the company, which water withdrawal from the river was reduced considerably by the

implementation of wastewater treatment and recycling projects, reaching about 14.7 million m³ in 2021. Also, despite the increase in the MSC production, the water consumption until the end of the hot rolling process has significantly reduced per ton of product compared to the initial plan. Accordingly, water consumption was reduced from 16.6 m³ for a ton of hot coil in 1992 which has been considered in the initial plan to 3.3 m³ in 2021 (2.2 m³ per ton of crude steel).

	Measurement unit	2019	2020	2021
Water consumption until the end of crude steel production	m <sup>2</sup> per ton of crude steel	3.08	3.90	2.2
Water withdrawal from Zayanderud River	million m <sup>2</sup>	19,5	20.5	14.7

MSC has taken various measures to optimize water consumption, some of which are as follows:

## Use of non-treatable effluents (RO Reject) for slag cooling

In this method, non-treatable effluents of 90 m<sup>3</sup> per hour are used for slag cooling, and there is no need for industrial water to cool the slag,

## Wastewater and effluent treatment of nearby cities for using in the production process

In line with social responsibilities, with the financing required by Mobarakeh Steel Company, the project of collecting and treating urban wastewater in Mobarakeh (Mobarakeh and Safaiyeh) and Lanjan (Zarrinshahr and Varnamkhast) cities has been implemented, and in cities of Majlesi, Talekhoncheh, Hassan Abad, Falavarjan, Soderjan, Kelishad, Shahr Abrisham, Baharan, Pirbakran, Bagh Bahadoran and Baghshad is being studied and implemented. This project contributes significantly to the improvement of the health condition of the region in addition to supplying part of the water required by the company and



Wastewater and effluent treatment facilities

reducing dependence on the Zayanderud River water.

Accordingly, the transfer of urban wastewater to MSC started in May 2019 and the amount of wastewater transferred to MSC increased gradually and in 2021 reached about 7.7 Million m³. It is expected that by the year 2031, with the increase in the flow rate of pre-purchased wastewater, 30% of the industrial water used in Mobarake Steel Company will be supplied from urban wastewater.

#### Zarrinshahr wastewater pumping station and transmission line

The Zarrinshahr effluent pumping station and transmission line has been implemented to save water consumption and reuse municipal wastewater, while preventing the overflow of urban wastewater that cause environmental pollution, particularly in the Zayanderud River. A contract was concluded with Water and Wastewater Company of Isfahan Province (ABFA) after determining the sustainable sources of water and dealing with the water problems of the company in terms of quantity and quality. According to this contract, the wastewater of Mobarakeh and Lenjan cities are purchased, leading to delivery of about 500 million m³ of effluent within 30 years. This measure will significantly help to remove the environmental pollution of the surrounding cities in addition to providing some of the water required by MSC.

According to this large-scale project, wastewater is first treated in the four treatment plants of Zarrinshahr, Mobarakeh, Safaiyeh and Varnamkhast after collection and then transferred to MSC water treatment plant.

The transfer of wastewater from Mobarakeh, Safaiyeh and Varnamkhast started in 2019, and Zarrinshahr wastewater pumping station and transmission line is currently operating and transferring the wastewater of this city to MSC.

This pumping station has been built in an area of about 1500 m<sup>2</sup> and at a cost of up to 250 billion Rials. Also, the maximum capacity of domestic companies, as manufacturers of equipment such as pumps, cables, electrical panels, cranes, etc., has been used in the construction of this pumping station.

#### MSC urban wastewater treatment plant

The wastewater are collected in the four treatment plants of Zarrinshahr, Mobarakeh, Safaiyeh, and Varnamkhast cities and treated in the first phase. This wastewater is transferred to MSC Water Treatment Plant and then to the Urban Wastewater Treatment Plant with a 600-mm line with the average flow of 1500 m<sup>3</sup> per hour. The most up-to-date technologies worldwide, including trash racks, injection systems, coagulation systems, DAF systems, self-clean filters, UV-based disinfection, submerged UF and RO were used in the establishment of this treatment plant.

The project of MSC urban wastewater treatment plant was implemented in an area of about 20000 m<sup>2</sup> and with a total cost of more than 5 million Euros. The capacity of the plant is 1500 m<sup>3</sup>/hour, with the ability to increase by 3000 m<sup>3</sup>/hour.



## Quantitative and qualitative upgrade of industrial effluent treatment plant project

This project upgrades the industrial effluent treatment plant in such a way that it can absorb about 50% of the industrial water required by the company. Frequent recycling of water in MSC networks has played a key role in the significant reduction of water consumption across the company, which is due to the high investment in the quantitative and qualitative development of the company's treatment plants.

## The study of changing the cooling towers to hybrid type in direct reduction unit and related pumping stations project

This project tries to reduce water consumption by the direct reduction unit, which uses the highest amount of water. According to calculations, this project can reduce the water consumption of the existing cooling towers by 70%.

Steel in the Flow of Life

## Controlling water pollutants and effluent management



MSC considers environmental standards for sampling and measuring all water pollutant parameters (42 parameters), of which 20 main effluent parameters of the industrial treatment plant are monitored online. The first phase of the complementary effluent treatment plant was set up in 2017 to recycle the treated effluent better and more efficiently across the company.

The executive activities of the second phase of the complementary industrial effluent treatment plant began in 2018, along with the treatment of municipal effluent by the urban wastewater collection system. In this regard, MSC along with its social responsibilities exerts a precise monitoring on water pollutants.

#### Measurement of pollutants of treated wastewater based on application in agriculture

	Performance				
Pollutants (mg/L)	2018	2019	2020	2021	Target (Allowed limit)
Grease and oil	1.2	1.75	0.5	0.53	10
Total Suspended Substances (TSS)	30.3	32	13	5	100
COD	34	26	25	26.8	200
BOD	9.5	7	7.5	6.8	100

## Management of waste and by-products



MSC evaluates the production areas based on the checklist of the waste management system to enhance the culture of waste management. It should be noted that the use of processed slag and fine-grained limestone and dolomite particles in the company's internal projects, along with the process and reuse of charge dust and steelmaking oxide scales, has increased the ratio of recycled or

#### Total waste generated (tons)

2019	2020	2021
2,102,000	2,497,000	2,563,000

The types of generated waste are normal, agricultural, industrial, medical and special.

#### Waste directed to disposal (tons)

2019	2020	2021
2343	1847	1044
Dienneal through a	therial industrial waste incine	erator appropried by Iran's Department

Disposal through a special industrial waste incinerator approved by Iran's Departmen of Environment.

## Ratio of recycled/sold waste to total waste generated (%)

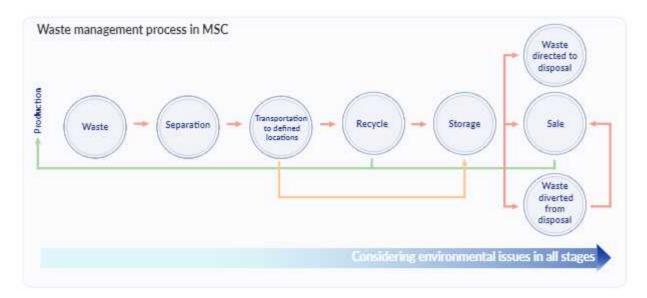
2019	2020	2021	
19	24	14	

sold waste to total waste generated. The MSC's Environment Department monitors the waste management conditions of the company and waste depots on a weekly and monthly basis. The results are reflected in the monthly reports or environmental disclosure forms, and the actions taken in different areas are evaluated through the comprehensive system of corrective actions.

#### Mean score of units in the correct implementation of waste management system

Unit	2019	2020	2021
Iron making	97.08	93.41	85
Steel making	95.25	87.83	93.17
Hot rolling	99.5	100	100
Cold rolling	96.91	91.66	97.07
Central workshop	98.25	95.83	98.06
Energy and fluids	98.75	100	95
Material control	99.83	100	99.41
Transportation	99.16	99.66	92.25





MSC has taken various measures concerning waste management and recycling at MSC to protect the environment. One of these measures is the implementation of research projects by benchmarking the world's steel companies (Diproinduca, Canada and Multiserve, USA) to process and sell steelmaking slags. MSC produces 14 practical products from the processing of steelmaking slag in road construction, buildings, urban planning, etc. The company has sold 300,000 tons of these products so far and continues to

receive new requests. Used firebrick is another part of waste from steel production processes, which is also sold as by-products.



Transporting of steelmaking slags for processing



#### Applications of the processed cold slag



Replacement of petroleum products in dealing with desertification to prevent the movement of blowing sand, control dust and particles, and prevent the environmental pollution with petroleum products.



Annual conversion of 500 thousand tons of slag to usable products in the production of blockage, base and subbase, rail ballast, and slag asphalt.



Reducing the rate of waste generation by potential use in other industries and protection of the environment with the approach of protection of materials and resources.



#### Applications of the processed hot slag



Raw material in the production of special cements



Replacing part of the cement in concrete preparation



Abrasive material in sandblasting operation (amount of free silica < 1%)



Raw material in the production of cement suitable for oil wells



Raw material in the production of floor tiles and firebricks

#### Processed slag sold (1000 Tons)

2018	2019	2020	2021	
286	147	316	206	

## Control of spills resulting from waste storage



All lagoons and landfills assigned to landfill or storage of industrial waste and sludge have complete insulation by standard coverings and liners. In addition to the evaporative lagoons of the company effluent treatment plant and the sludge and dust storage lagoons in the Saba steel complex, this feature is present in all the lagoons of the new waste site, which is one of the main national waste sites. Half of the implementation costs of the site is allocated to the lining of the lagoons. The complete lining of the floor and walls of the waste storage with special epoxy resin is another measure for the control of Askarel oil spill into the soil.



Receiving the highest award of the European Association for Green Management and the World Energy Foundation due to the implementation of the slag processing project (2013-2014)

## **Energy management**



MSC Energy Management System is designed based on ISO 50001 standard and has been established since 2015. The targeting of Energy Management System is carried out based on energy-saving according to relevant projects.

MSC has planned and implemented several approaches to manage energy consumption. By implementing these approaches, this company has been able to improve its performance in energy consumption and maintain it within the permitted range of

energy specified in the national standard of 9653.

Hence, the Iron and Steel Society of Iran (ISSI) reported our company as the basis for benchmarking to other companies. However, the change in the company's policy from using scrap to using direct reduced iron (DRI) led to an increase in energy consumption per ton of crude steel. This is because of the reduction in the price of iron ore, the capacity building for the production of reduced iron, and also its cost-effectiveness.

Type of energy	2018	2019	2020	2021
Thermal GJ/Ton	0.46	0.49	0.48	0.50
Electrical KWH/Ton	33.16	34.67	33.85	34.80
Thermal GJ/Ton	10.19	10.35	10.07	9.83
Electrical KWH/Ton	114.03	117.51	117.64	123.08
Electrical KWH/Ton	728.92	736.92	736.65	735.13
Thermal GJ/Ton	1.45	1.43	1.49	1.69
Electrical KWH/Ton	79.05	83.46	82.18	81.72
Thermal GJ/Ton	24.62	25.19	24.27	23.81
	Thermal GJ/Ton  Electrical KWH/Ton  Thermal GJ/Ton  Electrical KWH/Ton  Electrical KWH/Ton  Thermal GJ/Ton  Electrical KWH/Ton	Thermal GJ/Ton 0.46  Electrical KWH/Ton 33.16  Thermal GJ/Ton 10.19  Electrical KWH/Ton 114.03  Electrical KWH/Ton 728.92  Thermal GJ/Ton 1.45  Electrical KWH/Ton 79.05	Thermal GJ/Ton         0.46         0.49           Electrical KWH/Ton         33.16         34.67           Thermal GJ/Ton         10.19         10.35           Electrical KWH/Ton         114.03         117.51           Electrical KWH/Ton         728.92         736.92           Thermal GJ/Ton         1.45         1.43           Electrical KWH/Ton         79.05         83.46	Thermal GJ/Ton 0.46 0.49 0.48  Electrical KWH/Ton 33.16 34.67 33.85  Thermal GJ/Ton 10.19 10.35 10.07  Electrical KWH/Ton 114.03 117.51 117.64  Electrical KWH/Ton 728.92 736.92 736.65  Thermal GJ/Ton 1.45 1.43 1.49  Electrical KWH/Ton 79.05 83.46 82.18

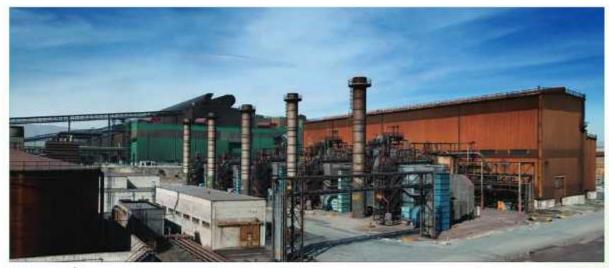


#### Supreme Committee of Energy

MSC Supreme Committee of energy was formed in late 1998 under the chairmanship of Deputy of Operations and membership of relevant managers. Policy-making to ensure secure energy for the present and the future of the company, bringing indices of energy consumption to international standards compared to the competitors, energy efficiency to reduce finished cost of products, compliance with environmental indicators, and the establishment of energy management system are among goals and tasks of the committee.

Energy audits have been performed in all

production and support units to find and improve energy loss points and achieve the mentioned goals. The results are used in different projects for energy efficiency improvement and energy loss reduction. Also, employees are provided with energy consumption management training at all organizational levels to create the necessary perspectives and maximize the availability of human resources in achieving these valuable goals. One of the most significant achievements in the field of energy management is the improvement of processes based on ISO50001:2018 standard.



MSC power plant

## Shared growth



## Creating a win-win partnership

In the current fast-changing business environment, large companies need to collaborate with suppliers, customers, small and medium-sized companies, start-ups, and other business partners to build a strong supply chain and actively respond to changing market needs and conditions. Accordingly, shared growth can benefit both the company and its business partners. This section introduces actions taken by MSC to strengthen the shared growth policy.

## Technical and research collaborations with suppliers, customers, and scientific and research centers

MSC uses approaches, such as supporting suppliers to develop localization of materials, parts, and equipment, partnership with clients in developing new products, and collaboration with universities, scientific & research centers, and knowledge enterprises to encourage engagement of suppliers, customers, and society in ideation and innovation. Appropriate organizational structures and procedures aim to ensure the systematic structure of these approaches. Review of localization structure (to improve its effectiveness) and concluding long-term contracts and agreements with universities and knowledge enterprises are other measures taken in this area.

## Long-term collaboration with other prestigious universities

Long-term contracts were concluded with the most prestigious universities and scientific and research centers in the country, including Isfahan University of Technology, Isfahan Science and Technology Town, Isfahan University, Tehran University, Sharif University of Technology, Science and Research Branch of Islamic Azad University, Islamic Azad University of Khorasgan, Islamic Azad University of Najafabad, etc. The followings are some of the projects completed or under completion:

- Development of hot torsion machine technology to design new products at MSC
- · Feasibility study of economic extraction of Vanadium from steelmaking slag at MSC on laboratory and semi-industrial scales
- · Replacement of SVC wares controlling system made by GE company with a controlling system made by Enermond company
- . Technical and economic examination of the application of different types of carbon instead of petroleum coke for injecting into steelmaking furnaces at MSC
- · Conceptual and basic design of energy recycling system from hot exhaust gases of direct reduction unit at MSC
- · Automatic detection of defective pallets using image processing



- Establishment of a joint digital transformation & innovation center with the University of Tehran and the Vice President for Science and Technology
- Concluding a grant agreement with the University of Tehran for graduate students dissertations
- Concluding long-term (three-year) contracts with leading universities in the country, such as Isfahan University of Technology, Isfahan University, Isfahan Science and Technology Town (ISTT), Allameh Tabatabai University, Azad universities, etc.

#### Steel Research Institute

The establishment and operation of the Steel Research Institute aim at organizing effective and continuous relations between science and technology centers and the country's steel industries while leading and managing research and technology in the steel industry. The offices of the research institute are established in the Isfahan University of Technology and MSC. The aim is to manage ideas and innovations, develop and commercialize strategic technologies, and create a futuristic intelligence in the Iranian steel industry. The mission of the Steel Research Institute includes the design of new products and the topics of circular economics based on the defined roadmap. The strategies of the research institute are as follows:

- Applied and developmental research in the steel industry
- · Forming the innovation and networking ecosystem in the steel industry
- Development of strategic intelligence and establishment of steel industry observatory
- · Enhancement of scientific and industrial services and support in the steel industry



بژوهشکده فولاد

Isfahan University of Technology











## Development of technological partnership in the field of technology design and transfer

MSC could succeed through Mobarakeh Steel Engineering Company (MSE) in establishing communications and acquiring knowledge and services from leading companies in technologies of steel chain production and development, including SMS Group, Danieli, MME, Perimetals, CFHI, Xian, etc., in line with development projects, localization, and promotion of production processes. The installation and commissioning of MSC's casting machine-5 in 2016 were among the most significant recent achievements of MSC, which was possible by the collaboration of these companies. Previous achievements have led MSC to benefit from the services of these companies for the mega project of Hot Rolling 2. Other positive aspects include reducing the finished cost of contracts, the ability to define contract areas in the technical sector, the use of the capabilities of these companies in the localization of equipment and processes, and improvement of the project implementation.

#### Innovative growth

MSC has strived to provide suitable conditions for universities, knowledge based enterprises, and start-ups by its approaches in the field of the steel industry, aimed at achieving innovative and shared growth. Some measures taken by the company are as follows:

- Concluding long-term contracts with universities and research centers
- Establishment of Mobarakeh Steel Group Technology Development and Innovation Center
- Establishment of Type3 research institute with the collaboration of Isfahan University of Technology, MSC and HOSCO

## Supply chain management



## An endeavor to create a sustainable and quality supply chain

Establishing a stable relationship based on win-win growth is of special importance MSC. Therefore, MSC has always sought to maintain its relationship with suppliers as much as possible through various mechanisms and approaches.

MSC has designed and implemented several approaches to developing collaboration with suppliers, including identification and evaluation of suppliers, relationship management, empowerment, and localization.

Accordingly, the Kraljic model is taken into account to divide suppliers into four categories based on the two criteria of "complexity and difficulty of purchase" and "Monetary value of purchase". Components such as the importance of the goods and the ability to provide alternatives are considered in the criterion of complexity, while the value of the purchased goods and services is considered in the second criterion. Also, the distinguishing features of each section are developed along with strategic goals, type of communication strategy, level of engagement, and related actions.



#### Categories of goods group and appropriate strategies to deal with suppliers

Supplier segment	Communication strategy				
Strategic	Family	Simultaneous partnership	Iron conce	entrate, pellet, wate	r, graphite electrode
Bottleneck	Friendship	Coordinated partnership		robe, thermocouple d bearings, conveyo	s, abrasive stones, or, etc.
Leverage	Business partnership	Partnership at cooperation level	Electricity	, natural gas, rail tra	insport, etc.
Routine	Transactional	Transactional	Pump, lim tint-metal	estone, chemicals, : , etc.	some refractories,
Material co	nsumption	-A			
Туре		Measurement unit	2019	2020	2021
Iron concent	rate (bought)	million tons	9	8.6	6.1
Pellet (bough	nt)	million tons	7.2	5.3	6.5
DRI and briq	uette (bought)	million tons	0.83	1,5	2.3
limestone (b	ought)	tons	247,000	228,000	244,000
imestone (pr	roduced)	tons	283,000	283,000	224,000
Iron scrap (b	ought)	tons	12.23 12.23	1222	300,000

## **Empowerment of suppliers**



MSC uses a variety of approaches to empower suppliers, some of which are concluding open and long-term contracts (purchaseing of safety accessories, shoes and packaging paper), technical and scientific support (training contractors and providing technical manufacturing information), financial support (barter, higher prepayment, guaranteed agreement, investment. purchase purchase of shares or increase of capital in chain companies), multilateral collaboration (using the free capacity of companies and creating a consortium), selection of quality control inspectors, and the use of domestic and localized equipment (multilateral cooperation of the largest domestic steelmakers in the country. Several measures are recently taken to improve empowerment approaches of suppliers, including improvement of the product information and technical documents, support for knowledge enterprises, and development of relationships with universities through bilateral contracts. As mentioned, MSC uses different approaches to identify, evaluate, monitor, and empower suppliers and their capabilities. Accordingly, suppliers initially send their applications, evaluated by the expert

team after self-reporting in the SRM system (supplier relationship management system in MSC Portal) in accordance with the relevant workflow procedures.

The capabilities of the suppliers concerning their specialized activities are evaluated based on the initial evaluation checklist designed according to financial, business, and technical criteria. The results are entered into one of the short supply lists, and the report is also submitted to the supplier company. If the required criteria are not met, the reasons for rejection of the application are notified to the company. Feedback on the identification of the capabilities of supplier companies can be useful in deciding about their selection in inquiries and tenders. Different criteria are effective in the selection of suppliers in inquiries, including the quality and number of discrepancies in the delivered goods in all previous contracts, timely supply, and technical capabilities (quality control unit, laboratory of raw materials and products, technical office, etc.) for all available suppliers in different fields of activity. Also, two-stage and one-stage tenders (evaluation in the technical and commercial committee) are considered to evaluate the supplier's selection in all procurement tenders.





#### Some approaches to identifying and evaluating key capabilities of partners and suppliers

Stages	Approaches/methods	Executive examples
	Purchase portal	Completing declaration of readiness form at SRM system by all companies
13	Public tender and call for identification of sources of supply	Holding tenders to identify suppliers, call for identification of capable contractors
exhibitions	Participation in specialized exhibitions	Participation in the specialized exhibitions of steel industry equipment and exchange of views with common suppliers between steelmakers and mining companies
	Visiting similar industries	Visiting similar companies and identifying their sources of supply
	Evaluation of suppliers' entrance	Entry evaluation based on specialized checklists in each field
	Evaluation of suppliers' selection	This evaluation is carried out for the suppliers in each field based on the available workflow procedures and in accordance with the nature of the goods and services.
Evaluation	Evaluation of suppliers' performance	Regular evaluations are performed considering criteria such as timely fulfillment of commitments, quality, timely delivery, and observance of safety and environmental issues. The results are recorded in the EIS system and used to decide whether to continue or discontinue cooperation with the selected suppliers.

#### Examples of empowering suppliers and business partners

- Long-term open contracts (lubricants with Behran, Iranol, Naft Pars and Fuchs Iranian, thermocouple with Daftar Kole Kala
  Industrial Co., carbon magnesite brick with Pars refractory products, Iranian Refractories Procurement & Production Co. and
  Mehr Godaz Co. paint with Goharfam and Partofam Industrial groups, shoes with Payara Shoe Co., sodium hydroxide and
  acid with Nirouchlor Co. and Chloran Chemical Production Co., special shapes with Zagros Special Refractories, packaging
  paper with Negahdar Poshesh Nagsh-e Jahan and work clothes with Shamim Baran Espadana Co.
- Multilateral collaborations with HOSCO for technical knowledge transfer, with Chadormalu Mining and Industrial Co. for graphite electrode manufacturing, with Esfarayen Steel Co. for special steel products, etc.

Number of Suppliers of MSC in 2021 (Local & Non-Local)	Total suppliers	Active suppliers
Number of suppliers of Isfahan geographical area	5023	1178
Number of suppliers of other geographical areas	7362	1191

## Localization process of materials, parts and equipment



The localization approach of Mobarake steel is to create the necessary infrastructure and platform for the production of consumables, spare parts and equipment required for steel production lines inside the country. In line with this goal, the localization unit is the gateway to the MSC purchasing process and monitors and prepares purchase requests with a localization approach.

The preparation of domestic purchases is done with the aim of ensuring the accuracy of the information on purchase requests and for the stability and continuity of domestic manufacturing purchase requests, taking into account the stability of the supply of production lines. The purchases that were not manufactured or produced domestically before are prepared in order to identify and create the necessary resources for domestic manufacturing and localization of these requests.

The localization process is a collaborative process and is carried out with the focus of the localization unit and the cooperation and participation of the production, maintenance and support units of MSC as well as manufacturing and knowledge-based companies.











#### Steps of localization of materials, parts and equipment

Steps	Aapproach
Reviewing requests	Collecting documents and records and forming a request localization team
Preparation	Identifying, negotiating and evaluating manufacturers and codifying the special conditions and terms of requests
Carrying out the comercial procedure	Send tender documents or inquiries to manufacturers
Technical review and analysis of submitted responses	Matching the terms of the technical proposal with the request requirements and finally selecting the manufacturer
Construction process control	Participation and sharing knowledge and experiences of the localization team with the manufacturer in the stages of engineering and manufacturing and finally quality control of the product in order to send it to MSC
Hot test	Ensuring the correctness of the localization process
Preparation of Final Book	Compilation of documents and maps to repeat subsequent purchases with the internal manufacturing process

According to the division of specialized tasks in the localization unit, the approach of empowering manufacturers to commercialize and complete the portfolio of required products leads to the establishment of companies with the Iranian trademark of that product. In order to maintain and continue the production of made in Iran products as well as

the survival and longevity of the companies, the development of the market of these companies through the transfer of successful experiences in this field in the platforms created in MSC and IMIDRO, such as "Karlink", "MSC Localization Link" and in the localization knowledge transfer sessions to other companies.

#### Supporting knowledge-based companies

According to the growing approach of using domestic products in the country's industries, the available resources do not meet the needs. For this purpose, MSC tends to continue and strengthen the movement of localization in order to stabilize meeting its needs and also fulfill social responsibility at the country level, and with the aim of stabilizing supply within the country, it strengthens the development of localization even more. In line with its social responsibility to support knowledge-based companies and technology development in the country, this company has planned specialized meetings with knowledge-based companies. It is worth mentioning that the company has facilitated the entry of knowledge-based companies into the list of MSC suppliers in order to support them.

The companies that are selected in this process continue to work in specialized fields with the aim of acquiring technical knowledge of designing and manufacturing materials, parts and equipment, and further commercializing and completing the product portfolio, and finally innovation and upgrading technology in production alongside MSC.

The localization of more than 7000 parts and equipment for the first time in the country, as well as the 30% increase in the share of domestic manufacturing (from 60 to 90%) in the purchase of MSC is one of the results of the execution of the localization process, which is important for the consistency of supply and removal of threats of sanctions, reduction procurement time and saving money while maintaining quality.







#### Localization in Mobarake Steel Group

In order to coordinate the localization process at the level of Mobarakeh Steel Group, the localization technical knowledge was first transferred at the level of the group companies. Also, in order to cover the daily needs related to this field, the communication between the specialized localization experts of Mobarakeh Steel Company and other localization units in the group companies was established. Next,

revising the localization process in order to integrate this activity at the level of Mobarakeh Steel Group with the aim of aggregating the needs and encouraging manufacturing and knowledge-based companies to invest and acquire technical knowledge of high-tech parts and equipment, as well as generalizing this process to all purchasing departments of MSC is one of the ongoing improvements in this area.

# Localization in the management of consumables

In the field of purchasing and supplying consumables, in line with the localization of parts and equipment, producers of domestic consumables have been identified in MSC, and after examining the prototypes and

confirming them, purchases are made from them. For example, refractories, oils and lubricants, chemicals, melting additives include a high volume of localization of consumables.



Iron ore and pellet storage yard

## Codes of conduct in relation to suppliers





The supplier codes of conduct are developed and implemented in line with ethical standards, corporate values, and the corporate citizenship approach to ensure effective interaction with suppliers. The company provides the codes of conduct for

the employees in the form of behavioral constitution, including codes 268-287. Some of the most important codes of conduct in this area are as follows:

Code	
268	We consider suppliers and contractors as our business partners, treat them with the utmost respect, value their empathy and engagement to achieve the goals of MSC, and appreciate their presence.
269	Our maximum effort is to meet our needs from domestic suppliers to support domestic production because it is our responsibility to help domestic suppliers in technical and professional development.
271	We select the company's suppliers according to the existing rules and regulations, considering specific criteria and based on quality, reliability, cost, tools, performance, and services. We have fair, honest, and collaborative behavior towards our suppliers to build a win-win relationship.
272	We make sure to select suppliers who have the required competencies and provide services and products with the best quality and the set standards. The quality and efficiency of the products rather than their price is always our priority.
273	We seek to work with suppliers and contractors whose values and codes of conduct are similar to ours and proportional to our ethical, safety and environmental standards.
274	Partnership with suppliers belonging to public-interest or charitable organizations and cooperation with those active in the areas nearby the company is our priority in line with the company's social responsibility.
275	We make due efforts to create a healthy and fair competitive environment among suppliers, and we will deal with any unfair behaviors of suppliers towards each other. We use expert and experienced supervisors to ensure the rights of suppliers.
276	All processes of tenders are carried out based on the existing instructions and regulations to create fair and equitable conditions in the evaluation and selection of suppliers. We provide the applicants with the required information fairly in terms of quality, time, and transparency.
277	Just as the rights of the company against the suppliers are important, and we ensure that the suppliers are acting following their obligations, we also do our best to ensure that the suppliers get their legal rights and claims as soon as possible.
278	We recognize the physical assets, intellectual capital, and confidential information of the suppliers as the assets of the company and do our best to protect and safeguard them.





## Supplier relationship management (SRM)



MSC uses several approaches to communicate with suppliers and meet their needs in this field, one of which is Supplier Relationship Management (SRM). MSC can have better and more effective interaction with suppliers through this system. Suppliers can also track their affairs without a physical presence in the company and get the latest information on contracts, evaluation status, concessions, financial statements, etc.

MIS system was previously used to manage information and supplier relationships. However, this system worked offline and was not suitable for mutual relationships with suppliers. As a result, the presence of suppliers in the company was necessary to perform any kind of activity, such as registration, receiving information about inquiries, orders, and payments. Yet, the establishment of the EIS system led to significant improvements such as online registration and evaluation of suppliers in the system along with the electronic access to information on payment, delayed orders, inquiries, and current orders for active suppliers. In addition, Training sessions are held for active suppliers in various fields of activity to provide them with the required information about the system, how to register, and how to use SRM system features. Besides, there are plans concerning the required training for active suppliers across the country.

SRM system has the following parts:

- Electronic registration and updating of self-declaration questionnaires
- Information on inquiries
- · Information on tenders
- · Information of orders
- Financial information records
- Performance evaluation records
- · Registration of internal bill of landing
- Suggestions
- Survey
- Invoice issuance
- Specialized reports on product quality control
- The possibility of obtaining the certificate of SAMAT and performance bond

MSC has provided and improved different parts in the SRM system to meet the needs

of the suppliers. Some examples include design and execution of electronic inquiries, electronic notification of orders (partial, average, and major orders), report on the status of the goods ordered and not delivered by the suppliers, observing the process of inspection and quality control of manufactured goods, tracking the sent goods and preparing reports, deleting the paper form of temporary delivery of goods and replacement with the electronic billing process, observing the order and financial information. access to the latest status of payment of goods sent to MSC by suppliers, simultaneous e-mails and text messages concerning self-declaration questionnaires returned to the supplier, establishment of a system of suppliers' suggestions and instructions on how to deal with the problems related to registration and performance reporting of companies and suppliers. The effectiveness of these approaches and actions is measured through indicators such as the level of supplier satisfaction with the SRM system and the number of suppliers that have an SRM system dashboard. The project of reviewing supplier survey questions (evaluation of entrance, performance, and selection) and SRM reporting mechanisms are other measures taken.



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## Supplier performance evaluation



Suppliers of MSC are evaluated based on various criteria. Performance evaluations of MSC suppliers are conducted in two areas of supply of goods and supply of services. Regarding supply of goods, evaluation is based on several criteria, including punctuality, quality of the goods provided, and the percentage of responses to inquiries. However, evaluation criteria and weight percentages are different in each field of activity for the supply of services (contract work). Every supplier is evaluated and rated based on criteria such as technical and professional ability, the ability to supply the required goods or tools, the ability to pay the salaries and benefits of employees on time, etc. Suppliers can find out their rating in the "Performance Evaluation Records" section of the SRM system. In addition, suppliers and contractors of MSC are evaluated based on criteria such as HSE performance, ensuring respect for their employees, and compliance with safety issues within the framework of the contract.

Applicant suppliers register their information

#### Evaluation criteria for suppliers of goods

Criterion Punctuality in supply of goods	Weight 40
Quality of supplied goods	40
The percentage of responses to inquiries	20

#### Evaluation criteria for suppliers of goods

#### Criterion

Organizational Structure: Competency of employees, employee specialization, the use employee specialization, compliance with safety, health, and environmental standards, etc.

Work Management: Timely procurement of equipment, product health control, market recognition, determination of customs tariffs, quality of guidance and training, etc.

Financial Capacity: regular and correct presentation of financial statements, timely payment of personnel salaries, ability to afford the costs of the contract

Time Management: Appropriate time of order registration, appropriate time of clearance, appropriate funds, etc. in the SRM system, and the necessary steps are taken to evaluate them in person after evaluation of the documents (however, in the current situation, the COVID-19 pandemic. the evaluation is carried out through video conferencing). The evaluation of active suppliers is also performed through the selection and performance evaluation approaches. considering their supply performance and the results of the minutes of the Technical and Commercial Committee. Some new measures taken in this area include control of safety and environmental requirements, optimal energy consumption in monitoring the performance of suppliers, mechanization of inquiries and orders, report on the status of the goods ordered and not delivered by the suppliers, access to the latest status of payment of goods sent to MSC by suppliers, simultaneous e-mails and text messages concerning self-declaration questionnaires returned to the supplier and the possibility of issuing invoice and performance bond.

Performance of all suppliers of MSC is evaluated separately for suppliers of goods and services. The performance of product suppliers is evaluated every 24 hours automatically and systematically based on criteria related to punctuality, quality, and performance in inquiries. When service providers apply for the purchase of services, the contract supervisor and his/her telephone number are provided through the applicant unit. The request for service purchase is then registered with the approval of the manager, and the performance of the service contractors is evaluated within certain periods (90 days), the results of which are registered in the EIS system. The evaluation patterns of service providers are reviewed based on the feedback received, and these providers are classified into 14 areas of specialized activity, assigned separate evaluation questions.



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# Control of safety and environmental requirements and energy efficiency in monitoring the performance of suppliers

Safety requirements are communicated to the suppliers of goods with safety and environmental aspects (such as covering the surface of a truck with a load of iron ore/packing and delivery of oils based on the relevant instructions) through Material Safety Data Sheet (MSDS) along with the order.

## Engagement of suppliers in product quality development processes



MSC takes any opportunity to interact with suppliers for a successful presence in the market by creating a partnership aimed at increasing the quality of products, mutual use of expertise, resources, and knowledge of suppliers, and creating incentives to ensure quality, timely, and stable supply of products and services. To this end, MSC uses different approaches and strategies to achieve this objective.

#### Value-creating collaboration with suppliers and business partners

Approach	Instances	
Interaction with suppliers (through communication channels)	Provision of Quality Control Testing Manual for manufactured parts, technical comments and suggestions and their dispatch to technical offices such as review and correction of technical manuals according to the technical correspondence of suppliers (for some specialized goods, alternative types and the change of existing brands were reviewed and approved by the technical offices and recorded in the EIS system), continuous inspections during the manufacture of domestic spare parts, holding specialized courses and seminars by suppliers, localization of parts and consumables	
Performing joint projects with suppliers	Safety examination of localized metal packing straps and belts, investigation of the results of protective oil laboratories, change of mechanical design of seal pumps by the manufacturer due to solution leakage from mechanical seal pumps of the product	
Concluding open contracts with suppliers	Concluding open and long-term contracts with suppliers to supply the required parts and consumables (including open contract for rolling oil with Beh Arian Co. and CHEMICIS and hydrochloric acid with Alborz Fanavar Shimi Co. and Nirou Chlor Co., open contract for the supply of industrial bolts and nuts, long-term contracts with Peyman Sanat Company to cover elastic rolls	
Supporting knowledge-based companies	Creating an introduction portal for knowledge-based companies in SRM, obtaining the latest list of knowledge-based companies from the www.pub. daneshbonyan.ir and prioritizing to evaluate and negotiate entry into the steel industry.	

## Mutual cooperation to improve processes and add value to the customer-supply chain



As mentioned, MSC divides all its suppliers into four groups of strategic, bottleneck, leverage, and routine goods considering the two criteria of supply complexity and volume of Rial purchase. The company determines the strategy of dealing with each group of

goods according to its degree of materiality. According to this categorization, MSC supports, empowers, and develops partnerships with suppliers through different approaches to create added value.















#### Approaches to mutual cooperation with suppliers and business partners

Approach	Cooperation method	Examples
Providing financial resources for suppliers	Barter Increasing prepayment Guaranteed purchase contract Long-term contract	Barter of refractory wastes with calcium aluminate Purchasing a part of Azar refractory shares Investment in manufacturing graphite electrode Guaranteed purchase of rolling oil from Beh Arian Co., and CHEMICIS Allocation of the site and provision of part of the capital for the calcined lime briquette factory construction Processing of cold slag through the construction of a factory by the method of build-operate-transfer (BOT contract) through Danesh Pardazan Atiyeh Co.
Training of contractors	Provision of the required training according to international standards	Providing HSE training for all suppliers and contractors present at MSC
Multilateral collaborations	Trilateral cooperation with the presence of customers and partner companies aimed at producing special products     Requiring capable domestic companies to form consortia to promote and use each other's potentials	Long-term cooperation with Oxin Steel Company     Establishing an agreement between MSC and alloy steel producers (Esfarayen Industrial Co. (EICO) and Iran Alloy Steel Co.) in order to preproduce all the alloy materials needed to make spare parts and equipment, facilitate and accelerate the supply of these materials for parts and equipment manufacturers.     A consortium between IRASCO, Kavosh Joosh and Prosimet of Italy to produce mold powder     Carrying out a research project, designing and building a system for inspecting and detecting impurity of incoming shipments to MSC by Isfahan Science and Technology Town (ISTT) through Behiar Sanat Co.
Increasing the quality of supplied goods	Selecting a consulting company for quality inspection of manufacturers and producers	Contract with Sepid Abzar Daqiq Co.     Contract with IKA Engineering and Technical Inspection Company     Contract with Azmooneh Foolad Co.     Grouping of inspection companies based on the sensitivity of spare parts and revision of contracts of inspection companies
Technical and knowledge support from suppliers	Provision of technical information during manufacturing Dispatch of suppliers' technical teams abroad Technical consultation contract	Dispatch of joint supplier and business teams to manufacture transformers and slag ladles Technical consultation agreement with Rahboard Farayand Dana Company to replace the tin coating gauge Contract with Adib Tarh Arian Co. for the preparation of technical documents for the manufacture of mechanical parts and repair manuals Contract with the Part Retech Co. for the preparation of technical documents for rotating parts and power transmission machines Contract with Arman Sepahan Design Co. to prepare specialized data sheets for item catalog parts.

Some results of applying these approaches include domestic production of bottleneck items, the development of indigenous technical knowledge of production, waste reduction and recycling, cost reduction, preparation and revision of quality control instructions for spare parts such as engraving instructions,

identification and tracking, rating the quality of spare parts provided by manufacturers, and review of SRM system modules. Also, Taking HSE considerations into account when evaluating supplier performance is another approach to value-creating collaborations





## Circular economy



In the circular economy, we move from linear business models, where products are made from raw materials and then discarded, to a circular business model, where products may be imported in economic cycle again in four ways of repair and restore, reuse, remanufacture or recycle. According to this concept, MSC has formulated its circular economy roadmap and defines and implements actions based on it. In this regard, in order to formulate the roadmap, first an ideal goal (quantitative vision) was defined in the form of strategic objectives of "MSC's value creation system", taking into account the current maturity

level of the company and benchmarking of the world's top steel companies. Then, the MSC circular economy focus areas were selected according to the principles of circular economy and benchmarking from global experiences, and the current performance status of the company in each of the focus areas (from the point of view of implemented and ongoing measures, and the current status of KPIs) was mapped. In the end, the main pillars and initiatives were prioritized and distributed in time horizons, and the circular economy roadmap of the company was finalized.



The process of developing circular economy roadmap

## Focus areas and main pillars of MSC's circular economy roadmap

#### Focus areas

#### Definition of focus areas

#### Main pillars

## Organizational culture and ecosystem

Improving employees' awareness of circular economy principles, institutionalizing circular economy concepts in the company by redefining work practices, policies and implementation methods, developing partnerships in circular economy issues with partners in the business ecosystem.

- Training and improving the skills of employees
- Knowledge sharing, cooperation and joint investment
- Influencing the ruling policies at the regional and national level Redefining working methods, policies and implementation methods to institutionalize circular economy principles in the organizational
- Supporting innovative ideas and active start-ups in the field of circular economy
- Replacing/using new technologies with circular economy orientation.

## Supply chain

Using raw materials, consumables and non-consumables/parts and equipment and selecting suppliers according to circular economy principles (consumption of water, energy, less materials, production of light but durable parts, reuse of products or system components, longer life cycle, less pollution, facilitating recycling), helping to promote supply chain business partners in circular

- Providing quality and environmentally friendly materials (material) consumable/equipment and non-consumable parts).

  • Putting green suppliers in the top priority (responsible sourcing)
- Empowering suppliers (training, counsulting, financial incentives) Defining joint projects, technical cooperation with suppliers

## Green steel products

Designing and developing innovative products and new more strength steel grades and consume less resources. Rethinking the design, life cycle and end of life of products and services to optimize use, eliminate waste and close the product cycle.

- Increasing the life/ strength of products
- Product design with the aim of reducing waste in downstream production processes
- Reduction of consumables in production
- Supplying materials needed for green products
- Cooperation with customers in improving the life/value/variety of uses/recycling at the end of the life of the final products

#### Recycling and waste

Recycling waste and by-products in steel production processes and other non-process waste in the form of on-site recycling (such as extracting iron and other ferrous compounds from slag and reuse of metal-based waste) or selling to third parties for processing and recycling (such as using slag in cement production, construction projects)

- Reducing disposal or landfill of waste and by-products
   Recycling and upcycling of the outputs of the production areas and
- also other support departments
- Finding recycling opportunities in other industries and expanding ecosystem partnerships
- Acquisition of knowledge and new technologies of recycling

#### Water

All activities in the field of minimizing the water consumption in the steel production and cooling process, reducing dependence on non-renewable resources, recycling and reusing water, and zeroing the treated waste water left in the nature.

- Providing the required quantity and quality of water from sustainable sources and diversifying water supply sources
- Reduction of incoming water
- Purification and recycling of water and reuse of water in the production process

  Treatment

  - Treatment and use of urban waste water
     Reducing water consumption in production processes and production wastage

#### Energy

A set of measures to manage and reduce energy consumption, increase operational energy efficiency and transition from fossil fuels to renewable

- Increasing energy efficiency
- Thermal energy recovery
- Substitution of renewable energies and fuel change Replacement of production technologies to reduce energy
- Reducing the dependence of energy carriers on the national grid

## Atmospheric pollutants

Identifying the emission points of GHGs and local pollutants in the area of main operations as well as throughout the supply chain and taking appropriate measures to reduce them. The reduction of emissions resulting from the supply of energy required by the company's operations from fossil energy carriers is under the field of energy.

- Replacement of green production technologies
- Optimizing transportation, logistics Increasing the share of scrap in steel production
- Reducing the emission of dust and polluting gases Compensatory measures in reducing the carbon footprint













## Performance as a responsible member of the society



MSChaswell-written plansfor local community development in its agenda. These programs

are the output of the company planning process with the following steps:



Operational plans and measures taken based on the aforementioned planning process are divided into four general categories.





Since the establishment of the company, we have sought to establish a mutual win-win relationship between the steel industry and society (particularly the local community). Receiving a certificate of appreciation and a Iran's Management Social Responsibility Award in 2016, 2018 and 2021 reflects the significant attention of the company to social responsibility.

## Social and human development



One of the areas of focus and the operational plans of MSC is participation in the social and human development of local and national communities to achieve responsible corporate citizenship to create a better future. Local communities are geographical areas in or near which the main activities of the company are located.

Since MSC supplies its required resources primarily from these areas, the company owes its development to them and because of that feels more responsibility towards local communities, and has well-written plans for their development in its agenda.







### Participation in the construction and development of cultural, educational, and scientific centers

- Participation in the construction of Hall of Cemetery of Martyrs in Isfahan
- Participation in the construction of the Central Hosseinieh of Mobarakeh city
- Supporting Quranic and Islamic research centers such as Bayeneh and Mahd-e Velayat in Isfahan city
- Participation in equipping the Museum of Holy Defense of Isfahan Province
- Participation in the construction of 29 educational centers at all levels
- Participation in the construction of Farshchian School of Art in the city of Mailisi
- Participation in equipping Schools of Art in the Mubarake city
- Participation in the reconstruction of educational centers in Mubarake city
- Financial donation to the headquarters for the reconstruction of the provincial capitals

# Development of relations with the representatives of community and regional and national officials

Various meetings with officials, administrators, and national, provincial, and regional officials (such as monthly meetings of the Administrative Council of Isfahan Province and region on a regular basis) are among approaches selected by MSC to interact with community representatives and regional as well as national officials. Of course, due to the Covid-19 virus pandemic, the number of these meetings has decreased in 2020. Among the achievements of this approach are the effective interactions between the officials of the region and the company in order to

develop the infrastructure of the region and make assistance of MSC targeted,

## Number of periodic and occasional meetings with officials and community representatives

2018	2019	2020	2021
165	152	85	100

# Engagement in the development of local and national economy

MSC engages in the development of the local economy by creating direct and indirect job opportunities in the region, provision of economic and financial resources from the region, provision of products and services from local suppliers, development of social context, creating economic prosperity, and consequently increasing local per capita income. In addition, MSC engages in the development of the national economy by the use of raw materials and services (through more than 2000 active suppliers in the geographical area of Isfahan and other geographical areas of the country), the production of intermediate products in the industry (for more than 1000 factories directly and more than 3000 factories and workshops indirectly), transportation of raw materials and products using the logistic capability of the region, and the use of domestic spare parts (localization). This engagement has increased the national income on the one hand and led to an increase in employment in the region, province, and country on the other hand. It is worth mentioning that MSC has a share of about 1.5% in the GDP of the country and 5% in the GDP of the Iran's industry section.



#### Admission and training of apprentices

In alignment with the social responsibilities, a systematic mechanism has been designed and established for the admission of interns from different universities all over the country. Based on this approach, a large number of university graduates are accepted each year for internship and training in the company. These interns by receiving training on the work processes at MSC, could have the opportunity to put their theoretical lessons into practice. The number of interns accepted has recently decreased because of our plan to raise the quality of training, Also, due to the COVID-19 outbreak in 2020 and in order to reduce the risk of infection, no intern has been accepted. Of course, with the improvement of this situation and backing to normal, we expect this number will be increased in the future.

#### The number of interns accepted

2018	2019	2020	2021
605	638	0	313

## Membership in professional associations and supporting of conferences

As the largest producer of steel products in the country, MSC has effective membership and engagement in numerous scientific and industrial associations, such as the Iron & Steel Society of Iran, Research Association of Iron and Steel Producers of Iran, Iranian Society For Human resource management, Chartered Institute of Personnel and Development (CIPD), and Isfahan Science and Technology Town (ISTT).

# Relationship with universities and research & educational centers (governmental and non-governmental)

MSC communicates with more than 130 universities, research centers, and knowledge-based enterprises by concluding research contracts or supporting student projects in the management process of R&D activities. Also, it has had a continuous and effective presence in the 13th National Sheykh Bahai Technopreneurship Festival to promote and develop technology, creativity, and innovation. In 2015, the company engaged actively in creating an atmosphere of

interaction between the investors and thinkers through participation in the NESHAplan (starting a relationship between investors and large organizations with technologists and owners of investment opportunities). The company has also developed its field of activities from problem-based to open innovation by reviewing the research and development document of the company with the approach of open innovation and commercialization since 2017, Accordingly, the provision of a research and technology fund, the establishment of Mobarakeh Steel Group Innovation Center, the formation of Digital Transformation & Innovation Center in Steel Industry with the participation of Tehran University and the Vice-Chancellor of I. R. Iran president for Research and Technology and investment in the construction of its physical space, the foundation of the Steel Research Institute, and the establishment of the Middle East Sahand Research and Technology Group are on the company agenda. Accordingly, various ideation events such as Reverse Pitch. Fan Bazaar, and INNOMINE 2 have been held at the Steel Industry Localization Exhibition and National Seminar on Surface Engineering. Scientific presence and cooperation in the preparation of specialized and scientific journals are other activities of the company with the collaboration of scientific and research associations and centers.



The poster of the second conference of INNOMINE-2019



#### Payment of legal duties and taxes

The company fulfills all its legal obligations (including the payment of duties, taxes, and other legal payments) in a timely and complete manner in line with its social responsibility.

#### Total Types of Taxes and Legal Duties (Billion Rials)

2018	2019	2020	2021
15,532	22,614	39,977	84,645

## Supporting the charitable foundations and NGOs



One of the operational programs of MSC is helping the deprived and vulnerable groups of society and supporting them in various ways. Accordingly, the company supports charitable foundations (such as Imam Khomeini Relief Foundation) and non-governmental organizations (NGOs) in addition to helping these groups. It should be noted that all payments and donations in line with social responsibility are made based on received requests and interactions with the officials of the province. For this purpose, after review, the cases are prioritized by the company's public relations and based on the existing workflow and with the approval of the CEO and the company's board of directors, payments and donations are made. Some of the most important donations made in this field are:

 Procurement and distribution of more than 8500 sets of educational stationery in 2021.

in order to support the needy students of the province, which has been done by MSC in the last few years...

- Donation of 1600 tablet devices to low-income students
- Participation in the ceremony by Isfahan Province Atonement Headquarters and assisting in the release of unintentional crime prisoners
- Assistance to victims of natural disasters such as earthquakes and floods, particularly in the western part of the country in early 2019
- Supporting institutions such as Imam Khomeini Relief Foundation, State welfare organization of Iran, etc. and participation in different charity programs such as Shekoufeha ceremony, Atefeha ceremony, Sin-e Sekhavat etc.
- Donations to prepare dowry for brides under the support of State welfare organization of Iran



#### Donation of 1600 tablet devices to low-income students

MSC provided 1600 student tablet devices and distributed them among students in deprived and underprivileged regions in line with its social responsibilities and given the special educational conditions caused by the outbreak of the COVID-19 virus in the country. Of these 1,600 tablet devices, more than 600 were donated to students supported by Imam Khomeini Relief Foundation of Isfahan.

#### Number of donations and contributions to the community

Category	Number
Social	38
Educational	13
Civil	40
Cultural	36
Sport	7















## Improvement of safety performance and community health



Another area of focus in MSC, as a responsible citizen, is the planning and implementation of programs to improve the safety and health performance of the community. Measures taken in this regard are as follows:

- Reconstruction of the emergency section at Mobarakeh Mohammad Rasulullah Hospital
- Collaboration in the reconstruction of Ayatollah Kashani Hospital in Isfahan
- Donation of 6 ambulances to the healthcare network in eastern Isfahan.

- Reconstruction of Zarinshahr Shahid Madani Rehabilitation Center
- Assistance to Diziche Rehabilitation Center
- Equipping the accident and burn hospital of the Isfahan province
- Equipping Isfahans's Farabi Medical Center
- · Construction of road relief and rescue base
- Equipping Mohammad Rasoolullah Hospital in Mobarakeh city



#### Providing equipment required by hospitals to fight the coronavirus

MSC allocated equipment such as ventilators, hospital beds, masks, and disinfectants with a value of 150 billion Tomans to Isfahan hospitals and medical centers in line with its social responsibility to combat the pandemic.

#### Free supply of oxygen required by hospitals in isfahan province

Since hospitals and medical centers are in urgent need of oxygen for their corona patients, and MSC has two large units of oxygen production, the company agreed to provide free oxygen required by hospitals and medical centers of the province until the end of the COVID-19 pandemic. Accordingly, MSC undertook to supply 80 tons of oxygen daily. Also the excess oxygen was sent to other provinces such as Tehran, Markazi, Chaharmahal and Bakhtiari, and Kohgiluyeh and Boyer-Ahmad. It should be noted that so far 27,700 tons of oxygen have been provided for the use of medical centers during the outbreak of the corona virus.

This initiative of MSC motivated other large companies in the country, such as HOSCO, to take similar measures.



## Provision of public benefit services



Provision of services and engagement in projects that are used by the community and have a public benefit aspect can be mentioned as another area of focus of MSC as a responsible citizen. It is noteworthy that the actions taken by MSC in this regard also contribute significantly to the development of the infrastructure of the region and the province. Some measures taken are as follows:

- Cooperation in the comprehensive plan of Isfahan metro (Majlesi-Mobarakeh-Isfahan)
- Collaboration in the construction of the West bypass freeway with the release of 14830 square meters of land owned by the company
- · Contribution for construction of Vahdat

intersection of Qahnuyeh

- Participation in the completion of the Great Mosque of Isfahan with the financial assistance of more than 70 billion rials
- · Construction of Zarrinshahr railway station
- Supporting Foolad Mobarakeh Sepahan
   Sports club and developing public sports at the provincial level
- Completion of Naghsh-e-Jahan football Stadium
- Effective financial supporting of the Provincial Crisis Headquarter
- Investment on the dam of the third water transfer tunnel
- Financial support to the Provincial Working Group for Adapting to Drought



#### Sports activities

MSC is the sponsor and owner of Foolad Mobarakeh Sepahan Sport Club. The activities of the sports teams affiliated with the Foolad Mobarakeh Sepahan Sport Club have enhanced the promotion of a prominent sports culture and championship sports in different levels and disciplines, leading to vitality and health in the society in addition to a significantly positive effect on the social image of MSC and the improvement of its reputation. The sports teams sponsored by the company are:

#### Men's national and provincial championship teams:

National championships including football, handball, cycling, and water polo in all age groups

Provincial championships including football, volleyball, futsal, mountaineering, basketball, wrestling, table tennis, chess, swimming, karate, judo, taekwondo, track and field, weightlifting, tennis, water polo, and handball.

#### Women's provincial championship teams:

Table tennis, volleyball, swimming, handball, badminton, and track and field.



# Foolad Mobarakeh Sepahan Football

- 5 championships in the Iranian Football Premier League
- 4 championships in the Iranian Football Hazfi Cup (Knockout Cup Competition)
- 1 runner-up in the Asian Champions League

Attending the Club World Cup

## Naghsh-e-Jahan Stadium

Naghshe-e-Jahan is a multipurpose stadium with a capacity of 75000 spectators in the city of Isfahan, Iran. This stadium, which hosts the home games of the football team of Foolad Mobarakeh



Sepahan, is the secondlargest stadium in Iran. The structure and architecture of this stadium are the same as that of Saint Nicholas Stadium in Bari, Italy. The first phase of this stadium was opened in 2002 and used only for football matches. The football team of Foolad Mobarakeh Sepahan played its home games in this stadium from

The team has also experienced a championship in the Premier League and two Hazfi Cup (Knockout Cup Competition) at this stadium.

On November 29, 2014, the Ministry of Sports and Youth handed over the executive management of Naghsh-e-Jahan Stadium to MSC for its completion and operation MSC completed this stadium with a total cost of 300 billion Rials, and its second phase was opened on November 02, 2016, after more than 9 years of closure. Also, according to the contract between MSC and the company for national sports facilities development and maintenance, this stadium was transferred to MSC for 45 years in exchange for technical and engineering services provided.

2002 to 2007.



## Society survey



Since its establishment, our company has had various approaches to receiving comments and views of the community. MSC has used the experiences of the polling center of Isfahan University of Technology and developed a systematic approach to society survey, which has been revised and improved during these years as necessary.

Since 2017, a community survey questionnaire has been specially designed for two groups of target audiences (citizens and officials). Hence, some components of the survey are only provided for one of these groups. In addition, data on performance indicators are also extracted from reliable databases to ensure the accuracy and reliability of data.

#### The society survey

#### Citizens

#### Officials

- Isfahan citizens
- Urban and rural residents of the region (cities such as Lenjan, Varnamkhast, Majlesi, Fooladshahr,
- Government and public agencies (such as provincial government, townhouse, industry, mine & trade organization, etc.
- City councils and municipalities
- Tax Affairs Organization
- Environmental protection and natural resources organizations
- Charitable and public foundations
- Universities, educational and research institutions, and Islamic seminaries

















## Employees as valuable assets of the organization



MSC believes that employees are valuable assets of the organization and play a key role in shaping our competitive advantages. In fact, the competitive advantages and success of MSC in the field of production stem from the continuous efforts of employees towards organizational goals. Thus, the company has always tried to develop and empower its employees with different effective approaches while simultaneously taking their safety and

health into account to improve their satisfaction. the company seeks to provide a robust lifestyle and work relationship by providing a safe and healthy environment at work, implementing welfare programs, and providing benefits through organizational culture.

Currently, 12295 employees works in MSC which are divided into 2734 organizational positions in 258 jobs and 11 job categories.

No. of Employees	12295	Male (%)	Female (%)	<30 years	30-50 years	≥ 50 years
No. of Positions	2734	==				
No. of Jobs	258	98.4	1.6	8.4	80.7	10.9
No. of Job Categories	11					

## Recruitment process



The recruitment system of human resources is carried out according to the workflows of "Assessment of needs and recruitment of human resources", "How to act on people in the hands of personnel affairs", "Evaluation and ranking of applicants for employment" and "Recruitment of human resources from outside the company". The required human resources are estimated according to the organizational structure, job competency profile, retirement rate and outsourcing policies, and human resources recruitment is also done through different approaches. The effectiveness and efficiency of this approach has been measured by relevant indicators and based on organizational learning, this approach has been reviewed and modified many times. From the improvement projects of 2020, we can mention the projects of "socialization",

"allocation of new hires based on competence and personality traits", "skill evaluation of candidates at the diploma level", "competency evaluation of candidates at the bachelor level with the approach of the assessment center", "mechanization of the process of recruitment needs assessment" and "omprehensive human resources planning system design".

At the end, the final accepted people entered the company by the Administrative Affairs based on vacant positions, the retirement date of the company's employees and the needs of the requesting units, a work contract is signed with them, and after completing the training course, they are hired and completed the process of socialization and familiarization with the company. Then they are introduced to their place of work and the decision regarding the destination post will be issued for them.







## New employees hired

2019	2020	2021	
66	36	451	

## The number of employees hired from the surrounding areas of the factory

2019	2020	2021	
16	6	120	

New employees undergoing training

## Career development and succession planning



Succession planning system in MSC is designed and implemented in order to develop the competencies of employees and take the target positions. With the aim of creating equal opportunities, the MSC has screened the employees in order to select a sufficient candidate for the replacement based on the degree of matching the competencies of the current position with the target position. Candidates enter the evaluation and development process in order to develop competence and determine the final successor of the target position. This system is defined and implemented for the two target groups of managerial jobs and shift supervisors based on the relevant Competency Model.

It is worth mentioning that due to the corona virus pandemic and the changes required in the field of evaluation and development of employees in new conditions, various measures have been taken in the organization with the aim of continuing the growth of employees while maintaining the health of all people involved in this process. Among the measures in this field are the design and implementation of online evaluation centers and the holding of tests online without the presence of assessor and assessees in the same place, the possibility of remote working of employees and reducing the hours of daily work of employees at the height of the corona pandemic, holding face-to-face evaluations with maintaining health protocols and physical distancing in a

disinfected space, screening people before appearing in the exam and continuous training regarding health guidelines. Also, this year (2021), leaders' development approaches have been designed and implemented online without the need to hold face-to-face courses.



One of MSC's employees working with equipment















Issues	Related approaches	Examples of implementation	Improvements	Performance & effectiveness indicator
Recruitment	Needs assessment and recruitment based on the appointment workflow by staff affairs  Recruitment of individuals with disabilities  The mental ability assessment of applicants in the assessment center  Holding proficiency test at the operator level based on professional and technical standards in recruitment  Considering an evaluation center for undergraduate levels in recruitment	Knowledge-based test with more than 30000 applicants  Skills test and interview with more than 1500 applicants  The number of people employed in operator level is 340 people and 175 people in expert level in 2020  Familiarization and socialization of newly hired employees, 150 experts and 290 operators	Increasing the evaluation capacity in majors of management, accounting, etc. in the evaluation center based on the results of this center  Holding skill test at the operator level based on professional technical standards	Satisfaction with the quality of provided human resources services Timely supply of the required human force
Career Path	Competency assessment for promotion of job class Promotion of job class and job groups	A comprehensive system of professional competency profiles modeled on O*net website, Tata Steel Ltd., and Saipa Co.  Development of professional regulations, including career path for production operator jobs  Development of a professional career system for maintenance jobs	Providing a suitable platform to evaluate electrical and mechanical repairmen and production operators within the company and by the evaluation center team  Training the skill assessors within the company Online training of assessors	Satisfaction with the opportunity to develop and promote based on the career path
Succession planning and development of leaders	Implementation of evaluation center for managerial and supervisory categories since 2012 and shift supervisors since 2014  Development of leadership categories based on the localized model of developing leaders  Development of Individual Development Plan (IDP) for leaders	People evaluated in the Evaluation Center of Competency:  340 evaluations in the management category  263 evaluation in shift foreman category  126 evaluations in the expert category  Individual feedback reports compiled in the Evaluation Center (464 reports)  Individual Development Plan (IDP) developed and implemented (140 plans)	Training internal competency assessors from talented staff within the organization and those interested in this field from universities and scientific centers within the Isfahan province since 2015  Forming a team of analysts to prepare analytical reports on individual and managerial feedback since 2016  Improvement of the evaluation model of managers, directors, and supervisors considering the past experiences since 2017  Holding online Evaluation Center sessions during COVID-19 pandemic  Establishing a competency development academy (first phase, especially for shift supervisors)  Implementation of the fourth semester of the digital transformation training course	Proportion of managers and succession target groups with Individual Development Plan (IDP)  The proportion of appointments in jobs with a supervisory nature based on the succession planning system  Trust in the leadership team  Satisfaction with the supervisor





## Employees training and development



This approach is defined by identifying the required competencies at the organization, team, group and individual levels based on the ISO 10015 standard with the aim of promoting the required competencies and improving the performance of employees. For this purpose, the training needs of employees at the three levels of individual, unit, and organization are identified through the results of competency evaluation, performance evaluation, surveys, competency profile (educational standard) and are prioritized by specialized training, monitoring, design, and task groups. Also, in order to ensure that the set expectations and goals are met, the effectiveness of training courses is measured based on localized model of Patrick.

In addition, in order to effectively use of the knowledge and experience of internal experts, about 75% of training courses are conducted by internal instructors. Educational institutions and professors are evaluated and selected according to the workflow of "How to select members and description of duties of specialized working groups for education and human capital development". In order to improve this system, the projects "editing educational profiles of company posts", "automating educational needs assessment based on the educational profile of employees", "project connecting courses to competence", "creating an application for communication with teachers and learners", "developing virtual trainings", "Family Development Program (FDP)", "establishment of organizational industrial psychologist in the factory areas", "scheduling the implementation of training courses automatically" and "creating a system platform to evaluate the effectiveness of the courses at the level of the three mentioned models" are defined.

In order to effectively train and develop employees in MSC, the following measures have been taken:

- Development of the Individual Development Plan (IDP) for the target groups of succession planning and allocation of individual development coaches
- Revision of educational standards of posts and connecting it to educational courses
- Implementation and execution of the educational system to facilitate and improve

the provision of educational services to employees and trainers

- Implementing a mentoring project with a problem-solving approach in the production areas as a pilot
- Automating the process of planning and defining training courses
- Identification, selection and allocation of performance improvement coach to units
- · Implementation of ISO 10015 standard
- Equipping and implementing skills assessment and development workshops
- Designing and establishing a comprehensive system of sending employees to conferences and seminars
- The project to improve the needs assessment and training planning process
- Creating a comprehensive family development plan (FDP)
- Creating a system platform to provide feedback and improve training processes in IS-Suite

## Development of leaders

Leaders Development Plan (LDP) is designed and established in three parts of individual development plan. collective attitude development and development of business management knowledge by benchmarking the best models such as CIPD with the aim of "enhancing the effectiveness of organizational leadership". The effectiveness of this system is evaluated through a survey of employees (indices of satisfaction with the supervisor and trust in the leadership team). Among the improvements made in this approach are the coaching skill development program in



MSC's Training and Development building

















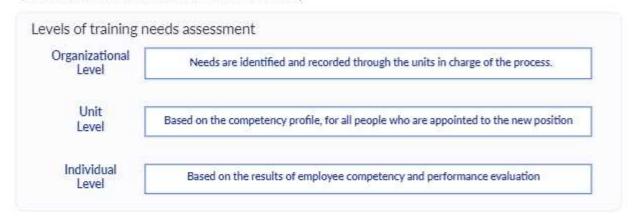


the managerial categories, the preparation of the self-study management program in the individual development program benchmarked from HBR, the formulation and implementation of the training program for digital transformation leaders for the management categories and the formulation of the individual development program (IDP) with the use of three sources of evaluation center results, evaluation of the organizational atmosphere by the subordinates and performance evaluation by the direct manager. Among the improvements in progress, we can point out the establishment of a future literacy

laboratory, the establishment of a competency development academy, the establishment of a system for evaluating and developing personality and cognitive characteristics, and the development of reasoning skills and critical thinking with the semi-theatre method.

#### Training

In line with comprehensive training and development of employees, training needs assessment is done in three levels according to ISO 10015 standard.



#### Planning and performing of training courses

The curriculum and headlines of the training courses are compiled after the need assessment. Internal instructors hold 75% of the training courses to provide local knowledge and experience. Some other courses are offered through external educational institutes after evaluation and selection of instructors according to the relevant guidelines. The required educational facilities and equipment are provided based on the designed lesson plan after the selection of the instructor. Also, the

#### Employees training per capita (man-hour)

2018	2019	2020	2021
60	44	24	51.3

#### Satisfaction with the quality of training services (%)

2018	2019	2020	2021
72.6	72.4	75.3	73.6

assessment of employee learning style based on the VARK model is currently performed for all employees to improve the effectiveness of planning and implementation of training courses according to the preferences and learning styles of employees. The results can be used in the design of training courses in the future.

#### Managers training per capita (man-hour)

2018	2019	2020	2021
83	86	51	85.3

Also, in order to improve employee satisfaction with the quality of training services, the following actions have been taken:

- Formation of specialized training working groups
- Revision of the needs assessment and training planning process
- Monitoring the level of learners in training courses
- Electronicization of training booklets and sending them before the start of the course
- Improving the mechanized training management system











## **Employees performance management**



The employee performance management system was designed based on the Armstrong model in the two areas of results and behavioral expectations and through behavioral and performance indicators in the perspectives of "performance goals and expectations", "behavioral expectations" and employee performance in "participation and transformation systems, HSE, Disciplinary and training and development" is evaluated in six-month periods in the context of the EIS system and its results are communicated through the performance report in the company's information system and the special portal for employees. The performance evaluation results are used in service development and compensation processes (such as determining the duration of the contract, promotion and payments).

This system is directly and indirectly integrated with other human resources approaches (such as promotion, training, employee competency special reward, performance bonus and selection of productive employees). The effectiveness of this system is evaluated through a survey of employees (performance management satisfaction indicator). Among the improvements made, we can mention "revision of behavioral expectations related

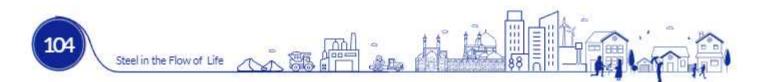
to employee performance" and "improvement of the mechanized system of employee performance management". In order to deepen and improve the effectiveness of this approach, the projects "design and implementation of employee performance coaching as a pilot in the area of steelmaking and continuous casting" were designed and implemented. Also, since 2020, a unit titled "Performance improvement and training planning" has been included in the organizational chart.

#### Leaders' competency model

MSC has implemented the approach of evaluation and development of leaders' competencies in line with the goal of "succession planning and development of leaders" and to ensure the existence of competencies and capabilities required by its managers. By implementing this approach, the company's current and potential managers have been evaluated in the "Managers' Evaluation Center" and according to the areas of improvement identified in this evaluation, the development plans needed by the leaders of the organization are formulated and implemented.



Leaders General Competencies Model



## **Employees survey**



In order to monitor job satisfaction and engagement and understand the needs and expectations of employees, since 2005, a survey system of employees has been designed and implemented, and it has been improved based on organizational learning and modeling of authentic models. At present, the survey of employee satisfaction and job engagement based on the Hay Group model and the satisfaction survey of the quality of human resources services (QHS) with learning from the service quality model (SERVQUAL) as well as other surveys such as the evaluation of organizational culture and organizational communication are conducted on a semi annual, annual and case-by-case basis with the cooperation of academic and research

centers. The results of these surveys are used in reviewing and formulating strategic goals and human capital plans and providing optimal services to employees. Among the improvements made in this field, we can mention the mechanization of the survey process (in order to increase the accuracy and speed of surveys). Also, based on the benchmarking of management consulting institutes and the world's top companies such as Korn Ferry, Deloitte, HBR, Gallup, IBM, etc., the improvement project of measurement of employees experience and conducting additional investigations using qualitative approaches such as interviews and resulting improvement measures are performing.







Subject of survey	Application Time
Employee job satisfaction and engagement	Since 2014 so far
Satisfaction with the quality of human capitals services (QHS) – perspective of employees	Since 2014 so far
Satisfaction with the quality of human capitals services (QHS) – perspective of unit officials	Since 2014 so far
Investigation of organizational culture	Since 2009 so far
Effectiveness of organizational communications and communication channels	Since 2015 so far
Employees and contractors' statement of health during COVID-19 pandemic	Since early 2020
Mental health screening of MSC employees	Since early 2020
Assessing the quality of life of employees	Since 2021
Identifying the values, attitudes and expectations of the employees of MSC with an emphasis on generation gap	Since 2021

#### Improvement of employees' satisfaction

MSC has been able to improve the overall satisfaction of its employees through employees' professional motivation management, implementation of effective approaches such as higher than average regional payments, financial and non-financial rewards, design of motivational packages, provision of benefits and welfare facilities in accordance with the service compensation system, employee appreciation, training and development, safety management and professional health system, and employee health management system.



2018	2019	2020	2021
72.5	73.3	76.4	73.9



One of MSC's employees in storage salon for cold rolled products

Steel in the Flow of Life



One of MSC's employees working on product packaging

## Satisfaction with the quality of services provided for human capitals

In order to increase employees' satisfaction with the quality of services provided to human capitals, welfare facilities according to the needs and expectations of employees, such as providing recreational and cultural services, trips, preparing and distributing birthday gifts for employees' spouses, food variety, improving facilities and the number of sports fields, improving commuting services, loans and financial facilities, etc. increased. The decrease in the related indicator is due to the Covid-19 restrictions in the travel, sports and nutrition sectors in 1400.

Satisfaction with quality of human resources services

2018	2019	2020	2021
77.7	72.7	74.7	73.3

## Occupational health and safety management system



Safe work is one of our values at MSC. Besides, the strategic goal of "promoting the safety and health of employees" has been defined, and risk-based occupational health and safety management system has been designed and implemented to meet legal requirements as well as the needs and expectations of stakeholders. This system includes approaches related to the standard requirements of safety management and professional health (ISO45001) and complying with the rules of technical protection and occupational health, the rules and regulations of the Iran's Ministry of Health, Treatment and Medical Education and the establishment of a safe work management system during the global epidemic of Covid-19 based on the ISO 45005 standard.



Model of professional health and safety management system

In the occupational health and safety management system based risk management, hazard identification and evaluation of safety and health risks play a key role in advancing organizational goals and protecting human capital. Companies' proper monitoring and attention to process safety, while preventing potential negative effects caused by process accidents, protects the organization's assets and human capital, as well as the continuation of high-quality and safe business, along with reducing costs caused by changes. MSC is not an exception to this rule and needs to pay attention to process safety management with the prospect of achieving Zero Accident production. Based on this, the HSE management of MSC in order to reduce human, equipment and process accidents, besides the designing of its own occupational health and safety management model and successfully implementing the first five-year plan (2012-2015) and the second five-year plan to improve the company's occupational health and safety (2017-2021), has taken steps to compile the third five-year plan for improving the company's occupational health and safety (1405-1401). In this regard the most important measures taken are the mechanization of the accident and quasi-accident registration system as well as the company's risk identification system as the basis of occupational health and safety management. based on risk management, safety performance evaluation at two levels (individual and unit) and promotion the occupational health and safety management standard OHSAS18001 to ISO 45001 in the years 2017 to 2018.

In recent years, in order to improve the occupational health and safety management system and process safety management, several projects such as "Identification of the risks of molten lifting cranes using the FTA method", "Evaluation of the infrastructure and safety life cycle stages of the safety instrument systems of the hot rolling preheat furnace unit (SIL Study), "Study of process hazards of Kharazi direct reduction unit and Oxygen unit with HAZOP STUDY Method", "Impact Modeling in MSC and Saba Complex Oxygen Units and new development plans", "Tripod-Beta Model Development for analyzing accidents based on human factors engineering indicator" and "Implementation of the study-training phase of process safety management establishment in MSC" have been defined and implemented.

Some of ongoing projects related to process safety are the hazard identification and operation management (HAZOP) study project in process units including energy and fluid distribution. electric arc furnaces, RH-Top workshop (secondary metallurgy of the steelmaking area), box annealing and galvanizing and colored sheet, hazard identification study project with HAZID method in energy and fluid distribution units and electric arc furnaces, impact modeling study project, LOPA and SIL Study in process units including energy and fluid distribution, box annealing and galvanizing and colored sheet, as well as quantitative risk assessment (QRA) in the energy and fluids distribution unit and Bow-Tie risk assessment in the electric arc furnace unit of MSC with the participation of Tarbiat Modares University Process Safety Center (CPSC).

The effectiveness of the approaches used in these systems is evaluated through internal and third-party audits, safety inspections, internal and external VIP visits, and measuring key indicators. The indicators of severity rate of accidents and frequency rate of accidents have improved due to the lessons learned from past events and the successful implementation of the first and second five-year comprehensive plan for the promotion of occupational safety and health (2012-2021). During these years, many measures such as organizing regular safety improvement meetings with the presence of managers, continuous inspections, training and culture building, implementing mechanized safety systems, evaluating units, employees and contractors, holding three-minute meetings at the beginning of each shift, preparing safety documents such as motion graphics and infographic of the hazards of different areas etc. has been performed.

Also, developing a workflow to encourage employees to participate in periodical examinations creates a growing and stable trend of employee participation indicator in this field. In addition, other programs such as conducting examinations outside the company for managers, chiefs and supervisors and holding a training course on health issues have been implemented for this group on the day of periodical examinations. According to the statistics presented in the reports of the Worldsteel Institute, MSC indicators of Frequency Rate of Accident (FR) (Lost Time Injury Frequency Rate

or LTIFR), Severity Rate of Accident (SR) and the Ftality Frequency Rate (FFR) are less than other steel companies and are considered as benchmark which shows the importance of paying attention to occupational safety and health in this company.



## Employees' comprehensive health program



MSC Employees' Comprehensive Health Program has been developed based on strategic analysis and review of the relevant pillars and with the collaboration of related units such as HSE, public services (sports and nutrition), education, and development of human resources, etc. This program has been developed based on the four pillars of occupational health, general health, workplace health, and mental health and communicated to all units after defining the relevant measures. According to the workflow of Industrial Medical Examinations, all employees undergo annual medical examinations, and the indicators of the disease risk factors is calculated and monitored through examination of health factors risk. The Comprehensive Employee Health Plan is evaluated on a regular basis through surveys and related performance indicators.

Participatory ergonomics interventions aimed at reducing musculoskeletal disorders, development of guidelines on prohibition/reduction/combating smoking in the company, ergonomics assessment of administrative requirements before purchase, and structured meetings with departments to explain the measures for the improvement of employees'

general health, the establishment of an ergonomics laboratory, a research project to investigate shift work systems and the problems caused by them in the company, the implementation of the hearing protection and respiratory protection program in the workplace, the implementation of the pilot project for the labeling of hazardous chemicals (GHS), the identification and evaluation of health risks using the specialized methods and the electronic system of specialized referral, the results of industrial medicine examinations are among the measures that have been taken in line with the improvement and promotion of the comprehensive employee health program. Also, the research projects "Designing a model of the electronic medical record system", "Comparison of HSE performance indicators before and after the outbreak of the Corona disease" and "Designing a comprehensive system for improving the health of employees" with the cooperation of the university are some measures to improve and promote comprehensive employee health program.

Strategic goal: Promotion of employee health and safety

Employees' Comprehensive Health Program

Occupational health

General health

Workplace health

Mental health

Moreover, with the outbreak of COVID-19, a working group called Prevention and Fight against Coronavirus was formed with the collaboration of various units involved and has continuously prepared, communicated, and monitored the practical instructions in this field to protect employees, stakeholders, and operations of the company. These decisions or instructions have been in various areas, such as presence and activity of the employees in the company, disinfection of the environment, equipment, means of transportation, etc., supply and distribution of necessary medical

and hygiene items, meetings, guest reception, nutrition, missions, repairs, etc.

Also, systematic health monitoring and screening are carried out in various ways, such as completion of the declaration by the employees of the company and the contracting companies, conducting tests, diagnosis, etc., in units with suspicious cases, and following up on the health status of employees who are suspected or have the disease. In order to comply with global standards in this regard, MSC implemented the safe work management guide during the global pandemic of Covid-19 (ISO 45005) and received the relevant certificate.

#### Safety and health approaches aimed at promoting the safety and health of employees

Improvement of workplace conditions

- Identifying, measuring, evaluating and controlling harmful factors in the work environment
- Performing occupational health and safety inspections
- Defining and implementing corrective projects to improve working environment conditions

Enhancement of personnel general health

- Planning and implementation of pre-employment and periodical examinations of employees
- Pursuing the job suitability of employees
- Training and culturalization of employees according to the principles of self-care

Promotion of ergonomic conditions

- Identifying and assessing the risk factors of the ergonomics of the work environment
- Collaborative ergonomics intervention program with the aim of eliminating or reducing skeletal and muscular disorders
- Ergonomic assessment of office supplies before purchase
- Evaluation of the ergonomics of transportation services

Prevention of coronavirus spread in the company

- Formation of the crisis committee for the prevention of the global pandemic of Covid-19
- Establishment of a corona management system
- Compilation of health guidelines to deal with the global pandemic of Covid-19
- Holding trainings to prevent the global pandemic of Covid-19
- Special health inspections in order to prevent the global pandemic of Covid-19
- Vaccination of employees against the Covid-19
- Establishing a safe work management system during the global pandemic of Covid-19 (ISO 45005)

## Benefiting from the experiences of retirees and honoring them



The experiences of retirees of the company are used based on the workflow of Technical Knowledge Transfer in the form of instructors and mentors and considering the implementation of the system of knowledge management as well as the transfer of knowledge and experiences of capable retirees to employees. Also, the transfer of knowledge and experience to substitute and newly recruited employees are performed by retirees using the coaching method.

Other current approaches in the company include the use of retirees' experiences in transferring technical knowledge to group companies (as instructors or consultants). MSC also runs different programs to honor retirees and appreciate their services, some of which include holding retirement ceremonies and giving gifts, financial assistance and payment of marriage loans for children, access to medical, welfare, and sports facilities (similar to working employees), etc.













## Retention, absenteeism and employee complaints



The percentage of employee absenteeism is low, and their retention rate is relatively high given the use of various approaches such as granting facilities and welfare and recreational services, job classification system, and other occupational benefits, performance management system, etc. Some other measures taken by the company to reduce employee complaints compared to previous years are obtaining a license to conclude a permanent contract for the veterans and rejection of complaints by a group of retirees requesting an extension of up to 35 years of service in the relevant units. Of course, it should be noted that the number of complaints is negligible compared to the total number of employees of the company.



#### Retention rate (%)

2018	2019	2020	2021
100	100	100	100

#### Number of employee complaints from the company

2018	2019	2020	2021
14	12	9	8

## Employees, the ambassadors of company



MSC has established numerous platforms and infrastructures to transform its employees into ambassadors of the company's reputation and success. Some of the measures taken to achieve this goal include publication of articles and books written by employees, presentation of articles and achievements in conferences and seminars, training of organizational excellence evaluators, encouraging

presence of auditors in the Iranian National Excellence Award and IMIDRO Productivity Award, holding organizational excellence tours, and providing other companies with the opportunity of visiting and modeling the success and experiences of MSC, etc. Also, the role of employees in promoting the external image of the company is explained in the project of "Organizational Brand Management".

## Employee engagement in social activities



Participating in social activities by creating the necessary platforms, providing appropriate information to employees and using multiple approaches, and in summary, the effective implementation of the approach of "encouraging employees to participate in social activities" and the comprehensive participation of company employees in humanitarian activities (such as helping victims of unexpected accidents, the needy, disabled, and homeless people, the prisoners

of non-intentional crimes, etc.), are measures which indicate the high social maturity of the employees and their social responsibility.

#### Number of participants in humanitarian activities

2018	2019	2020	2021	
5869	5283	5285	5395	













## Internal Communications System



In MSC, in line with the strategic goal of "improving communication and interactions among employees", the communication needs of employees are identified through approaches such as surveys, meetings of human resources managers employees, receiving feedback from existing communication channels. and existing channels are improved and new channels are established. . At present, in order to establish effective internal communication between employees and the management team, as well as employees with each other, several vertical and horizontal communication channels have been created, some of the most important of which are: meetings of the CEO, vice presidents and managers with employees, meetings of managers with supervisory layers, meetings Heads of production and maintenance, transformation committees, Radio Foulad, website, employee portal, Steel newsletter, video newsletter, social networks, e-mail, notice boards, internal conferences and exhibitions, SMS, comprehensive survey system and Poopak internal messenger. The effectiveness of the mentioned approaches is evaluated through the annual survey "Effectiveness of organizational communication and communication channels". Integration of the satisfaction measurement process of organizational communication and communication channels of the company and the "Dialogue and Solutions Cafe" project is one of the improvement measures in this field. Also, a new project has been defined under the title of "MSC communication management in the field of employees" in order to improve this system.

#### Employee communication channels

Communication channel	Issues -		ommunic lirection		Scope of
Communication channel			Down	Horizontal	application
Radio Foolad	Reporting on the company's programs in various fields of production and services (reports, interviews, etc.)		<	~	All employees
Company website	Reporting on the company's activities in various fields			✓	Society/employees
Employee portal	Reporting on the rules and regulations of the company, services that can be provided to employees, etc.		1	~	All employees
Electronic organization, organizational e-mail, CEO email, Telegram channel	Office automation messages, notifications, correspondence, information on production, processes, and plans, etc.	V	1	✓	Most employees
Foolad Newsletter (Weekly), Iron and Steel Quarterly magazine	News and information related to the company and its achievements		~	~	All employees
Booklets, brochures, and reports	Regulations, health and safety warnings and technical issues			1	All employees
Bulletin boards	Circulars, administrative, welfare and sports notices			✓	All employees
Strategic maps, strategic goals boards, and SEM strategic management system	Annual strategies and goals, key performance indicators, and achievements	~	~	~	All employees
Domestic gatherings, exhibitions and conferences	Reporting on achievements, goals and programs, training topics and improvement activities	1	1	~	All employees
SMS	Production and quality information, training programs and information, employee welfare programs, invitations to attend meetings, etc.	V	~	✓	All employees
Comprehensive survey system	Awareness of employee satisfaction level and perception of basic human resources issues		1		All employees
Employee chat room in Poopak mobile application	Informing and awareness of the employees' views on various issues of the company	V	1	~	All employees
Groups for information and exchange of views on social media	Reporting the latest rules, regulations and events of the company and polling about these cases	1	1	1	All employees
Incident notification system	Awareness of officials, employees and contractors of events within the company			~	All employees
Poopak mobile application	Notification and exchange of views on important issues of the company	1	1	1	All employees



#### Employee communication channels

Communication channels	Level	Content	Examples	Time Interval
Meetings of managers with employees (except during covid-19 outbreak)	All employees	Information on the company's performance and future plans Investigation of employees' problems and issues and current affairs  Information on the company and future plans  Investigation of employees' problems and issues and current affairs	General meeting of the CEO with the employees The CEO and deputies visit of the units In-person meetings of managers with employees Human Resources officials meetings with employees	6 months Annually Weekly Quarterly
Joint meetings of managers with supervisory layers of the company	Managerial, supervisory, and expert levels	Information on the issues and programs of the company	Management Committee Meetings     Meetings of the Council of Deputies     Human Resources officials meetings with operations unit     CEO meetings with directors and supervisors	Monthly Once every two weeks Weekly Quarterly
meetings of heads of production and maintenance	Operational units	Shift production and maintenance issues     Regional issues and pursuing the realization of the production plan     Workshop safety issues and transfer of important content in shifts	Meetings of heads of units with officials     Meetings of production & maintenance	Daily Weekly
Transformation Committees (online meetings during covid-19 outbreak)	Managerial, supervisory, and expert levels	Goals, strategies, processes, improvement projects	Supreme Transformation Committee     Main & departmental transformation committees	Monthly Once every two weeks
Safety meetings	Deputies and area managers, HSE officials, heads of units, Shift supervisors and contractors	Investigating the safety and occupational health of employees and contractors	Technical safety and occuptional health committee of the company Safety meetings and visits (VIP) Meetings of technical safety and occupational health committee of areas, units and teams Meetings of technical safety and occupational health committee of contractor companies Three-minute shift meetings at the beginning of the shift Incident review meetings (quasi-incidents)	Monthly  Monthly  Monthly  Monthly  at begining of each shift case by case

## Transferring strategies and goals to employees



MSC uses a variety of methods to transfer the effectiveness of strategies and orientations to employees. Some examples include six-month senior management conferences with employees, meetings of transformation committees, Foolad newsletters and special issues, provision of strategy maps and strategic goals boards, intra-departmental meetings,

information on goals and objectives, holding "goals competitions", etc. Also, the strategic goals of the organization are streamlined using the BSC approach in all the units of the company in a cascade manner. Strategic goals board (including strategic goals, indicators, and measures) are developed for each unit and monitored through the SEM system.

#### Approaches to transferring mission, vision, values and strategies to employees

Meetings of the management committee, supreme transformation committee and main transformation committees, conferences and presenting information on goals and strategies by company officials, Foolad newsletter and special issues, provision of strategy maps and strategic goals boards, SEM strategic management system, Managers' interview with Radio Foolad (Glass Studio)











## Service compensation system and staff appreciation

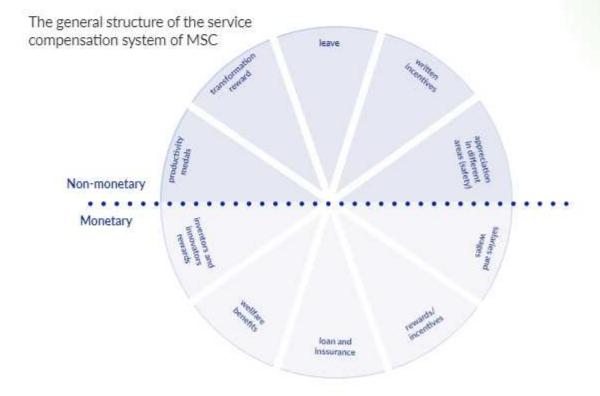


MSC pays salaries and benefits based on the job classification system and in line with the policies of the Human Resources Transformation Committee affected by job (job group payment), position (hardship allowance, the right of responsibility), and employment (service life). Also, different financial and non-financial approaches have been taken in the form of regulations and guidelines to enhance employees' motivation, including incentive fee, productivity bonus, inventors and innovators reward, rewards by improvement committees, appreciation of project execution, top experiences and suggestions, etc. Other benefits and facilities are also provided to improve the quality of life of employees and their families, including loans, travel, and restaurant allowances, special payments, welfare facilities, sports facilities, supplementary insurance, marriage leave, compassionate leave, maternity and breastfeeding leave, safety performance reward, written incentives, etc. The above items, along with salaries and benefits,

constitute the compensation for employee services. These approaches are continuously evaluated based on the organizational conditions and developments outside the organization to identify and implement the necessary improvements. Two projects of "Review of the Reward Payment System for Improvement and Transformation" and "Connecting Performance Management Systems to Incentive Systems" are examples of the new defined improvements.



One of MSC's employees preparing product.





## Setting equal opportunities for employees



MSC has established systematic principles through workflow procedures and guidelines to provide equal opportunities in various fields (including employment, promotion, salary and wages, rewards, education and empowerment, loans, health and welfare facilities, health and treatment, sports, etc.).

The effectiveness of these approaches is evaluated through surveys of "employee job satisfaction and motivation" and "satisfaction with the quality of human resource services". Besides, continuous improvements are made depending on the feedbacks received and the internal and external conditions.

## Assessment and enhancing organizational culture



Given the importance of culture in organizational development and support for the realization of strategy, the organizational culture of the company has been evaluated based on Dennison's model, and the predominant cultural tendencies have been identified through several studies since 2006. The necessary strategies to empower the culture and achieve a successful cultural level are designed and implemented after evaluating the current situation of organizational culture. The design of the organizational culture management model of MSC with the cooperation of university professors is among the current achievements of the company, aimed to coordinate the management model of organizational culture and subcultures with the conditions of the company.

# Development of a culture of cooperation and teamwork

MSC uses different approaches to promote the culture of cooperation and teamwork,

some of which include holding training courses, establishing incentive systems, productivity records, holding annual conferences on productivity, appreciation of productive employees, different competitions (such as suggestions, recording experiences, etc.), books, publications, and specials, etc.

The effectiveness of these approaches is evaluated through indicators of "satisfaction with cooperation and engagement", "percentage of employee engagement in transformation systems", "suggestions per capita", etc. some improvements in this area include the approval of rewards for special projects, non-cash rewards to top projects and proposals, etc.



MSC's employees performing maintenance



## Appendix-GRI Standards

GRI standards	Title	Pages and Notes
RI 102: General Disclosure:	s 2016	
rganizational profile		
102-1	Name of the organization	5
102-2	Activities, brands, products, and services	5, 12-13, 16-17, 36-37, 41-42
102-3	Location of headquarters	5, 123
102-4	Location of operations	5, 16-17
102-5	Ownership and legal form	12-13
102-6	Markets served	14, 41
102-7	Scale of the organization	5, 14, 16-17, 99
102-8	Information on employees and other workers	5, 99
102-9	Supply chain	74-84
102-10	Significant changes to the organization and its supply chain	12-13
102-11	Precautionary Principle or approach	61-62, 107-108
102-12	External initiatives	3, 66, 91
102-13	Membership of associations	66, 91
rategy		
102-14	Statement from senior decision-maker	19
102-15	Key impacts, risks, and opportunities	61-62
hics and integrity		
102-16	Values, principles, standards, and norms of behavior	6-7, 50, 79
102-17	Mechanisms for advice and concerns about ethics	33-34, 105-106, 112-113
hics and integrity		
102-18	Governance structure	8-10
102-19	Delegating authority	8-10
102-20	Executive-level responsibility for economic, environmental, and social topics	8-10
102-21	Consulting stakeholders on economic, environmental, and social topics	33-34, 48, 80, 95, 105-106
102-22	Composition of the highest governance body and its committees	8-10
102-23	Chair of the highest governance body	8-10
102-24	Nominating and selecting the highest governance body	8-10
102-25	Conflicts of interest	8-10
102-26	Role of highest governance body in setting purpose, values, and strategy	11
102-27	Collective knowledge of highest governance body	Regarding the changes in the members of BOD based or the composition of shareholders, personal information o BOD members can be accessed through MSC's website (www.msc.ir) and Comprehensive Data Base Of All Lister Companies website (www.codal.ir).

GRI standards	Title	Pages and Notes		
102-28	Evaluating the highest governance body's performance	8-10		
102-29	Identifying and managing economic, environmental, and social impacts	11, 31-34		
102-30	Effectiveness of risk management processes	61-62		
102-31	Review of economic, environmental, and social topics	8-10		
102-32	Highest governance body's role in sustainability reporting	8-10, 31		
102-33	Communicating critical concerns	8-10, 33-34, 61-62, 112-113		
102-34	Nature and total number of critical concerns	31-32		
102-35	Remuneration policies	114-115		
102-36	Process for determining remuneration	114-115		
102-37	Stakeholders' involvement in remuneration	105-106		
102-38	Annual total compensation ratio	Limitation on the provision of information due to the confidentiality of the subject and also it is not usual that this information is announced in the country and the markets in which we are present.		
102-39	Percentage increase in annual total compensation ratio	Limitation on the provision of information due to the confidentiality of the subject and also it is not usual the this information is announced in the country and the markets in which we are present.		
keholder engagement				
102-40	List of stakeholder groups	34		
102-41	Collective bargaining agreements	In this regard, MSC acts in accordance with the laws and regulations of the Islamic Republic of Iran including the constitution and labor law (labor code) of I. R. Iran.		
102-42	Identifying and selecting stakeholders	33-34		
102-43	Approach to stakeholder engagement	33-34		
102-44	Key topics and concerns raised	31-34		
porting practice				
102-45	Entities included in the consolidated financial statements	In this case please refer to financial statements and reports published in Comprehensive Data Base of All Listed Companies website (www.codal ir).		
102-46	Defining report content and topic Boundaries	3, 31-34		
102-47	List of material topics	32		
102-48	Restatements of information	3 (about this report)		
102-49	Changes in reporting	3 (about this report)		
102-50	Reporting period	3 (about this report)		
102-51	Date of most recent report	3 (about this report)		
102-52	Reporting cycle	3 (about this report)		
102-53	Contact point for questions regarding the report	123		
102-54	Claims of reporting in accordance with GRI Standards	3 (about this report)		
102-55	GRI content index	116-122		
	External assurance			







GRI standards	Title	Pages and Notes		
GRI 103: Management Appro	ach 2016			
103-1	Explanation of the material topic and its boundary	31-32		
103-2	The management approach and its components	6-11, 21-30, 41, 45, 50, 52-58, 53-60, 62-63, 79, 89, 107-110		
103-3	Evaluation of the management approach	6-11, 21-30, 41, 45, 50, 52-58, 53-60, 62-63, 70 79, 89, 107-110		
GRI 200: Economic				
Economic Performance 2016	_			
201-1	Direct economic value generated and distributed	14		
201-2	Financial implications and other risks and opportunities due to climate change	61-62, 62-69		
201-3	Defined benefit plan obligations and other retirement plans	110		
201-4	Financial assistance received from government	None		
Market Presence 2016				
202-1	Ratios of standard entry level wage by gender compared to local minimum wage	In this regard, MSC acts in accordance with the laws and regulations of the Islamic Republic of Iran including the constitution and labor law (labor code) of I. R. Iran.		
202-2	Proportion of senior management hired from the local community	99-100		
Indirect Economic Impacts 201	16			
203-1	Infrastructure investments and services supported	89-95		
203-2	Significant indirect economic impacts	89-95		
Procurement Practices 2016				
204-1	Proportion of spending on local suppliers	75		
Anti-corruption 2016				
205-1	Operations assessed for risks related to corruption	Corruption and related risks are of great importance to MSC and in this regard, necessary training are presente to employees through company Code of Conduct. Also, this issue is monitored and controlled through current approaches in MSC's related departments (e.g. security departments).		
205-2	Communication and training about anti-corruption policies and procedures	Corruption and related risks are of great importance to MSC and in this regard, necessary training are presented to employees through company Code of Conduct. Also, this issue is monitored and controlled through current approaches in MSC's related departments (e.g. security department).		
205-3	Confirmed incidents of corruption and actions taken	None		
Anti-corruption 2016				
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	None		
Tax 2019				
207-1	Approach to tax	92, MSC pays its taxes according to laws and regulation of Iran, Ministry of Economic Affairs and Finance, Irania National Tax Administration (INTA). Also, policies in this regard are made in the framework of and in accordance with these laws and regulations.		
		8-10		
207-2	Tax governance, control, and risk management	8-10		
207-2 207-3	Tax governance, control, and risk management  Stakeholder engagement and management of concerns related to tax	8-10 31-34		









GRI standards	Title Title	Pages and Notes	
GRI 300: Environmental			
Materials 2016			
301-1	Materials used by weight or volume	71, 75	
301-2	Recycled input materials used	69-70	
301-3	Reclaimed products and their packaging materials	None	
nergy 2016			
302-1	Energy consumption within the organization	71, 75	
302-2	Energy consumption outside of the organization	71, 75	
302-3	Energy intensity	71	
302-4	Reduction of energy consumption	66, 71-72	
302-5	Reductions in energy requirements of products and services	66, 71-72	
Vater and Effluents 2018			
303-1	Interactions with water as a shared resource	67-69	
303-2	Management of water discharge-related impacts	67-69	
303-3	Water withdrawal	67-69	
303-4	Water discharge	67-69	
303-5	Water consumption	67-69	
iodiversity 2016			
304-1	Operational sites owned, leased, managed in, or adjacent to protected areas and areas of high biodiversity value outside protected areas	None	
304-2	Significant impacts of activities, products, and services on biodiversity	62-66	
304-3	Habitats protected or restored	None	
304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	None	
missions 2016			
305-1	Direct (Scope 1) GHG emissions	65-66	
305-2	Energy indirect (Scope 2) GHG emissions	65-66	
305-3	Other indirect (Scope 3) GHG emissions	65-66	
305-4	GHG emissions intensity	65-66	
305-5	Reduction of GHG emissions	65-66	
305-6	Emissions of ozone-depleting substances (ODS)	65-66	
305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	65-66	
Waste 2020			
306-1	Water discharge by quality and destination	69-71	
306-2	Waste by type and disposal method	69-71	
306-3	Significant spills	69-71	







GRI standards	Title	Pages and Notes		
306-4	Transport of hazardous waste	69-71		
306-5	Water bodies affected by water discharges and/or runoff	69-71		
wironmental Compliance 20	M6			
307-1	Non-compliance with environmental laws and regulations	None		
upplier Environmental Asses	sment 2016			
308-1	New suppliers that were screened using environmental criteria	81-82		
308-2	Negative environmental impacts in the supply chain and actions taken	81-82		
RI 400: Social				
mployment 2016				
401-1	New employee hires and employee turnover	99-100, 111		
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	114		
401-3	Parental leave	114		
abor/Management Relations	2016			
402-1	Minimum notice periods regarding operational changes	Whenever there is a change in operation that has an impact on stakeholders (especially employees), these changes are communicated to stakeholders (especially employees) through communication approaches and channels, and the necessary planning is done in this regard.		
ocupational Health and Safe	ty 2018			
403-1	Occupational health and safety management system	107-110		
403-2	Hazard identification, risk assessment, and incident investigation	107-108		
403-3	Occupational health services	109-110, 114		
403-4	Worker participation, consultation, and communication on occupational health and safety	102-103, 107-110		
403-5	Worker training on occupational health and safety	102-103, 107-110		
403-6	Promotion of worker health	109-110		
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	107-110		
403-8	Workers covered by an occupational health and safety management system	107		
403-9	Work-related injuries	108		
403-10	Work-related ill health	108		
raining and Education 2016				
404-1	Average hours of training per year per employee	103		
404-2	Programs for upgrading employee skills and transition assistance programs	102-103, 110		
404-3	-3 Percentage of employees receiving regular performance and career development reviews 104			
iversity and Equal Opportun	ity 2016			
405-1	Diversity of governance bodies and employees	99-100		















405-2	Ratio of basic salary and remuneration of women to		
ASTARCATES:	men	There is no significant difference	
lon-discrimination 2016			
406-1	Incidents of discrimination and corrective actions taken	None	
reedom of Association and Colle	ective Bargaining 2016		
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	None	
hild Labor 2016			
408-1	Operations and suppliers at significant risk for incidents of child labor	None	
orced or Compulsory Labor 201	6		
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	None	
ecurity Practices 2016			
410-1	Security personnel trained in human rights policies or procedures	None	
ights of Indigenous Peoples 201	16		
411-1	Incidents of violations involving rights of indigenous peoples	None	
luman Rights Assessment 2016			
412-1	Operations that have been subject to human rights reviews or impact assessments	None	
412-2	Employee training on human rights policies or procedures	None	
412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	None	
ocal Communities 2016			
413-1	Operations with local community engagement, impact assessments, and development programs	89-94	
413-2	Operations with significant actual and potential negative impacts on local communities	None	
upplier Social Assessment 2016			
414-1	New suppliers that were screened using social criteria	81-82	
414-2	Negative social impacts in the supply chain and actions taken	81-82	
ublic Policy 2016			
415-1	Political contributions	According to I. R. Iran's regulations and laws, MSC is not allowed to participate in any political process, and this is not the case.	
iustomer Health and Safety 201	6		
416-1	Assessment of the health and safety impacts of product and service categories	51-52	
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	None	
Marketing and Labeling 2016			
417-1	Requirements for product and service information and labeling	52-53	
-TINE.	and labeling		







GRI standards	Title	Pages and Notes	
417-3	Incidents of non-compliance concerning marketing communications	None	
Customer Privacy 2016			
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	None	
Socioeconomic Compliance 2	016		
419-1	Non-compliance with laws and regulations in the social and economic areas	None	
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