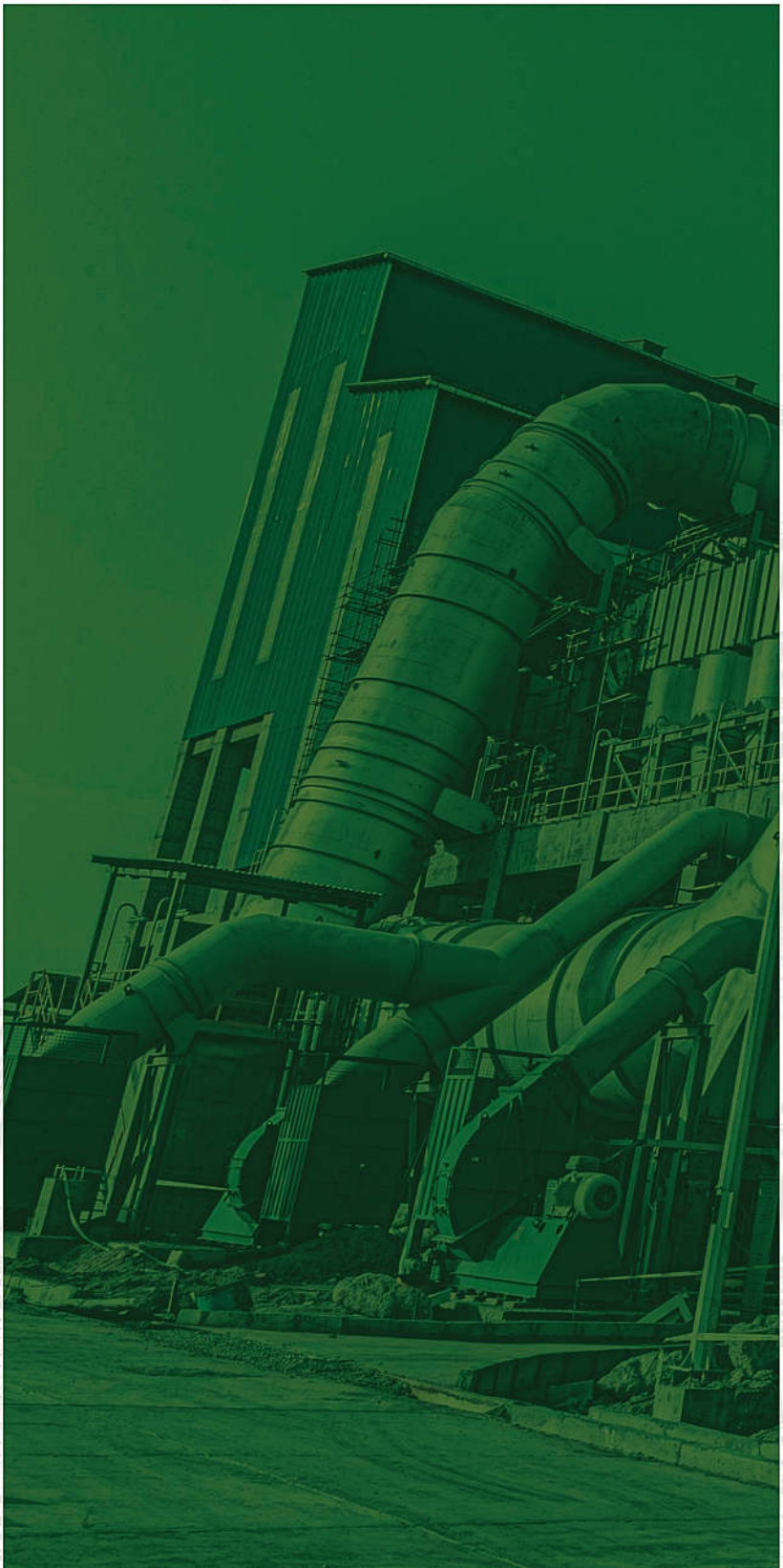
WE GIVE NEW LIFE
TO THE ORE

GENERAL CATALOG

www.fms-co.com



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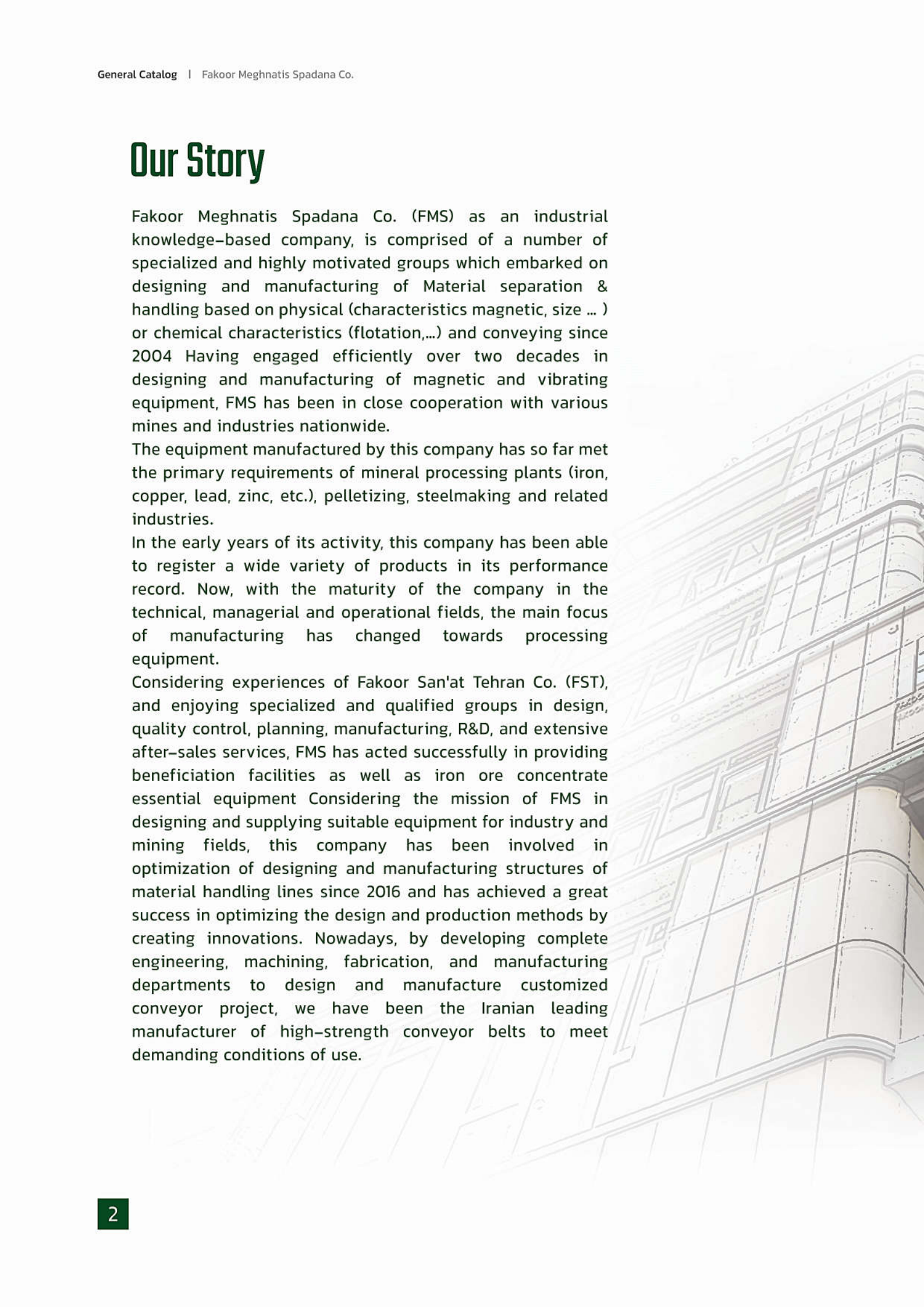
Our Story

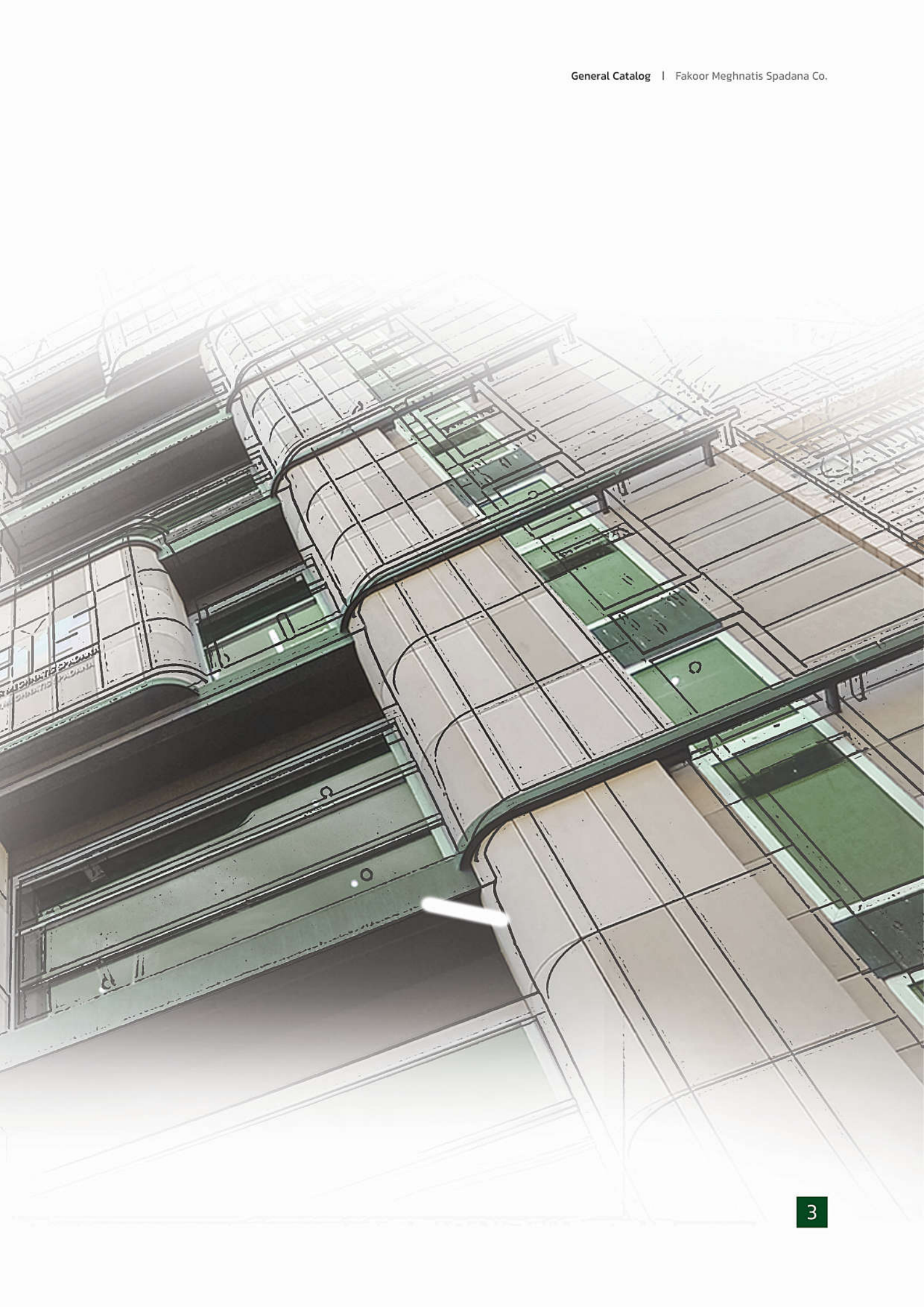
Fakoor Meghnatis Spadana Co. (FMS) as an industrial knowledge–based company, is comprised of a number of specialized and highly motivated groups which embarked on designing and manufacturing of Material separation & handling based on physical (characteristics magnetic, size ...) or chemical characteristics (flotation,...) and conveying since 2004 Having engaged efficiently over two decades in designing and manufacturing of magnetic and vibrating equipment, FMS has been in close cooperation with various mines and industries nationwide.

The equipment manufactured by this company has so far met the primary requirements of mineral processing plants (iron, copper, lead, zinc, etc.), pelletizing, steelmaking and related industries.

In the early years of its activity, this company has been able to register a wide variety of products in its performance record. Now, with the maturity of the company in the technical, managerial and operational fields, the main focus of manufacturing has changed towards processing equipment.

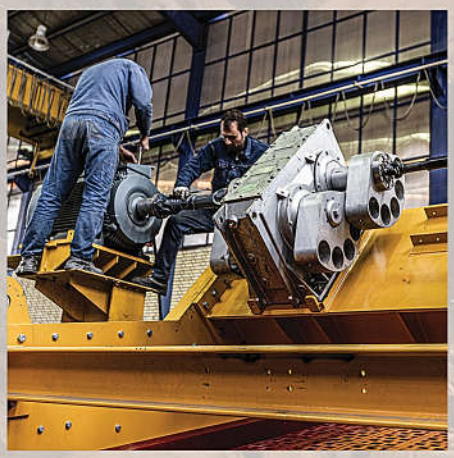
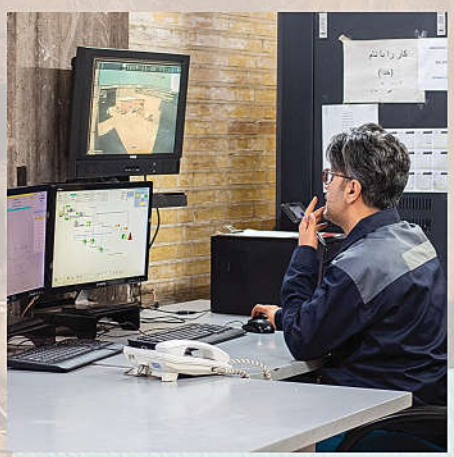
Considering experiences of Fakoor San'at Tehran Co. (FST), and enjoying specialized and qualified groups in design, quality control, planning, manufacturing, R&D, and extensive after–sales services, FMS has acted successfully in providing beneficiation facilities as well as iron ore concentrate essential equipment Considering the mission of FMS in designing and supplying suitable equipment for industry and mining fields, this company has been involved in optimization of designing and manufacturing structures of material handling lines since 2016 and has achieved a great success in optimizing the design and production methods by creating innovations. Nowadays, by developing complete engineering, machining, fabrication, and manufacturing departments to design and manufacture customized conveyor project, we have been the Iranian leading manufacturer of high–strength conveyor belts to meet demanding conditions of use.





Our Mission

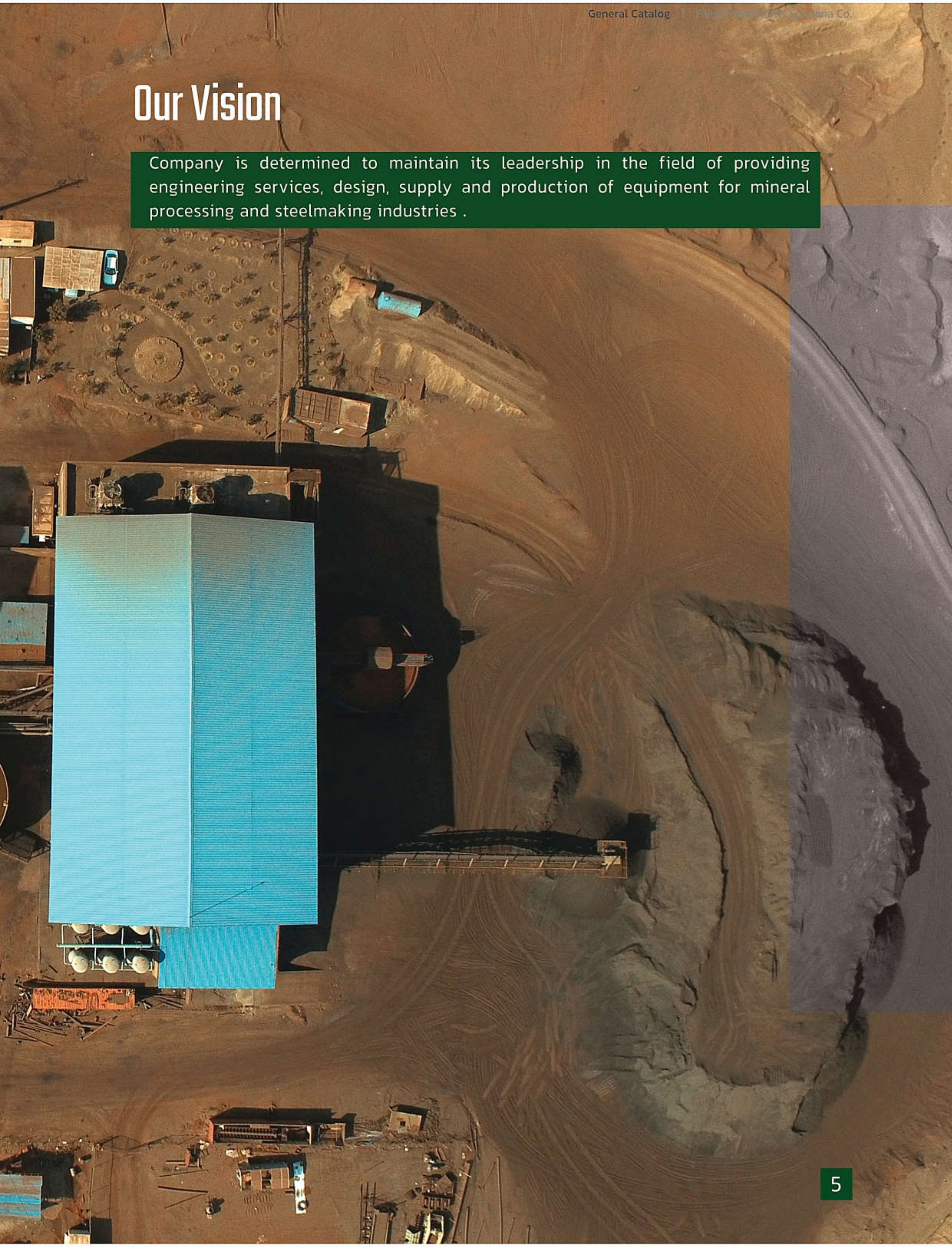
Responding to the needs of the industry by relying on knowledge and innovation, producing and supplying equipment and providing creative solutions at the global level in the field of mineral industries (mainly metal) with a commitment to social and environmental responsibilities.



Our Vision

Company is determined to maintain its leadership in the field of providing engineering services, design, supply and production of equipment for mineral processing and steelmaking industries .



Our Slogan

WE GIVE NEW LIFE TO THE ORE

Our Policy

Fakoor Meghnatis Spadana Company is a knowledge-oriented engineering company that, with two decades of favorable background in designing, manufacturing and supplying magnetic equipment, crushing, granulation, processing and transfer of materials, while deeply understanding its effective and sensitive role in the industrial upgrading of our country, better protection of Natural resources is its pride.

Our Values

WE ARE PIONEER

- **P** Professionality
- **I** Innovation
- **O** One Step Ahead
- **N** Net Positive Impact
- **E** Energy Saving
- **E** Embracing for Changes
- **R** Recycling

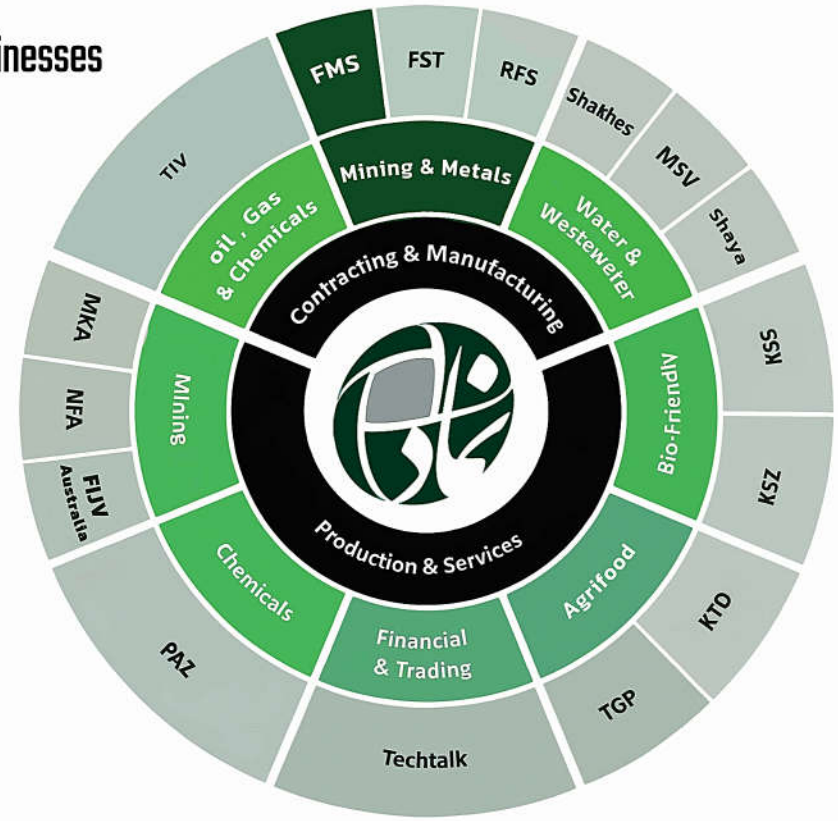
We are PIONEER and we never stop exploring new possibilities.
PIONEER means challenging the status quo and creating solutions to make them happen
As PIONEER we have the courage to pursue our dreams and the passion to make them happen
Being PIONEER is not just a slogan, it's a mindset. We embrace change. Learn from failure, and strive for excellence
PIONEER is more than a name. it's a mission. We are committed to delivering value to our customers, partners and society.

NSP Holding Group

FMS company as a designer and manufacture of mineral equipment is a member of NAMAD SANAT PARS (NSP) industrial group , which is a leading company in the following fields

Company Type **Private Holding Company**
Date of Establishment **2005**
Subsidiary Companies **+20 Companies**
Position among the top Irranian companies (IMI–100 2022) **Within frist 100 companies**
Position in the ranking top Iranian EPC Contractors (IMI –100 2022) **2**

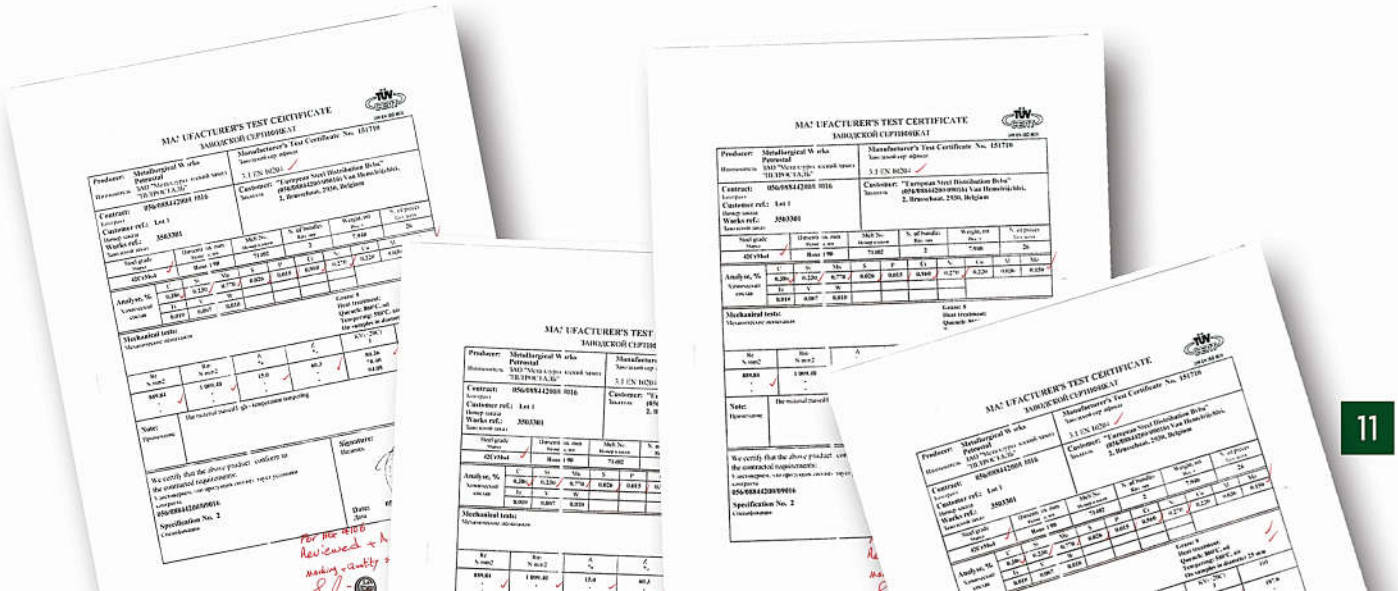
Core Businesses



1) Contracting & Manufacturing:
a) Minerals and Metals industries (steel, iron ore, copper, coke, ...)
b) Oil, gas & Petrochemicals Industries
c) Water and Wastewater Industry (desalination plants, urban and industrial water and wastewater treatment plants, water pipelines and pumping stations)
2) Production & Services:
a) Mines & Minerals (iron ore, copper, ...)
b) Agri–food Industry & Eco–friendly Products
c) Chemicals (resins, polyols, and thermoplastic polyurethanes)
3) Financial and Commercial Services

NSP Group Qualifications

No.	Field	Qualifications
1	Mine & Industry	1st Grade
2	Installation & Facilities Construction	1st Grade
3	Water & Wastewater Installations	1st Grade
4	Design & Building EPC Contracting	1st Grade
5	Water EPC Contracting	1st Grade
6	Residential Construction	1st Grade
7	Oil & Gas	1st Grade
8	Power	3rd Grade
9	Road Construction	3rd Grade



Manufacturing Workshops

Caspian

Workshop (Under Construction)

Isfahan Workshop

Abyek Workshop

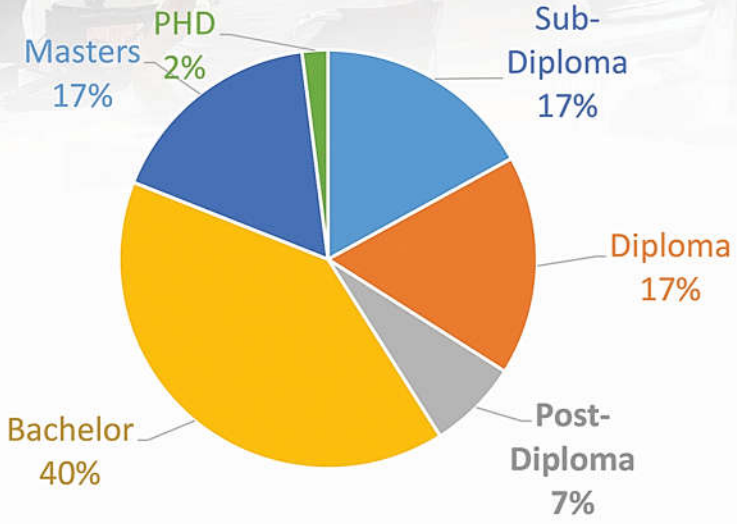
Nazarabad Workshop

FMS Scope of Work

- DESIGN AND MANUFACTURING
- COMMERCIAL & TECHNICAL CORPORATION
- SERVICES & SUPERVISION

Human Capitals

Personal Education



HSE Policy

Understanding the value of the planet and believing that the most important asset and the creator of all the vision and mission of the organization are people, Fakoor Meghnatis Spadana Company is committed to maintaining and improving the safety and health of its colleagues and other stakeholders, and properly understands its responsibility towards the environment and future generations and communicates it within and outside the organization. At FMS, we set and pursue specific goals for efforts and improvements in the field of HSE; for this reason, we are committed and proactive in seeking improvement and development in the following areas:

1. Implementing specialized standards and complying with occupational health, technical and environmental protection requirements and guidelines in all activities throughout the life cycle of products and services.
2. Monitoring and evaluating to identify, assess and control risks and create and disseminate an HSE attitude in organizational processes and procedures.
3. Raising awareness, training and related empowerment among colleagues; benefiting from the presence of specialized experts and trying to attract the participation of colleagues in HSE programs.
4. Planning for managing accidents and crises and reducing losses, as well as allocating the financial, human and organizational resources needed in safety, health and environmental programs.
5. Clarifying goals and obligations in the field of HSE for contractors and creating joint programs and goals with them in observing HSE principles and regulations.

Products

DESIGN AND MANUFACTURING

1- Separating systems

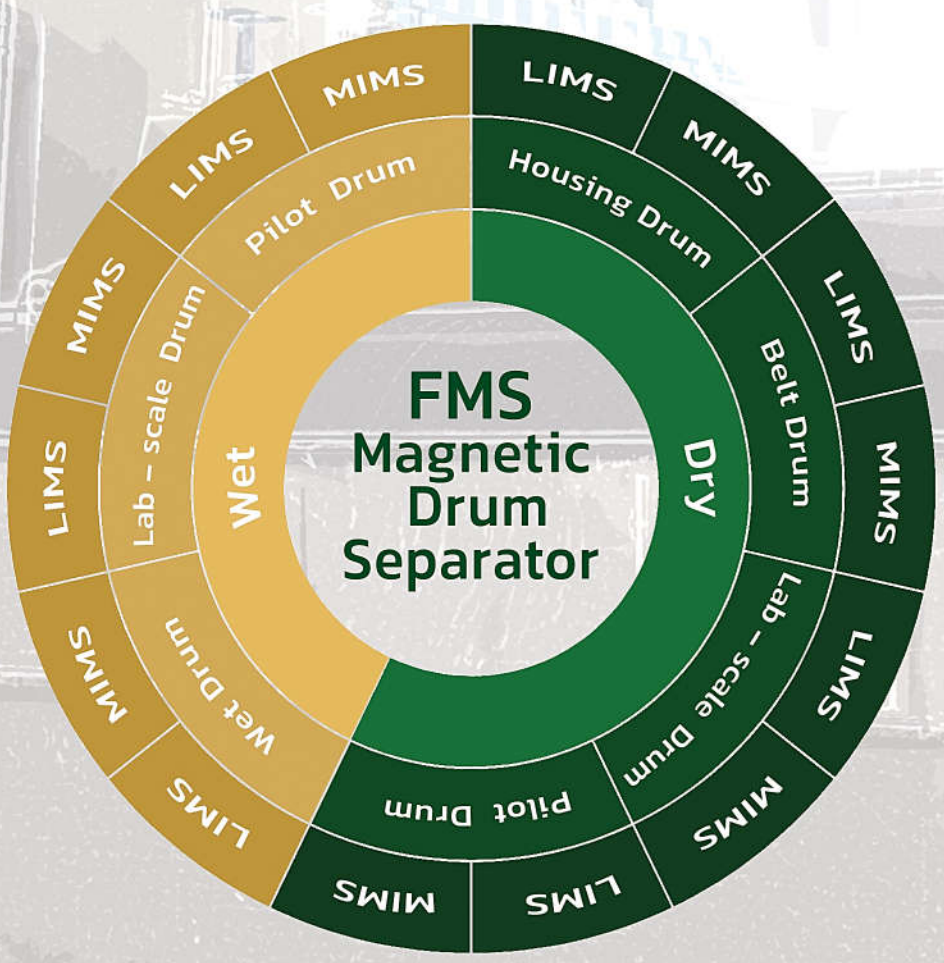
- 1-1 Magnetic systems
- 1-2 Screening systems
- 1-3 Gravity systems

2- Bulk Material Handeling (BMH)

- 2-1 Belt Conveyors
- 2-2 Feeders & Samplers

1- Separating Systems

■ Magnetic Separation Systems : High intensity up to 10.000 gauss
Wet Magnetic. Drum separator. Housing Drum Separator
Belt Drum Separator

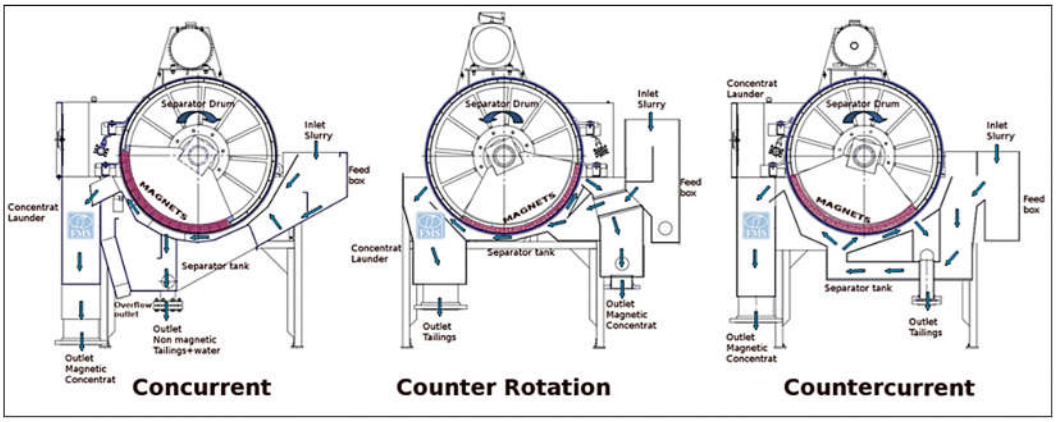


1-1 Magnetic system

■ Drum Separator

Wet Magnetic Drum Separator

(The largest producer Wet Magnetic Drum Separator in the country)
- ■ Separation and condensation of iron ore softening
- ■ Production of iron ore concentrate



To achieve the highest grade and recovery, the best tank type is selected based on ore characteristics and desired intention of magnetic separation.
Since the tank is continually in contact with slurry, weak tank material will result in corrosion and early damage. Tank body and frame material for FMS drum separators are made of stainless steel entirely.

Dry Magnetic Drum Separator

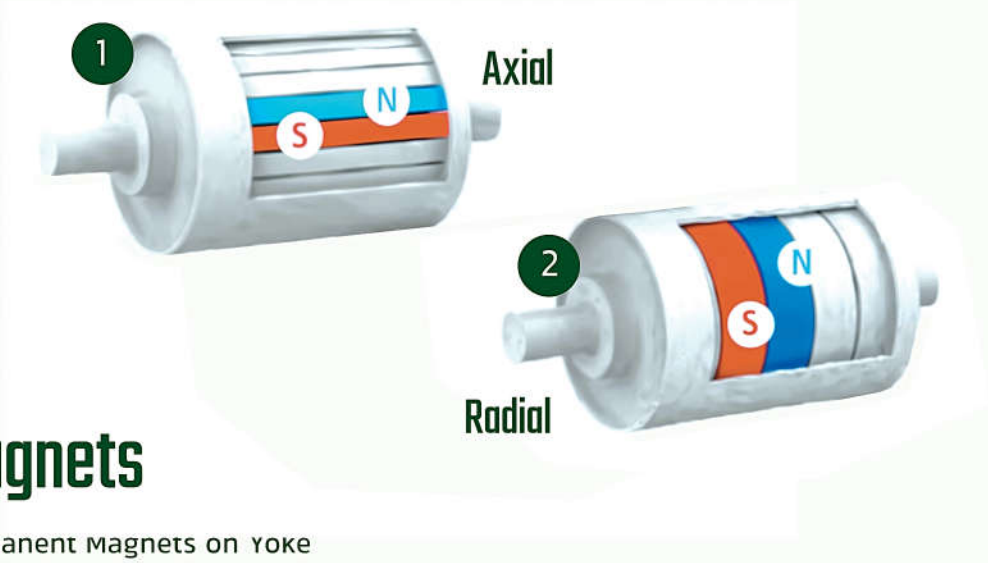
(The maker of the most active dry drum separators in the country's projects)
Water access restrictions
Separation of fine ore and coarse grain

Lab - scale Magnetic Drum Separator


WHIMS

MAGNETIC ARRANGEMENT

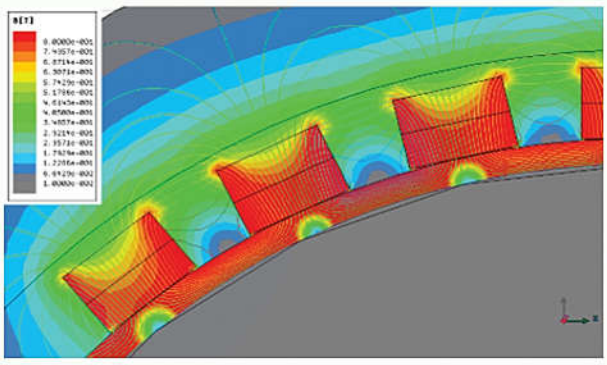
Axial arrangement of magnetic assembly is dominated design with higher product quality , but radial arrangement also could be consider when the main concern or in cases which much bigger particle size need to be handle specially for dry applications.

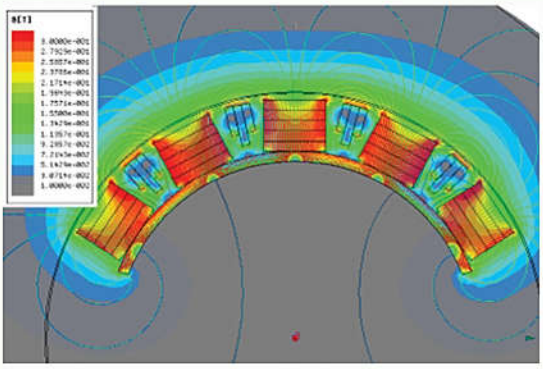


Magnets

Permanent Magnets on Yoke

magnets are installed on fixed yoke inside rotating drum. Placing magnets on the yoke is done based on the process type of iron ore beneficiation. The yoke is made of and has several machined rows. The Shaft is made of a non magnetic material and is a 3 piece non integrated part for ease of replacement.



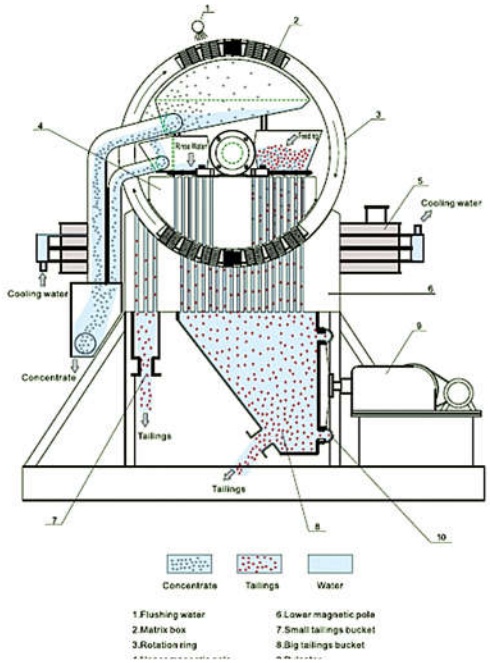


Wet High Intensity Magnetic Separator (WHIMS)

Magnetic Separation: Up to 50% higher grades in hematite recovery Wet High Intensity Magnetic Separator (WHIMS)

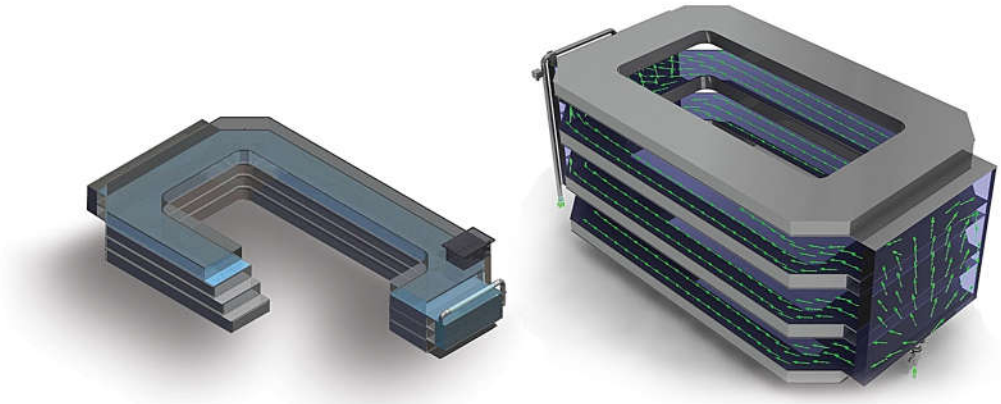
WHIMS Features

Vertical ring provides jam–free operation
Improved concentrate grade and recovery
Adjustable magnetic intensity 0–22,000 Gs for beneficiation of minerals with different magnetic susceptibilities
Low consumption of electrical power and cooling water
Compact structure
Low maintenance



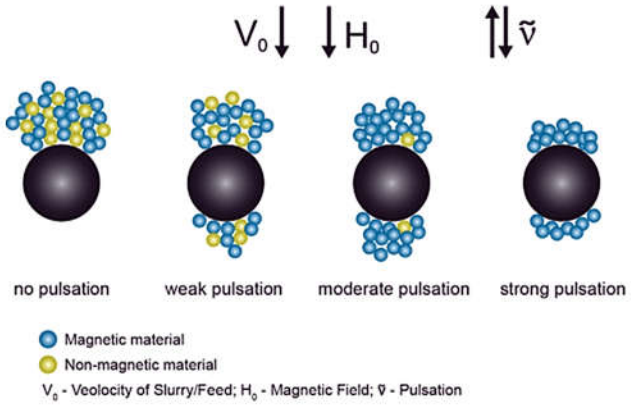
WHIMS Coil

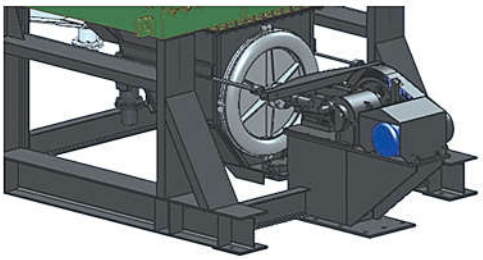
While magnetic field in Magnetic Drum Separators are caused by permanent magnets, when high DC current passes WHIMS copper coil creates strong magnetic field. Water transmission through the coil controls the generated heat.
Taking the advantage of Coil, makes it possible to achieve magnetic field up to 22,000 Gs which is not possible by using permanent magnets.



WHIMS Pulsation Unit

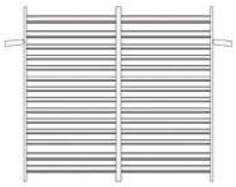
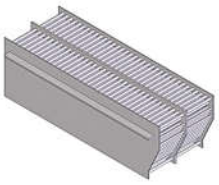
WHIMS pulsation unit makes pulp level move up and down. Pulp movement rinses particles attracted on surface of matrix and keeps particles suspended in pulp, offering thorough separation.
Therefore, it delivers higher recovery with desirable concentrate grade, the system prevents jam in matrix as well.

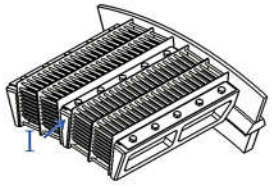




WHIMS Matrix

WHIMS Matrix on ring induces high intensity magnetic field on its surface when it rotates in magnetic area. The high intensity magnetic field suits it for concentration of weak magnetic mineral and purification of non-magnetic material.



Hematite
Fe2O3
Ferric Iron Oxide

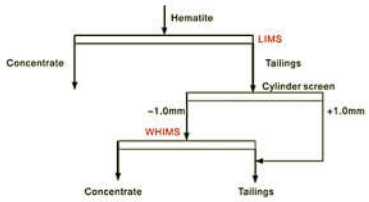
Ilmenite
FeTiO3
Iron Titanium Oxide

Martite
Fe2O3
Hematite pseudomorphs after Magnetite

Manganese
Pyrolusite
MnO2
Manganese Dioxide

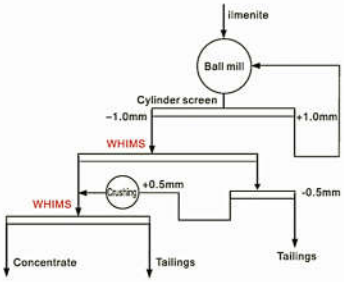
Hematite

Item	Grade(%)	Yield(%)	Recovery (%)
Feeding	30.1	100	100
Concentrate	52.7	49.6	86.96
Tailings	7.8	50.33	13.04



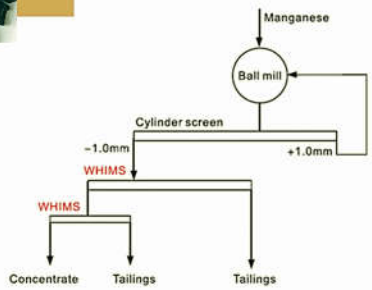
Ilmenite

Item	Grade(%)	Yield(%)	Recovery (%)
Feeding	8.85	100	100
Concentrate	47.5	9.38	50.34
Tailings	4.85	90.62	49.66

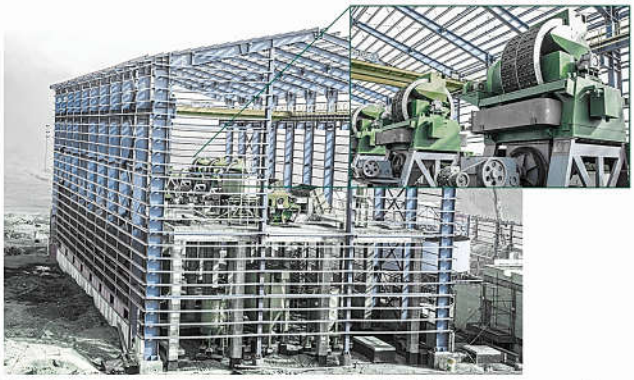


Manganese

Item	Grade(%)	Yield(%)	Recovery (%)
Feeding	8.85	100	100
Concentrate	30.9	21.53	75.17
Tailings	2.8	78.47	24.83



References



Jalalabad Iron Concentrate Plant – Kerman, Iran (2019)

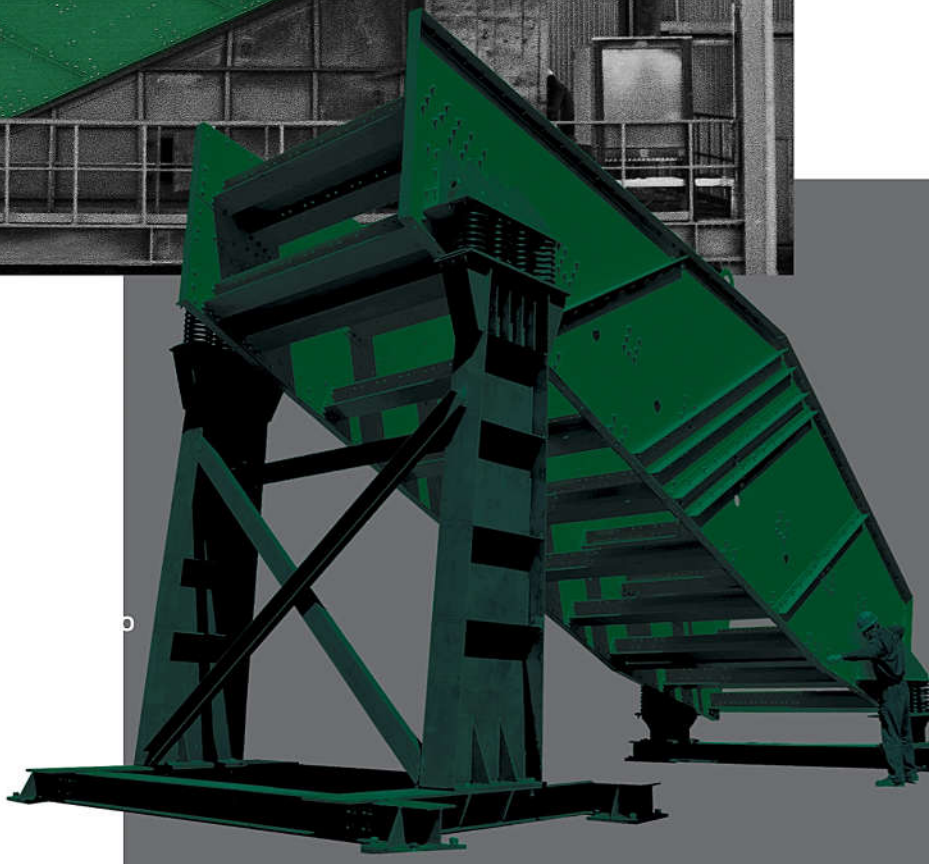
Certificate Of Appreciation

شرکت محترم فکور مغناطیس اسپادانا

با سلام و احترام

1-2 Screeninig systems

Vibratory Screen



FMS presents a wide range of vibrating screen type to cover most of sizing/scalping applications in mining industry . protection of wear protected critical parts beside engineered reliable and efficient design makes an optimal screen design.

Types of equipment

Horizontal Screen

FMS Horizontal Screens are heavy duty type, utilized in a wide range of applications such as mill discharge screening, coal preparation, and wet sizing . Inclination of

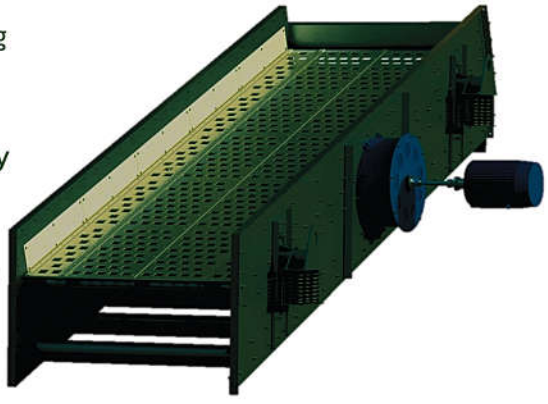
Double slope / Banana screen

This type of screen has been manufactured up to the capacity of
1440 tph with 2.5*8.5 screen area.
Single, double or triple deck design can be provided for high efficiency screen .

Pellet de-dusting screen

Proper material motion, large screen area, shape of media opening and wear resistance material for media are the main characteristic of pellet de-dusting screens. Screen area up to 2.5*9 m with 400 tph has been designed and worked successfully.

Scalping Screen



Inclined screen usually suggested for scalping applications due to the lower manufacturing cost comparing linear motion screen. Screens up to 2.4*7.2 m dimension, 2000 tph capacity and 80% material humidity has been manufactured. The vibrating double raw self-aligning bearing type and no contact grease sealing system is utilized to maximize the bearing life time.

Type of equipment

Dewatering screen

For application with 90% water content in feed and desired discharge with below 15% moisture, dewatering screen is suggested. This screen has negative slope, 1500 rpm vibration frequency and capacity up to 50 tph.

Washing screen

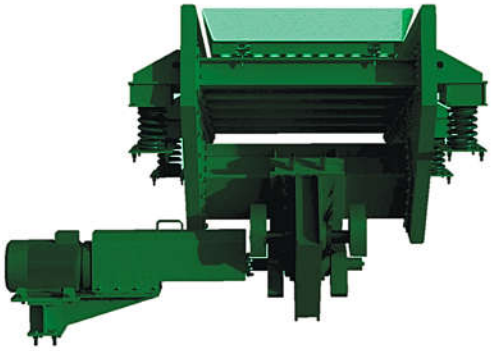
High screening efficiency with minimum of maintenance cost are the main options considered in FMS washing screens. In addition, special water nozzle are used for higher washing performance.

Grizzly screen

Linear-motion screens manufactured for heavy-duty pre-screening of fine materials before primary crushing. Grizzly screens have the robust design to bear feed stones up to 1000 mm size.

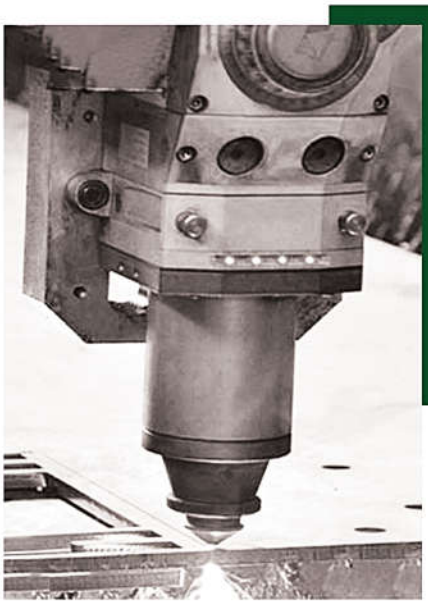
High temperature screen

High temperature screens are designed to bear feed materials, with max 1000 C temperature. Special wear resistant media, cooling system for exciter and heat protection of electrical motor is considered in design.

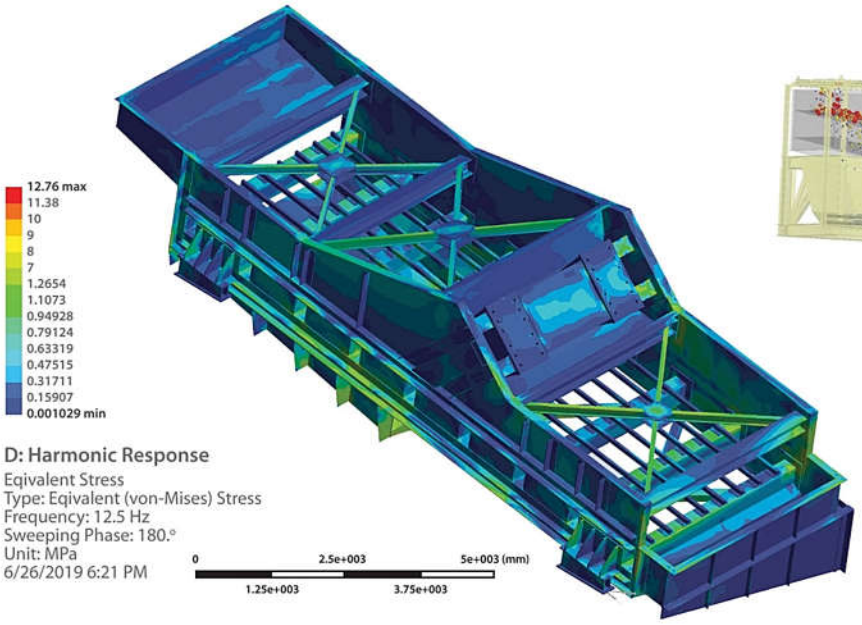


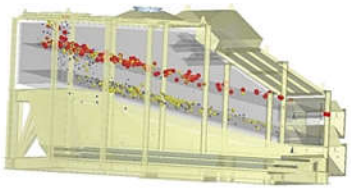
Manufacturing Quality

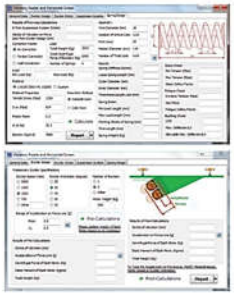
- Analysis and simulation come to reality standards are passed.
- Screen body and parts are cut and marked via CNC laser machine
- accurate assembling procedure results in a balanced screen structure.
- High quality welding and uniformity of welding surface suitable for vibrating screen



Professional design procedure







Professional test

Roller Screen & Roller Feeder

FMS presents a variety of roller screens and roller feeders with different dimensions for sizing, scalping and feeding applications. The length of the rolls offered by this company is from 1.5 meters to 6 meters.

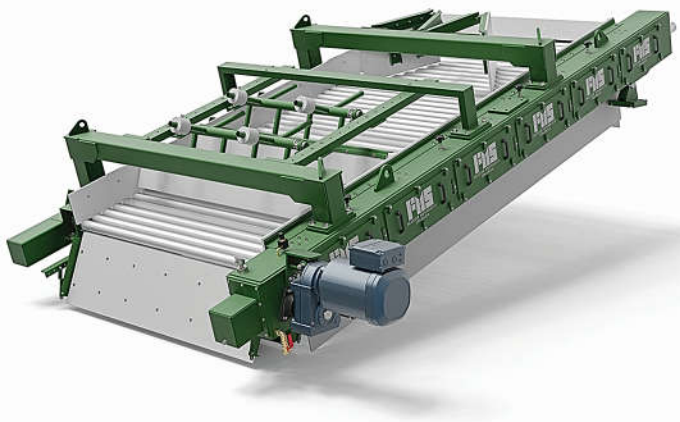
Roller Screen & Roller Feeder Feature

Ability to convey brittle materials with high humidity (such as green pellet iron ore) because of gentle conveying of material using rotary rolls
Minimum space for installation
Various sizing capabilities due to the ability to adjust the roll gaps
Minimum roll diameter to provide maximum performance in minimum space
Use of anti-wear coated rollers to increase the lifespan

- Types of Equipment according to Application :

Scalper Roller Screen

Scalping sticky and wet material
Specific UHMW cover

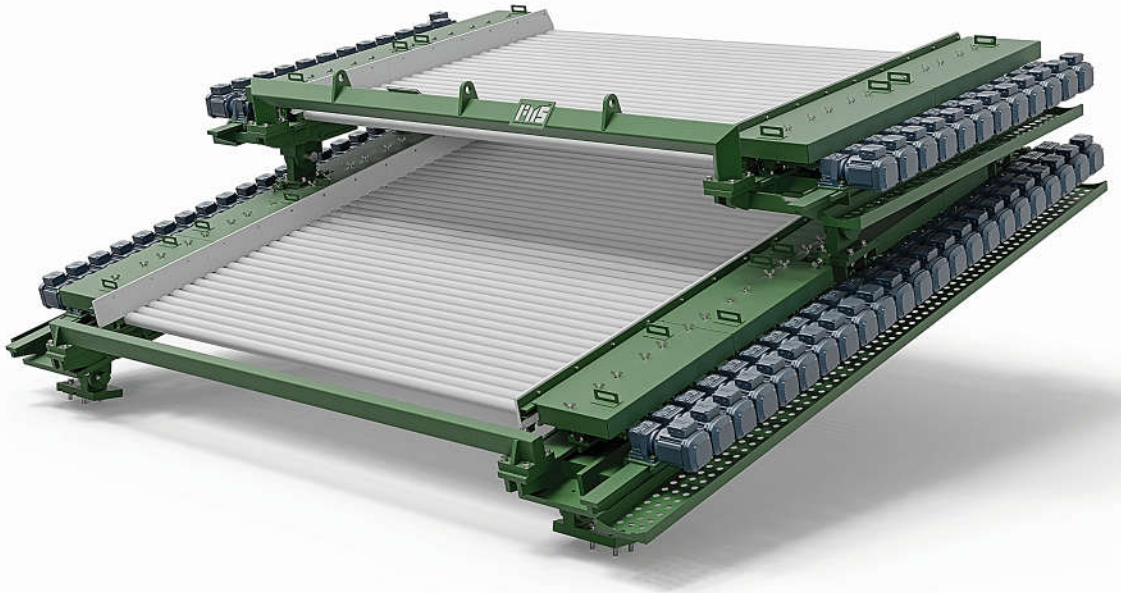


Sizing Roller Screen

Classifying of green pellet iron ore under the balling disc

Single and Double Deck Roller feeder

Classifying and feeding of green pellet iron ore before induration machine



Triple Deck Roller Feeder

Classifying and feeding of green pellet iron ore before induration machine with better quality and productivity and reduction of energy consumption

compact Roller Screen

Compact size for low space places
Suitable for efficiency pilot tests

Types of Equipment according to Drive

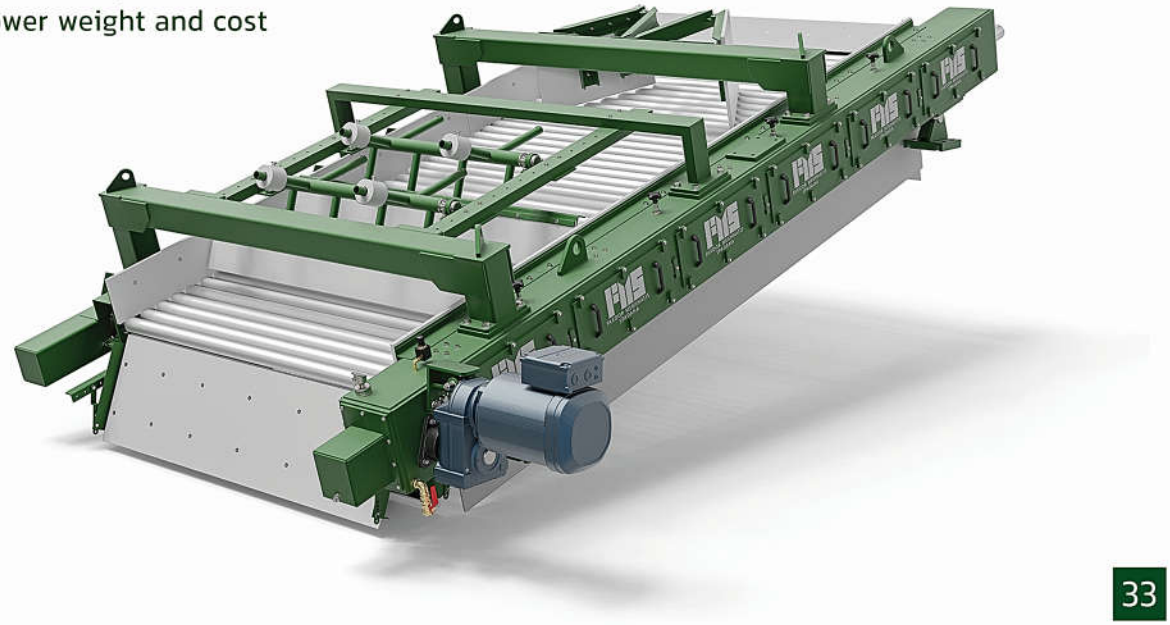
FMS can offer roller screen and roller feeder regarding drive type in two types, multi-drive or single drive. Each of these types has its advantages

Multi-Drive

Easy and fast maintenance
Automatic lubrication sys[illegible]
Cardan shaft coupling for large misalignment

Single-Drive

Minimum space for installation
Lower weight and cost



Roller Technology

Scalping sticky and wet material
Specific UHMW cover
Dedusting cover

Chrome Coating
- *300 microns coating*
- *Corrosion resistance*
- *Wear resistance*
- *Recyclable base rolls*

Particular UHMW Cover
- *Wear resistance*
- *Low Friction Coefficient*
- *Easy service*
- *Recyclable base rolls*

304 Stainless Steel
- *180 HBn hardness*
- *Low Cost*
- *Proper pellet quality*

Other Coatings (as per customer requirements)
- *Carbide Wolfram (CW)*
- *Ceramic Coating, etc.*

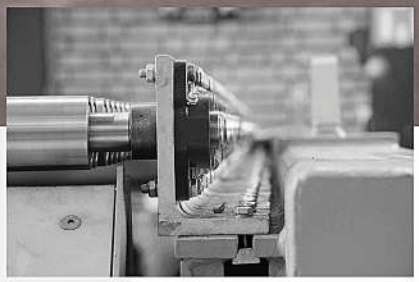
CA6NM Stainless Steel
- *300 HBn hardness*
- *Wear resistance*
- *Proper pellet quality*

SF80 polymer Base

Advantages
- High abrasion resistance
- No adhesion to the concentrate
- Sufficient friction
- Sufficient impact resistance
- High effective lifetime

CR10 Embossed chrome plate

Advantages
- Patent registration for the brand of FMS
- High wear lifetime
- Surface hardness above 60 Rockwell
- thickness of Chrome layer more than 200 microns
- No adhesion to the concentrate
- Sufficient friction for proper passage of the pellet
- No need to re-gap during the operation
- Effective lifetime of more than 18 months



AF190 Carbide base coating

Advantages
- Very high wear life
- Surface hardness above 70 Rockwell C
- High resistance to abrasion of objects stuck between the rolls
- No adhesion to the concentrate
- Sufficient friction for proper passage of the pellet

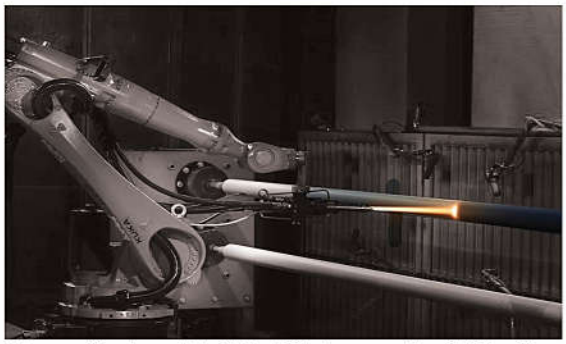
AF190 Carbide base coating

Model	Coating type	Life time	Application	Location	Re-gapping interval
CA6NM	No coating	9-12 months	Classifying green pellet	Pelletizing plant	Every 3 month
SF80	Polymer base	+6 months	Protecting HPGR	Concentrate scalping	No re-gapping required
CR10	Embossed chrome plate	+18 months	Classifying green pellet	Pelletizing plant	No re-gapping required
AF190	Carbide base	+36 months	Classifying green pellet	Pelletizing plant	No re-gapping required

Introducing FMS HVOF coating line

- Fully automated sandblasting and coating equipment with a robot
- The possibility of coating and sandblasting parts with a length of more than 6 meters
- The possibility of apply all kinds of ceramics with anti-wear applications, heat resistance
- Full implementation of qualitative tests of coatings

Fully automatic Sandblast with a working length of 7 meters

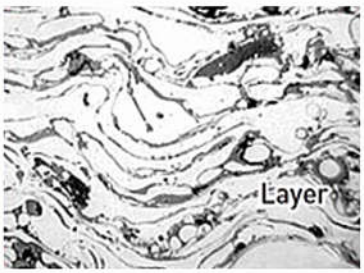


6 degrees of freedom robot with the ability to move on the rails (7th axis)

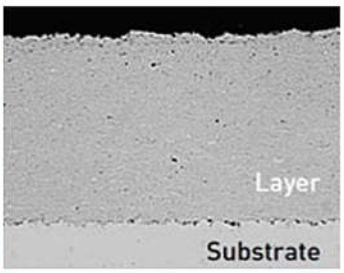
Types of coating methods

HVOF (High velocity oxygen fuel)

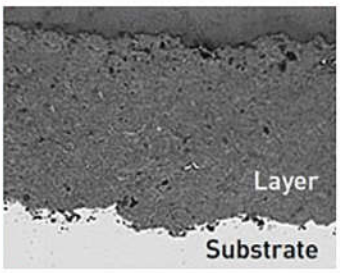
- High wear resistance
- Maximum surface quality
- Minimal porosity in the coating
- Uniform surface quality
- Minimal deformation due to lower production temperature



ARC Sprayed Metal



HVOF Sprayed Carbide

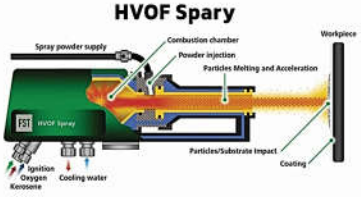


SPD Sprayed Ceramic

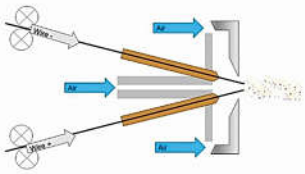
Types of thermal spraying method

- Arc Spray
- Plasma Spray
- Flame Spray
- HP/HVOF (High Velocity Oxygen Flow)

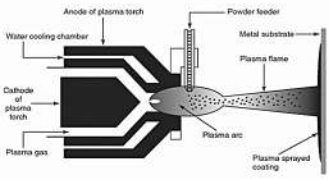
HVOF Spary



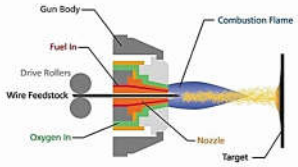
Arc Spray



Plasma Spray



Flame Spary



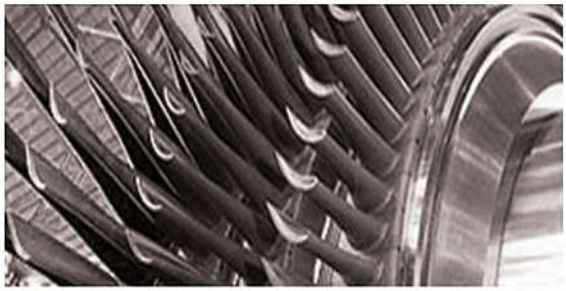
Advantages of thermal spraying by HVOF method:

- The possibility of coating with a wide variety of materials (those that melt without decomposition)
No structural changes of the substrate, no distortion and thermal stress caused by heating the substrate (about 200°C)
- Development of coatings with high melting point
- Excellent adhesion strength due to rapid cooling of sprayed particles and creation of mechanical locks
- Excellent wear resistance against all types of wear, including abrasive wear, adhesive wear, erosion and cavitation.
- Development of ceramic coatings for electrical insulation (induction coils of furnaces and electrode holders)
- Development of electrical conductor covers (axles of train wagons)
- Development of thermal barrier coatings in order to reduce the surface temperature of parts and protect against heat (power plant turbine blades and missile heat shields)

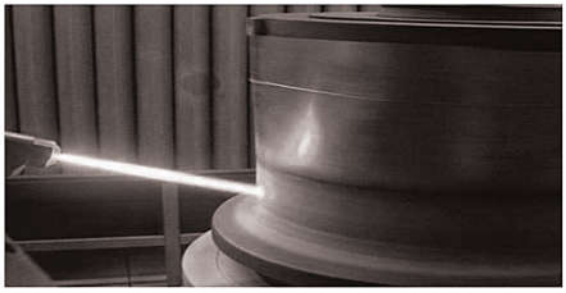
HP/HVOF Coating Applications:

- Steel industry: parts of steel production and forming lines, especially rolling rollers, cutting blades and forming molds.
- Oil, gas and petrochemical industries: applying tungsten carbide coatings, satellites, etc. on Gate Valves, Ball Valve Seats, Conveyor Screws, Hydraulic Rods, etc.
- Aerospace industries: applying thermal barrier coatings on turbine blades of aerospace industries, bearings, stator, helicopter rotor, etc.

- Power plant industries: gas turbine blades, nozzles, gas exhaust fans, boiler walls, etc.
- Automotive industry: Transmission Shifter Forks
- Printing and paper industry: printing rollers, paper production rollers

- Hydraulic industries: shaft jacks and solenoid valve spools and...
- Medical industry: dental implants
- Cement industry: Cement industry rollers




Refrenece Of Roller Feeder

Row	Description	Client	Project	QTY	Capacity t/h	Location
1	Roller Fedeer Double Deck	MSC	Mobarakeh Steel Company Pelletizing Plant	1	1200	Grate Feeding Station
2	Roller Fedeer Double Deck	KSC	Khouzestan Pelletizing Plant1&2	3	1100	Grate Feeding Station
3	Roller Fedeer Single Deck	MSV	Toseeh Melli Pelletizing Plant	1	465	Grate Feeding Station

Refrenece Of Roller Screen

Row	Description	Client	Project	QTY	Capacity t/h	Location
1	Scalper Roller Screen	Chadormalu	Ardakan Pelletizing Plant	1	600	Before HPGR
2	Roller Classifier	Chadormalu	Ardakan Pelletizing Plant	6	140	Under Balling Disc
3	Roller Classifier	MSV	Toseeh Melli Pelletizing Plant	6	120	Under Balling Disc
4	Roller Classifier	GEG	GEG Pelletizing Plant1	1	180	Under Balling Disc
5	Roller Classifier	FST	Sechahoon Pelletizing Plant	9	159	Under Balling Disc
6	Scalper Roller Screen	Pasr Sanaat co	Butia Iranian Steel Company Pelletizing Plant	1	600	Before MIXER
7	Scalper Roller Screen	Azaran	Blaine Increase Sechahoon	2	500	Before HPGR
8	Scalper Roller Screen	KSC	Khouzestan Pelletizing Plant1&2	2	350	Before MIXER
9	Scalper Roller Screen	EMC-Co	Mobarakeh Steel Company Pelletizing Plant	1	550	Before HPGR
10	Roller Classifier	BISCO	Butia Iranian Steel Company Pelletizing Plant	1	150	Under Balling Disc
11	Scalper Roller Screen	BISCO	Butia Iranian Steel Company Pelletizing Plant	1	600	Before HPGR
12	Scalper Roller Screen	PAMIDCO	Khorasan Steel Pelletizing Plant	1	950	Before HPGR
13	Scalper Roller Screen	PAMIDCO	Bahabad Pelletizing Plant	1	150	Before HPGR
14	Scalper Roller Screen	SMIC	Sangan Steel	1	800	Before HPGR
15	Scalper Roller Screen	MANA	Re-Grinding of SISCO	1	540	Before HPGR

1-3 Gravity Systems

Multi Gravity Separator (MGS)

This proven machine has an unsurpassed ability to recover fine and ultra-fine materials. The MGS' continuous process is low energy and its robust design requires minimal maintenance.

Originally developed for the Cornish Tin industry, the C902 MGS is a proven production machine with over 80 manufactured machines, many of which are still in service. The Multi Gravity Separator (MGS) operates on a similar principle to a shaking table to separate and upgrade very fine materials. MGS' subtle centrifugal force simulates enhanced gravity, pinning heavier materials to the wall of the drum to be dragged forward by scraper blades, while lighter tailings are agitated by the shaking motion and washed away. The MGS can be used as a primary separator of fine materials, scavenging tailings and middlings from spirals or shaking tables. Alternatively it can be used in two stages to maximise recovery and grade. The MGS will function satisfactorily with materials up to 500 microns but, it works exceptionally well where there is a narrow size band of material below 100 microns.

The benefits of using an MGS system in a gravity circuit are typically:
Delivers very high grade and recovery from fine and ultrafine material
Sustainable, chemical free processing
Suitable for concentrating many valuable metal bearing ores
Self regulating and able to cope with significant changes in material grade without losses
Ability to cope with changes in feed pulp density by adjusting wash water levels.

Flexible solution
Can be used to produce saleable grade concentrate from low grade tailings in one step, or
Can be used in a two stage process either as a rougher or finisher to optimize capacity and recovery

The MGS' scraper blade system drags heavy fine materials to the front of the drum, while tailings are washed to the back of the machine. Alternative scraper designs are available to optimise the scraping action.

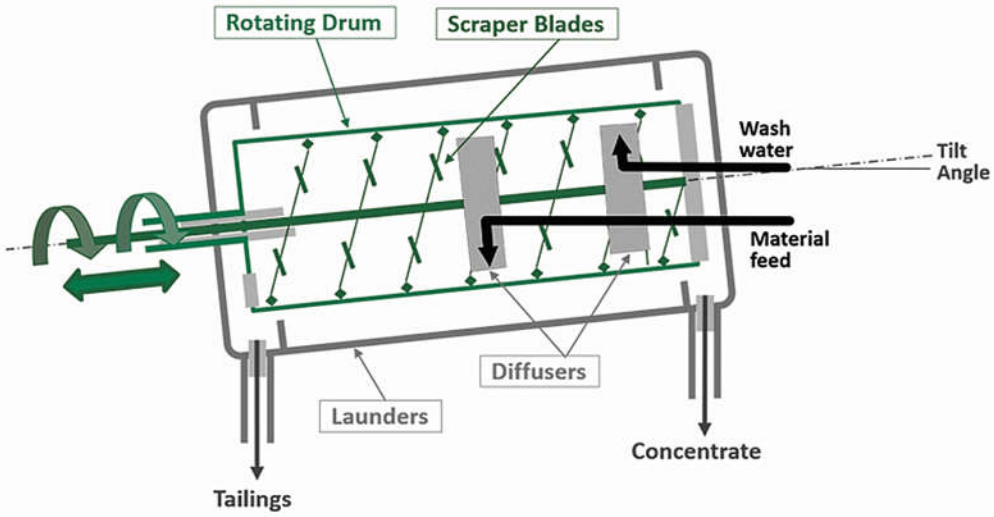
New style machine with simplified chassis design and more robust safety guarding. Machine shown with lockable stainless steel control panel and Allen Bradley PF525 –Ethernet/IP addressable inverters for remote operation and contro

The MGS mechanical system is ultra simple allowing easy access for occasional maintenance. Drum rotation and shake motion are driven by separate variable speed drive motors.

How the Gravity Mining Multi Gravity Separator works

Drum Rotation – Slurry is fed to the mid point of the drum as it rotates. The subtle centrifugal force capitalizes on small differences in Specific Gravity keeping heavier materials in place to be dragged forward by the scraper blades. Lighter materials flow with the wash water to the rear of the drum. Rotation speed is variable (100–180 RPM) allowing flows to balance for optimum recovery and grade.

Scraper blades are rotated at a differential speed to the drum which drags heavier materials forward to the front of the machine. Blade design is critical for maximum output, allowing lighter material to flow, while heavier material is caught and dragged forward.



Tilt Angle of the drum is adjustable and creates a natural gravity bias for the material and wash water.

Wash Water combined with natural gravity and the drum tilt angle creates a flow carrying less dense tailings to the back of the drum. Adjusting the water flow can impact the concentrate grade.

The Drum and Scraper system move together in an adjustable Axial simple harmonic motion. This fluidizes the material allowing directional movement.

MGS' Tapered Drum creates higher centrifugal forces towards the tailings end of the machine, this has the effect of recycling any heavy material that finds its way to this end of the machine

C902 MGS technical specifications

Capacity	4-5 tonnes/hr (dry basis-material dependent)
Feed Particle size range	500-1 micron
Feed Pulp Density	10% to 50% solids w/w
Unpacked dimensions	4242*1540*1980 mm
Gross Packed weight	3,050Kg
Nett weight	2,500 Kg
Electrical standard	IP66 with centrally mounted control panel
Power requirements	3 phase 415V 50Hz - other options available
Drum Drive Electric Motor	2 * 2.2 kw variable speed
Shake Drive Electric Motor	2.2 kw variable speed
Total Power	6.6 kW installed (typical consumption 3.3kW
Drive System	Belt
Rotational Speed	100-185 rpm infinitely variable
Shake Frequency	2-6 Hz infinitely variable
Shake Amplitude	15 mm std. (10 or 20 mm optional)
Tilt Angle	7.5 degrees std. (0-9 degrees optional)
Wash Water	0-40 litres/min per drum (free of solids)
Construction materials	
Frames	Galvanized steel
Drum	Aluminium
Drum Lining	Abrasion resistant polyeurethane

FLOTATION

The technology of making flotation systems has been exclusive to countries such as Australia, Germany, America and some European countries for the past few years.
In order to localize this technology, Fakoor Meghnatis Spadana is a knowledge-based company that benefits from a wide network around the world. Since 2012, it has started the project of making flotation cells, and in order to benefit from the aforementioned network, it is now possible to transfer technology from prominent companies in this field, such as FLS Group, etc., for the greater benefit of our dear country.
This company has succeeded in transferring the manufacturing technology of iron concentrate factory equipment from KHD Germany and several technology

Separation and concentration by flotation method

■ In mines for the purpose of processing and concentrating minerals, due to the presence of disturbing elements as well as the increase of sulfur percentage, the flotation system can be used to process the desired elements.
■ Fakoor Meghnatis Spadana, as a leading company, has the possibility of manufacturing and designing all types of flotation cells by using 3D simulation and also using the processing laboratory.
■ CFD simulation in 3–phase mode has been carried out as a joint project with Tarbiat Modares University and this simulation is an introduction to flotation cell design.

Due to the scientific ability and the deposition of knowledge in Company, it is possible to simulate, design and manufacture this equipment, as well as design a complete line of flotation system in this complex:

- Process calculations of cells
- Reverse engineering of cells and cell mechanism
- Making laboratory and pilot samples
- 3D simulation of cells
- Design and optimization of flotation cells.

Cells designed in FMS company

Rounded design of WEMCO and DORR–OLIVER models:

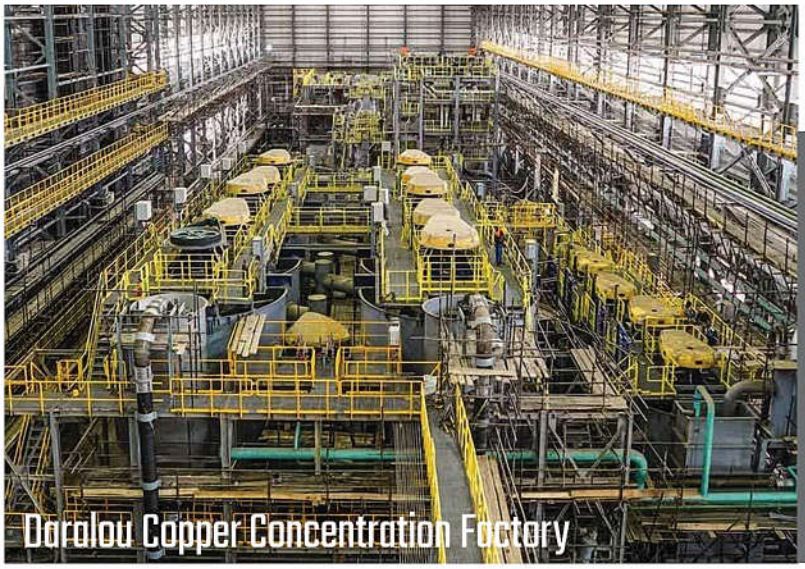
■ 250 cubic meter cell (tank + mechanism) WEMCO design
■ 160 cubic meter cell (tank + mechanism) WEMCO design
■ 130 cubic meter cell (tank + mechanism) BGRIMM design
■ 50 cubic meter cell (tank + mechanism) WEMCO and BGRIMM design
■ 50 cubic meter cell (tank + mechanism) DORR–OLIVER design
■ 30 cubic meter cell (mechanism + stirrer) WEMCO and BGRIMM
■ 10 cubic meter cell (mechanism) DORR–OLIVER design.

Rectangular design of SALA model

■ 11 cubic meter cell (tank + mechanism)
■ 9 cubic meter cell (tank + mechanism)
■ 3.3 cubic meter cell (tank + mechanism)

Ongoing projects

Copper flotation project of Chahfiroozeh copper (includes 12 cells of 130 cubic meters Rougher, 13 cells of 50 cubic meters Cleaner & Cleaner Scavenger, 3+1 cells, Re-cleaner, Air-blower, Dosing system, Samplers, process pumps, Analyzer systems and spare parts and the corresponding installation.
6 flotation cells of 250 cubic meters of Miduk copper concentration phase 2 project
12 flotation cells of 250 cubic meters of Miduk copper phase 3 concentration project

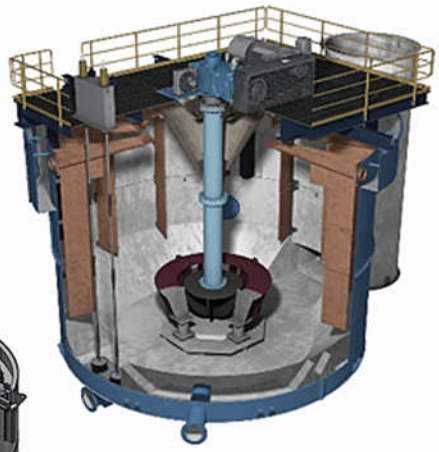


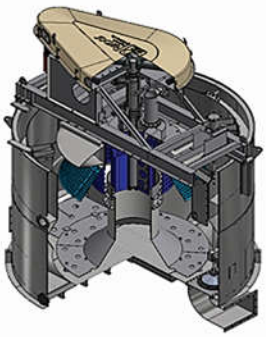
Daralou Copper Concentration Factory

Design and manufacture of flotation systems:

Since 2014

Self- aspirated flotation cells
WemcoVolume: 5- 250 m3
design
Forced air flotation cells
Volume: 5- 130 m3
Dorr Oliver design , RCS design
Conventional flotation cells
Volume: 5- 30 m3
Denver design, Sala design





Planning to build the most equipped flotation research and design center

Since 2022

- Construction of a research center in a roofed and fully equipped shed with an area of 1500 square meters and a height of 20 meters.
- With the ability to perform laboratory flotation tests with various designs of tanks, rotors and stators.
- With the ability to perform semi-industrial flotation tests with different arrangements of self-aerated and aerated tanks.
- Conducting simulation studies with modern software in order to optimize operational parameters.
- Conducting development research to localize the world's current technologies in the field of flotation.
- Effective cooperation with reputable domestic and international cooperation centers and companies in the field of flotation.

Flotation Cells

History of development of flotation technologies
First generation flotation circuits:
Denver flotation cells
(Zero phase Sarcheshme copper)

Second generation flotation circuits
Flotation System
Tank Cell+Column (Phase 1 Midok and Soongoun)

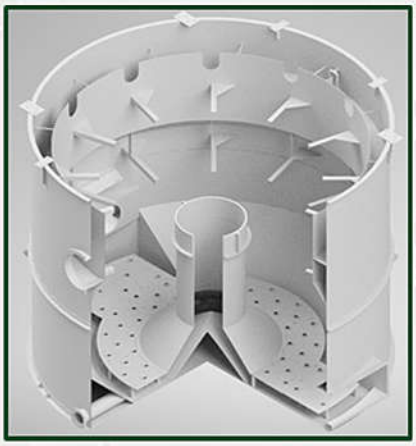
Third generation flotation circuits:
Hybrid systems
Aspirated Cell+ Air Force Cell (new copper development phases)

Developing flotation circuits
Pneumatic cells
Hybrid cells
Mixed Row Cells

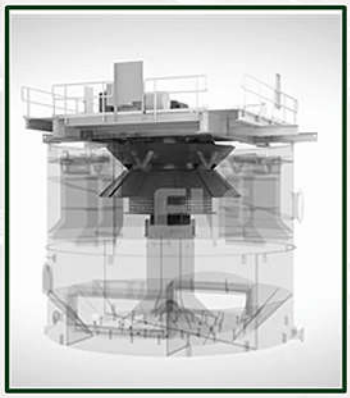
Ongoing projects

Types of flotation cells of self-aerated design
Designed and built by Fakoor Meghnatis

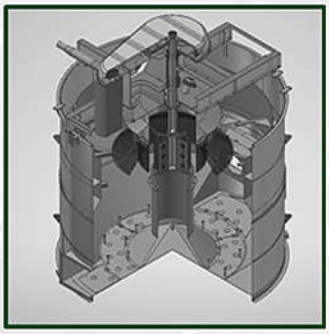
Wemco Type



250 m^3
(Ø8120 X 6377 mm)

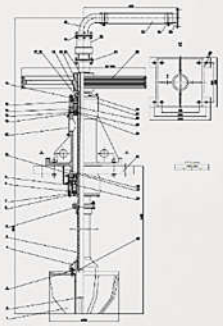


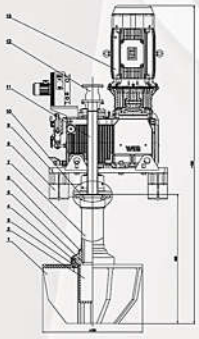
160 m^3
(Ø6980 X 5932 mm)



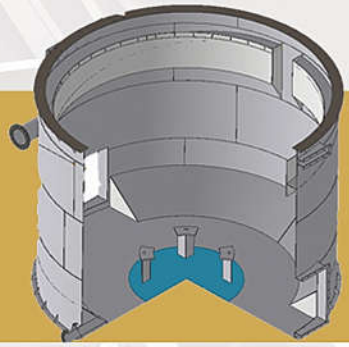
50 m^3
(Ø4588 X 3814 mm)

Types of flotation cells of aerated design

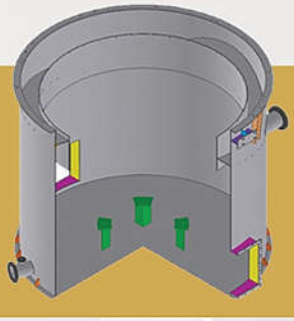




Dorr-Oliver Type



130 m^3
(Ø6600 X 4910 mm)



30 m^3
(Ø6600 X 4910 mm)

50 m^3

10 m^3

2- Bulk Material Handling (BMH)

2-1 Belt Conveyors

We help our customers make Gem out of the soil

We are beside you in :

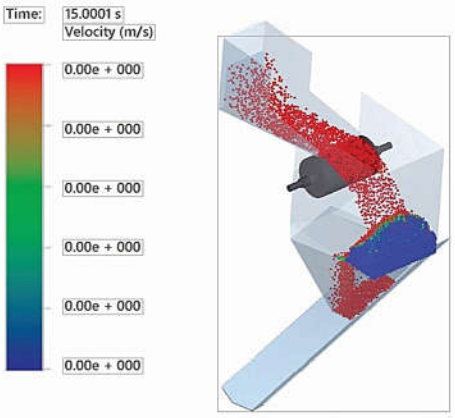
- Equipment installations to commissioning
- Suppling genuine quality of spare and wear plate
- Providing various belt types upon application requirement
- Training and engineering services during installation and commissioning
- Fast and qualified assistance by our engineer for proper selection of conveyer , simulation and process analysis

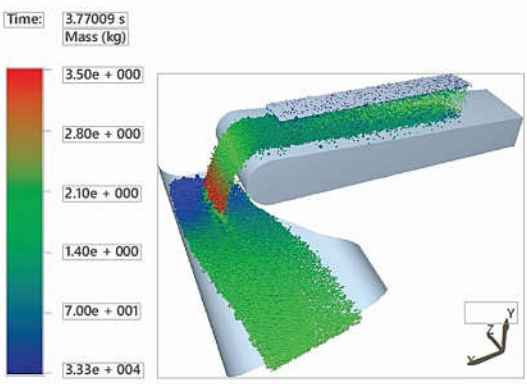
Engineering

All conveyor parts will be fully analyzed and optimized by state-of-the-art technical methods in our design department. These methods embrace finite elements methods for static and dynamic analysis and discrete elements methods for dynamically simulates application condition.
FMS design department experts are advising about detailed matters during the planning of conveyor belt systems. They thus contribute to ensuring that the belt complies with the operating conditions, that the belts technological aspects are considered, and that a customized belt construction is achieved for use.

Our design and analyses are done base on the following codes and standards:

- CEMA Universal 7th Edition
- ISO 5049: Mobile Equipment for Continues Handling of Bulk Material
- AWS D1 .1: Structural Welding Code
- ACI 318: Building Code Requirements for Structural Concrete and Commentary
- MSHA: Mining Safety and Health Administration
- AISC: Manual of Steel Construction
- NFPA70: National Electrical Code
- DIN for General Parts Design





FMS Conveyor Frames

FMS conveyor frames are made up of standard modules with lengths of 6 meters, 3 meters and 1 meter. In these modules, instead of using profiles with standard sections, all elements are formed by bended plates and bolt fasteners are used for connecting them, instead of welding.
All static and dynamic analyses are done on these modules according to 1505049 by FMS design department and correspondingly the optimum design is developed.

1–Ability of Designing

As mentioned above, all FMS Frame's elements are formed from bended plates; consequently, there is no need to choose their figure from standard profile and due to this fact, each section can be designed precisely based on their calculated safety factors, so over–designing can be prevented and optimal design of the frames, in comparison whit the conventional ones,
will be firmly ensured

2–Frames Weight Reduction

In view of the ability to design an optimal frame, as mentioned above, the FMS weight of conveyors' frames are reduced about 30% to 50% in comparison with conventional types. As a result, in addition to material cost reduction, the costs of manufacturing, shipment and erection are also reduced.
Likewise, the towers and relative structures and foundations are down–sized

3–Reliability Increase

Standardizing all of the frame's modules and using the automated precise CNC machineries in our continuous production line will lead to produce more reliable products. Likewise, frame's modules are made from high qualified plates, instead of conventional standard profiles and making use of bolting fasteners considered all, the better mechanical properties and more reliability of FMS frames, in comparison with the conventional ones, will be firmly ensured

4-Production Time Reduction

Due to the following reason, FMS frames' production time is reduced by approximately 70% comparing to conventional ones.

- Standardizing and uniformity of all frame modules
- Reducing shop drawing process
- Using high speed cutting and bending CNC machines
- Eliminating the drilling and deburring operations
- Faster quality control Process
- Reducing welding process and welding inspection

5-Erection Cost and Time Reduction

Modularity and uniformity of frame's parts decrease the erection time. Also, they reduce the erection cost due to the reduced weight of the parts and enabling us to use smaller cranes. Faster storage, easily identifying the parts and eliminating touch up operation are the other reasons of erection cost and time reduction. According to our experiments, more than 100 meters conveyer frames could be erected easily by just 6 technicians

6-Considerable Reduction of Welding

Reduction of welding operations results in reducing cost, increasing production rates and reliability as well. Similarly, by eliminating the welding process, inspection and NDT are eliminated and due to decreasing HAZ zone, the mechanical properties of frames, elements significantly increase

7-Surfaces Galvanizing

Because of being bolted the modules' elements and painted separately, all of the modules' surfaces can be galvanized and, as a result, the quality and lifetime of frames could be increased accordingly. Also, the need of yearly painting will be eliminated.

8-Increase of Shipment Capacity

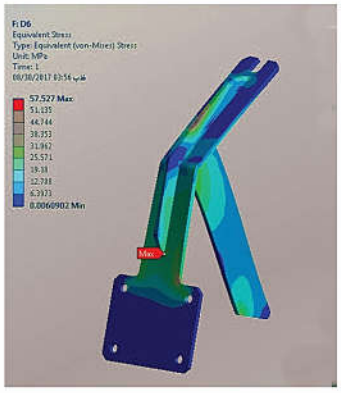
Since all of the modules' elements are trans ported separately and could be packed compactly, the Shipment capacity would be increased about 100% comparing with the conventional ones. Therefore, loading and unloading cost decrease significantly

9-Easy Installation

There are many holes on each modules auxiliary elements such as rain covers, electrical elements standard eyebolts can be installed easily without extra cutting and welding at site even during conveyer operation

Material Handling 29%Weight Reduction

Long Belt Conveyors



2-2 Feeders & Samplers

FMS has actually designed, manufactured, supplied and serviced a wide range of feeders in mining industry. We have many experiences with standard and special types of feeders; which have been used for feeding fine particles up to 400 mm large stones. Our products has long life, low maintenance and minimum operation cost.

Type of equipment

Unbalance motor drive

Feeders with unbalance motors are the right answer for a perfect, economical and low cost maintenance feeders.
Upon client project condition it may required to design special feeders. As an example, due to lack of space a 2750*2750 mm
feeder is designed in order to distribute material
uniformly on a magnetic drum separator.

Electromagnetic drive

Feeder with magnetic vibrators are usually being used for feeding and dosing. Magnetic drives enable the continuous adjustment of the throughput during operation.
They also can reach full power right after being switched on. For accurate dosing, while switch–off occurs, in a fraction of a second, feeder stops the material flow immediately .

COMMERCIAL & TECHNICAL CORPORATION






Mineral sampling

The implementation of a mining project (exploratory, extractive, ore dressing and processing) is impossible without sampling operation due to the scope of its operations and the level of reliability of primary data, and optimal sampling as well as correct preparation of samples is actually the first brick of mining operation. Errors in this step, especially systematic errors, will have adverse effects. Careful investigation has shown that part of the weaknesses of failed projects and unexpected results are rooted in sampling and preparation errors.

In the mineral processing operation, the most important part of the operation is the monitoring of the process performance, which requires continuous sampling, therefore, sampling is very important. Proportion and quality distribution of the sample to be tested (specific gravity, grade, sizing, moisture, mineralogy and recoverability) should be the same both in the mass and in the sample.


Mineral sampling operation

Sampling operations in mineral processing plants are usually done continuously and non-continuously. In the continuous operation of the non-stop production line, material sampling is done, which is much more practical than non-continuous sampling because it reduces production line stops and also greatly reduces risks.

In general, sampling in mineral processing systems is done in two ways, wet and dry, depending on the process stage. The main purpose of sampling in these systems is to check effective crushing, sizing, and grade.

Automatic sampler

This equipment has the ability to ha dry minerals continuously, this equipment is mobile and is .installed on a belt conveyor

This equipment is capable of sampling at any time interval. The installation places of equipment are usually before and after a crushing process. For example, after gyrator or jaw .crusher, before and after the cone crusher, before and after the HPGR

In line with the localization of this equipment and considering the necessity of this equipment for the Iranian mineral processing plant, FMS has been the first Iranian company to design, .manufacture and commission it

Mineral Processing R&D Center

TECHNICAL SERVICES

- Crushing circuit (selection and sizing of crusher)
- Grinding circuit (selection and sizing of HPGR,ball mill,screen and hydrocyclone)
- Magnetic separation circuit (selection and sizing of low/medium/high intensity magnetic drum/belt separation, LGS)
- Gravity separation circuit (selection and sizing of separation equipments)
- Flotation circuit (selection and sizing of flotation stages and cells)
- Tailing Thickening (selection and sizing of tailing thickening equipments)
- Concentrate and tailing Filtration Process (determination of filtration conditions, selection and sizing of filter media)

Idea → Test (lab & pilot scale) → Concept Design → Basic & Detail Design → Commissioning → Monitoring → Test → Evaluation → Optimization

Qulity Control Policy

As a leading and knowledge–based organization in the design, supply, production and delivery of magnetic solutions and equipment, crushing, granulating, processing and transporting minerals, Fakoor Meghnatis Spadana Company, by understanding its deep and effective responsibility in our country's industry, has made the protection and greater productivity of the natural resources of our beloved Iran and the development of the export of engineering and industrial services and equipment the focus of its efforts.

For this reason, all managers and colleagues of the company believe that a development–oriented and systematic effort to increase customer satisfaction and continuous improvement are important pillars of FMS's sustainability and development.

Relying on the efforts and competencies of our colleagues and paying attention to the great capacity that is created by our efforts and determination for our beloved country, we are committed to global standards and the following principles to provide our stakeholders with desirable quality; to create a gem from the soil:

1. Commitment to quality and achieving goals: At FMS, we are committed to proactively paying attention to and observing quality in all processes and products based on the needs and expectations of stakeholders, especially current and future customers, by quantitative planning and monitoring specific goals.

2. Continuous improvement: At FMS, we are committed to continuously improving operational processes and management systems to prevent errors and improve productivity based on various types of evaluation and control at the level of processes, procedures, tools and systems, as well as ensuring the necessary competence and attention by our colleagues to the importance of
improvement.

3. Training and empowering colleagues: At FMS, we are committed to ensuring that our colleagues have the necessary competencies, resources and opportunities to make decisions and participate in the continuous improvement of processes and products.

EPC Construction of 40 million ton iron ore concentrate plants

COMMERCIAL & TECHNICAL CORPORATION

In order to complete and develop its products in several projects, in order to provide better services and facilitate things for its customers, Fakoor Meghnatis Spadana cooperates with many European and Asian companies in the field of manufacturing, designing and supplying some mineral products. Some of the products of this company are licensed by the companies listed in the table below.

COMPANY	COUNTRY	EQUIPMENT
LEEJUN	China	HPGR &Spare Parts
IEM	Germany	Material Handling
COMPOSIT	Russia	Rubber Hoses
ZENITH	China	Mobile Crushers
STEINERT	Germany	Sorting System
DARTEK (SKAKO)	Spain (Denmark)	Vibrating Feeders
AUMUND	Germany	Material Handling
ERSEL	Turkey	Crushing System
BGRIMM	China	Processing Technology
AUMUND GROUP	Germany	Apron Feeder, Bucket-Elevators, Chain-Conveyors
SHADE	Germany	Stockyard and Recliner
SAMSON	Germany	Alternative Fuels Feeder

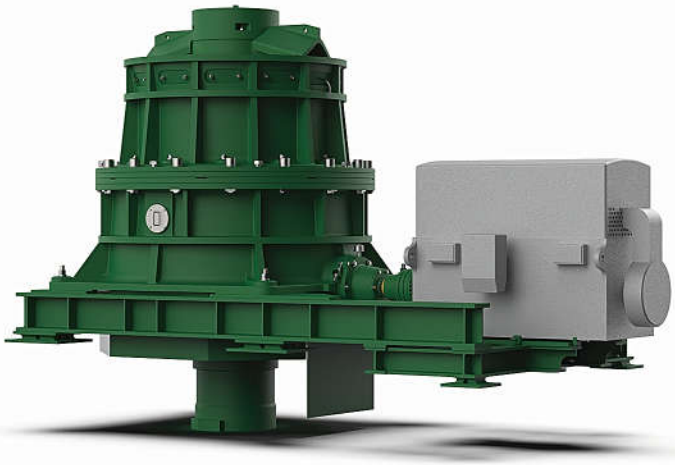
Crushing & Grinding Systems

The ZROg 846M cone crusher boasts significantly improved performance, capacity and installed power, while at the same time retaining the reliability, excellent product shape and high set under that is an industry benchmark. The brilliant design uses a heavy duty hydraulic cylinder to support the main shaft; this feature combined with the significant flexibility of our automatic control and monitoring system allows easy and automatic crusher setting and crusher utilization optimization and monitoring during operation.



Ease of operation and maintenance coupled to the aforementioned features positions the ZROg 846M as a state of the art, cost efficient, modern cone crusher with advanced performance. The ZROg 846M cone crusher has a large clearing circuit, and is designed to safely and quickly allow uncrushable materials to pass, avoiding costly damage and associated downtime for repairs. The use of a single bowl for all liners over its range of operation helps reduce downtime and inventory costs while allowing optimum versatility, flexibility, and efficiency in any aggregate application.

The ZROg series of cone crusher has a wide field of use as it can easily be matched to changes in production through the proper selection of crushing chamber and eccentric throw. Our cone crusher is ideal for secondary and even tertiary crushing.



Application Cone crusher

- Production of ballast and chippings in the natural rock and gravel industry
- Ore crushing in metallurgical plants
- Refractory industry
- Ore mining

Advantages

- High throughputs
- High crushing degrees
- Low operating and wear part costs
- Simple crusher operation with optimum efficiency
- Optimum life of crushing members
- Large main shaft resilience stroke

FMS Service

FMS Service

With our experience, commitment and knowledge Optimize your mining performance

Today, mining operators can hardly achieve sustainable goals due to low-grade ores. Our experience, knowledge and commitment are designed to help you fill your skills and knowledge gaps. On-site support as well as remote support, using advanced digital technologies, ensure that our experts are always at your service and offer various solutions to your problems.

Sustainable Production

Today, due to the harder access to mineral resources, the nature of mining has changed and it is becoming increasingly difficult to find manpower with sufficient skills. At the same time, there are a variety of innovations that have created a world of opportunities for mine operators. Innovations that help produce more of the product. Solutions that enable you to dramatically reduce waste and digital tools that enable easy communication between your mine and our experts. The way forward is not limited to new solutions, but also includes the optimization of old methods. Our extensive knowledge of solutions, our long and diverse experience, will help you manage a more productive, sustainable and cost-effective mine.

Key Benefits

- Increase productivity and efficiency
- Reducing equipment downtime
- Specialized support when necessary
- Reduce operating costs
- Filling skill gaps
- Increasing energy efficiency
- Performance optimization
- Increasing the useful life of equipment

Increase productivity on your site

Even when things are going as expected, you may be looking to increase productivity or save water or energy. Our wide range of on-site and remote services can help you increase process efficiency and optimize equipment performance. Our service contracts include both traditional and digital methods to increase accessibility, reliability and performance of equipment. These contracts are open contracts based on close cooperation between FMS and customers and can be applied to a specific equipment or to a process line, depending on your needs.The advantage of this type of agreement is the further development of a preventive and holistic maintenance strategy.

Experience and expertise

We offer experienced and qualified professionals to carry out your projects.

Ways of communication

We are ready to receive any request by providing effective communication ways to provide a quick response and a stable communication process, such as the possibility of registering a request on the company's website and making phone calls to experts.

Responsibility:

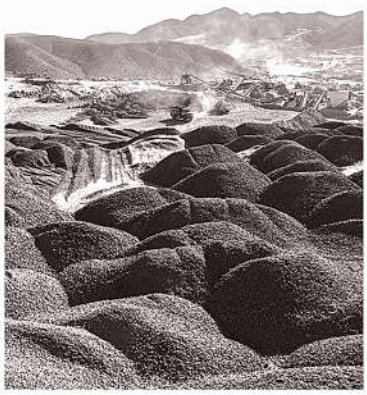
Skill shortages are a problem for mining sites around the world:

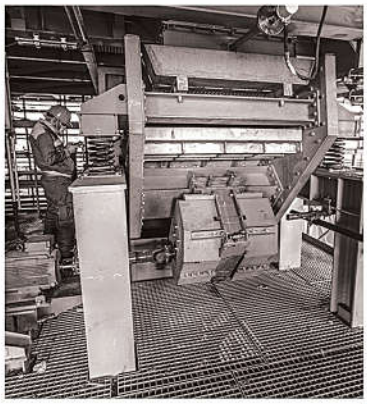
We are committed to our customers. When you partner with us, we consider ourselves part of your team and share in the success of your project.

Support

Manage and condition monitoring

Remote support services enable you to reach an expert when needed, without waiting for someone to come to your site.Available on an ad hoc or ongoing basis, our remote support packages range from simple phone calls to advanced digital tools that connect directly to your equipment to provide a quick and comprehensive response.





Services

Supply of Spare Parts

In order to have a complete and comprehensive maintenance program in equipment-oriented organizations, accessibility to spare parts in a certain period of time is very necessary.Lack of critical spare parts during planned or unplanned maintenance will have a big impact on overall equipment effectiveness (OEE).Fakoor Meghnatis Spadana Company has made it possible for customers to choose the right spare part and supply it in the shortest time and at the right cost.

Installation and Commissioing to shut down

Maximize value creation from new equipment with our installation services

Our cooperation starts before the first day. From the very early stages of planning and development, our team of experienced technical consultants is available to help you optimize your site design for maximum productivity with sustainable performance.Make sure everything is done safely and thoroughly with our pre-commissioning inspections.

For all your start-up needs and beyond, our maintenance and operation training courses ensure that not only is your equipment up and running, but so are your employees.

Take the stress out of your installation project

Our specialized installation services reduce risk and enable you to minimize downtime and achieve a faster ROI.

- Pre-launch reviews
- Functional Commissioning
- Performance Commissioning
- Performance Guaranty Test
- Training of Maintenance, Repair and Exploitation

Maintenance and overhaul

The equipment and physical assets of the organization undergo depreciation during their life cycle, and this forces organizations to periodically decide to retire or rebuild their equipment. In many cases, the renovation and overhaul of industrial equipment, if implemented correctly, is a decision that can help the organization in creating the most value from physical assets. The correct implementation of overhaul processes requires specialized human resources with high technical ability, all-round management capacity, and of course accurate project planning, factors that, if put together, can contribute to the greater effectiveness of equipment overhaul decisions No matter how the analysis and planning are precise and accurate, in the end it is the form and quality of doing the work that can become the main challenge. The Executive Unit of Fakoor Meghnatis Spadana, relying on years of specialized cooperation with various mining factories and specialized and trained manpower, is ready to provide case-by-case and comprehensive services to various factories.

Condition monitoring and troubleshooting

Maintenance and repairs based on condition monitoring (CBM) is one of the maintenance and repairs strategies based on which the most important parameters of the equipment such as vibrations, sound, lubricant condition, temperature, etc. are measured in certain time intervals and based on these data for repair or the replacement of parts and equipment is decided. Condition monitoring is the most important part of condition–based maintenance (CBM), which is known and used as the most beneficial strategy for performing maintenance work in a wide range of industries.

For each parameter in each device, a limit and a warning limit are determined.

In the case of most machines and for many parameters, these limit values specified in the standards or by the manufacturers indicate when the component failure is imminent and repair or replacement operations are required. In fact, the basic philosophy of predictive maintenance is that service and repairs are only allowed when measurements show that repairs and service are necessary for the health of the machine.

Fakoor Meghnatis Spadana Company is ready to provide vibration, oil, sound, electric current and thermography analysis services to employers and industrial owners by employing top experts and with the help of advanced condition monitoring tools.

Online Condition monitoring

Find the first signs of failure and take effective action.

What is an online condition monitoring service?

We currently provide online condition monitoring services for mining equipment.

This service connects your equipment to our experts.

The sensors read the data related to the health of the equipment and send it to our cloud based monitoring system. Data can be obtained from existing sensors (Service Level I), or if more accuracy is required, our experts can install additional sensors (Service Level II).

- Reducing unplanned downtime and secondary damage to equipment
- Increasing the lifespan, reliability and performance of equipment
- OPEX reduction
- Achieving more sustainable exploitation

Online condition monitoring by our expert team provides you with the following:

- **Incident reporting in case of critical alarms with remote support allows you to take immediate action to prevent failure.**
- **Periodic asset health reports with around the clock recommendations to significantly improve equipment health and reduce operating costs.**
- **Ability to perform predictive maintenance and repairs – Online access to plant performance data**
- **Online access to plant performance data**

These services complement on-site maintenance and repairs and help you plan your next major overhaul, while also optimizing production and costs.

But what we do with the data is important. At Fakoor Meghnatis Spadana Services, we analyze, filter and interpret data and help you succeed in industry challenges such as safety, quality, productivity and environmental protection.

Education

Upskilling the workforce Around the world, skills shortages are preventing mining plants from reaching their true potential. In addition to providing specialized services, we intend to transfer our knowledge to your team. For this reason, our trainings are designed in such a way that the right training is provided at the right time and to the right people.

Investing in people is investing in sustainable productivity.

- **Flexibility in planning**
- **Reduce downtime**
- **Improve productivity**
- **Increase efficiency**

Fakoor Meghnatis Spadana training courses can be customized to meet the specific needs of your plant and cover all stages of the concentrate, pellet, steel, etc. production lines.

A worthwhile investment

in quality training not only improves plant performance, but also increases your team's confidence, motivation and satisfaction.

Reduce the risk of equipment failure and improve availability by improving troubleshooting and maintenance skills.

What training do you need?

We provide hands-on training for all plant equipment and systems, from any manufacturer.

Let us know what you need and we will create a course specifically for you, ensuring you get the most return on your training investment.

You can participate in our training courses online or at your factory

Consulting & Providing Solution

Mineral processing is a difficult and complex task and there are many areas for errors to occur in it. Whether you're facing a problematic production bottleneck or a catastrophic failure, our expert teams will help get your plant back to original productivity as quickly as possible. Increase the potential of

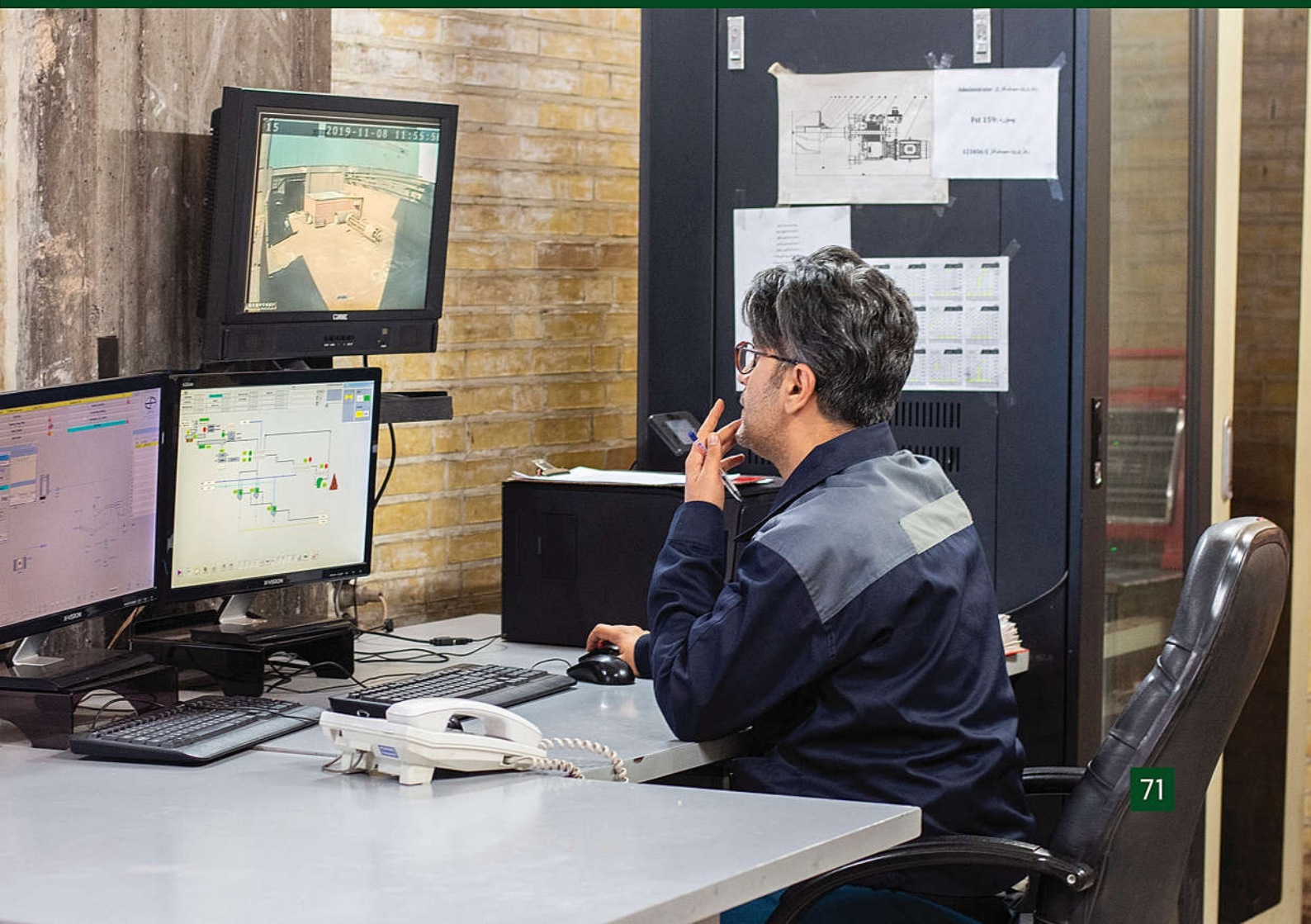
your factory with our expert advice.

- Improving factory performance
- Increasing energy efficiency
- Increasing efficiency

Why audit?

Auditing is an essential component of any process improvement project.
Working closely with you, we use a combination of on-site inspections and data collection to provide you with a comprehensive picture of your current plant performance and identify areas for improvement.

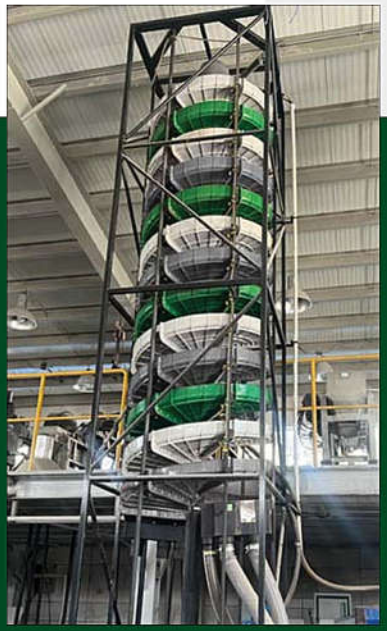
Based on your specific needs, this audit covers all processes, production methods and the condition of mechanical equipment and helps to identify ways to improve product quality and stability, equipment availability, maintenance practices and more.



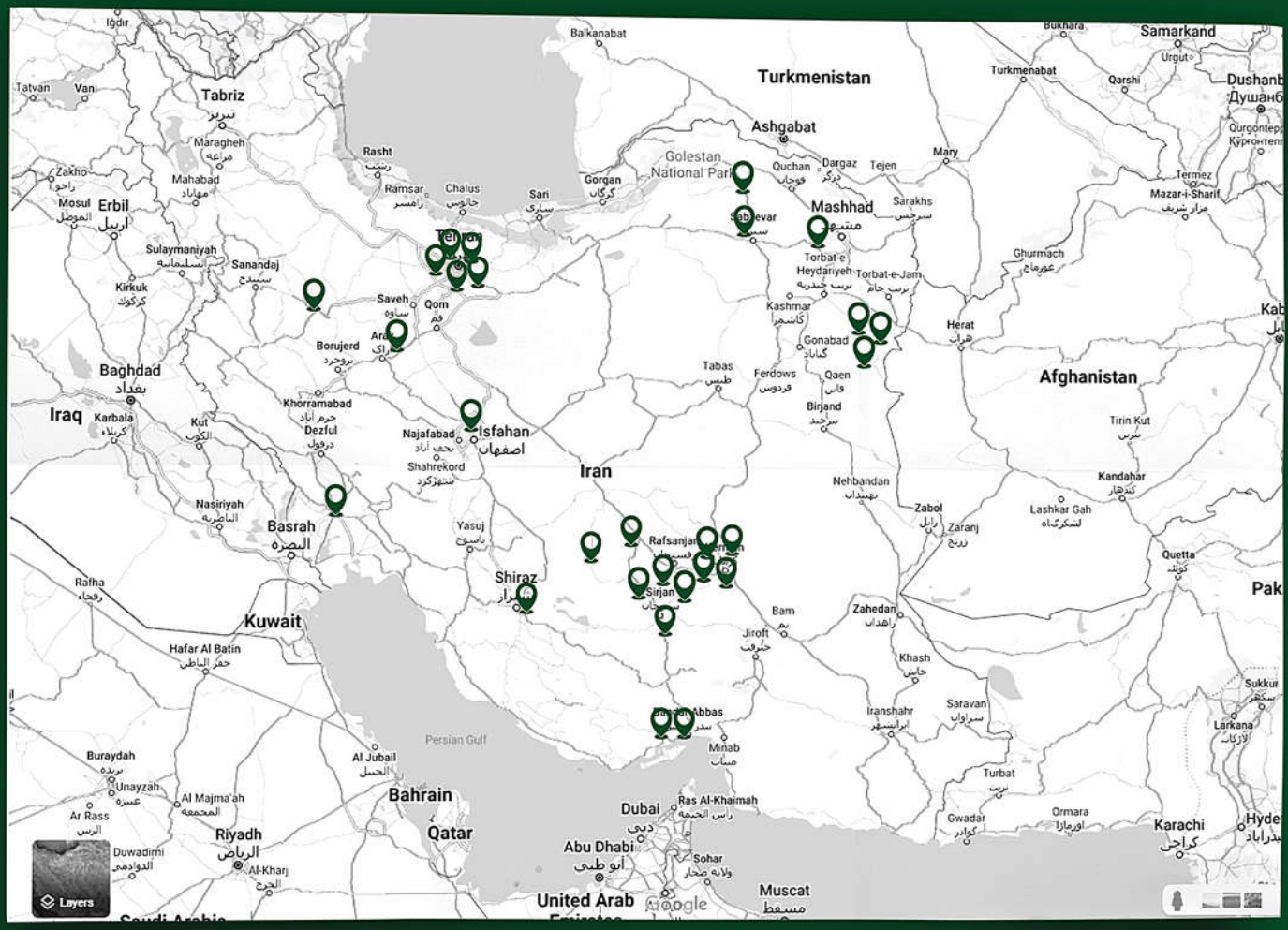
Laboratory services

The more you know, the greater your ability to improve your plant's performance and profitability. Tighter control over the process increases process stability and quality, which has a positive impact on other energy-saving initiatives in the plant.
Our audits cover all relevant analyzes in the laboratory, including chemical and physical tests.
Once completed, we will verify the accuracy of your data and let you know where there is room to improve production line performance and product quality.

Fakoor Meghnatis Spadana is ready to provide all kinds of relevant services in its well-equipped laboratory by providing all kinds of crushing, separation, dewatering, etc. tests.



Customers Services




WE ARE
PIONEER

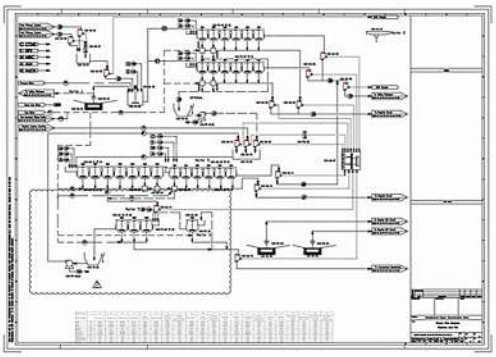
REFERENCES

Mineral Processing Solutions

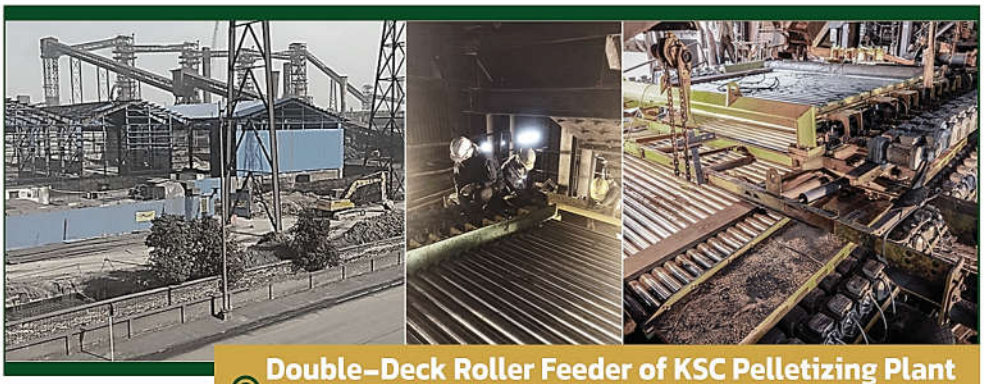
CHAH FIRUZEH FLOTATION SYSTEM (ONGOING PROJECT)

Equipment List:

12 x 130 m3 rougher cells
7 x 50 m3 cleaner cells
6 x 50 m3 scavenger cells
3 x 30 m3 recleaner cells
1 x 30 m3 recleaner cell
Dosing system
Samplers
XRF analyzer and instruments



Product: Copper Concentrate **Capacity: 100.000 TPA** **Location: Near Kerman Province**



Double-Deck Roller Feeder of KSC Pelletizing Plant
Khouzestan Steel Complex, Khouzestan – Iran

EPC construction of 350.000 TPA Copper Concentrate Plant
Abbas Abad Copper Complex, Semnan – Iran

Recovery and Separation of Ferrous and Non-Ferrous Metals
Khouzestan Steel Complex, Khouzestan – Iran

650 tph Pellet Classifier **140 tph Scalping Screen**
Ardakan Iron Pellet Plant – Yazd, Iran

450 tph Pellet Scalper **450 tph Pellet Roller Feeder**
Sirjan Iron Pellet Plant – Kerman, Iran Sirjan Iron Pellet Plant – Kerman, Iran

7 km Conveyor System Manufacturing, Installation and Commissioning
Tosee Meli Iron Ore Concentrate Plant, Sangan – Iran

Sales Statistics

Cumulative Sales Report

No.	Equipment	No. Sold
1	Magnetic Separators	1300+
2	Screens	90+
3	Feeders	400+
4	Roller Screens and Roller Feeders	50+
5	Samplers	80+
6	Flotation Systems	16

International Partners

FMS Clinet

- سنگ آهن مرکزی
- فولاد سنگان
- فولاد زرند ایرانیان
- فولاد اسفراین
- آریا جنوب ایرانیان
- مجتمع مس شهر بابک
- فولاد کاوه جنوب کیش
- مجتمع فولاد اردکان
- صنایع و معادن احیا پارسیان
- کیسون
- سرمایه گذاری مس سرچشمه
- فولاد خوزستان
- توسعه فراگیر سناباد
- فولاد سیرجان ایرانیان
- فولاد شرق کاوه
- گهر روش
- آذر گهر حدید
- صنعتی معدنی چادر ملو
- صنایع‌ومعادن‌سرزمین‌پارس
- فولاد تکنیک
- الروسا
- ذوب آهن اصفهان
- فولاد مبارکه اصفهان
- گل گهر سیرجان
- فولاد خراسان
- صبانور ایرانیان
- فولاد پاسارگاد شیراز
- فولاد سبزوار
- بوتیا ایرانیان
- سازه های صنعتی آذران
- نیپک
- گهر زمین
- ایمیدرو
- فکور صنعت تهران
- مس سرچشمه
- مس کاوان
- کانی مس
- ماد کوش
- نظم آوران
- راهبر فرآیند آریا
- اپال پارسیان سنگان
- ایریتک
- اویاک
- SDM

letter of Appreciation

Ehya Iron Ore Mines Co.

بهره بردار نمونه کشوری سال ۱۳۹۱ و ۱۳۹۵

شرکت محترم فکورمغناطیس اسپادانا

موضوع : تأییدیه عملکرد جداکننده های مغناطیسی خشک شرکت فکورمغناطیس اسپادانا

با سلام؛

احتراماً بدینوسیله این شرکت نسبت به عملکرد مثبت و مورد قبول جداکننده‌های مغناطیسی خشک ساخت شرکت فکور مغناطیس اسپادانا در خطوط پیش فرآوری و پرعیارسازی معادن پلاسری نگین سنگان، مراتب تایید خود را اعلام می‌دارد.

مدیر واحد فنی و برنامه ریزی

واحد فنی و برنامه ریزی

تاریخ : ۱۴۰۱/۰۹/۱۲

شماره : ص/۱۴۰۱-۱/۱۶۹۹

پیوست :

شرکت محترم فکور مغناطیس اسپادانا

با سلام و احترام

نظر به تامین، نصب و راه اندازی ۸ دستگاه WHIMS در کارخانه کنسانتره جلال آباد، بدین وسیله مراتب رضایتمندی خود را از تجهیزات نصب شده و خدمات پشتیبانی آن شرکت محترم اعلام و از خداوند منان موفقیت روزافزون برای آن شرکت محترم خواستاریم.

با تشکر

معاون تامین

Certificates

بسمه تعالی

با توجه به ارزیابی شرکت براساس آیین‌نامه ارزیابی شرکت‌ها و موسسات دانش‌بنیان مصوب کارگروه (لینک) و بر مبنای مصوبه کارگروه

شرکت فکور مغناطیس اسپادانا

از تاریخ ۹۴/۳/۹ در «فهرست شرکت‌ها و موسسات مشمول» استفاده از مزایایی قانون، قابل دسترسی در peh.daneshbiyan.ac.ir به عنوان

شرکت/موسسه دانش‌بنیان تولیدی نوع ۲ (صنعتی)

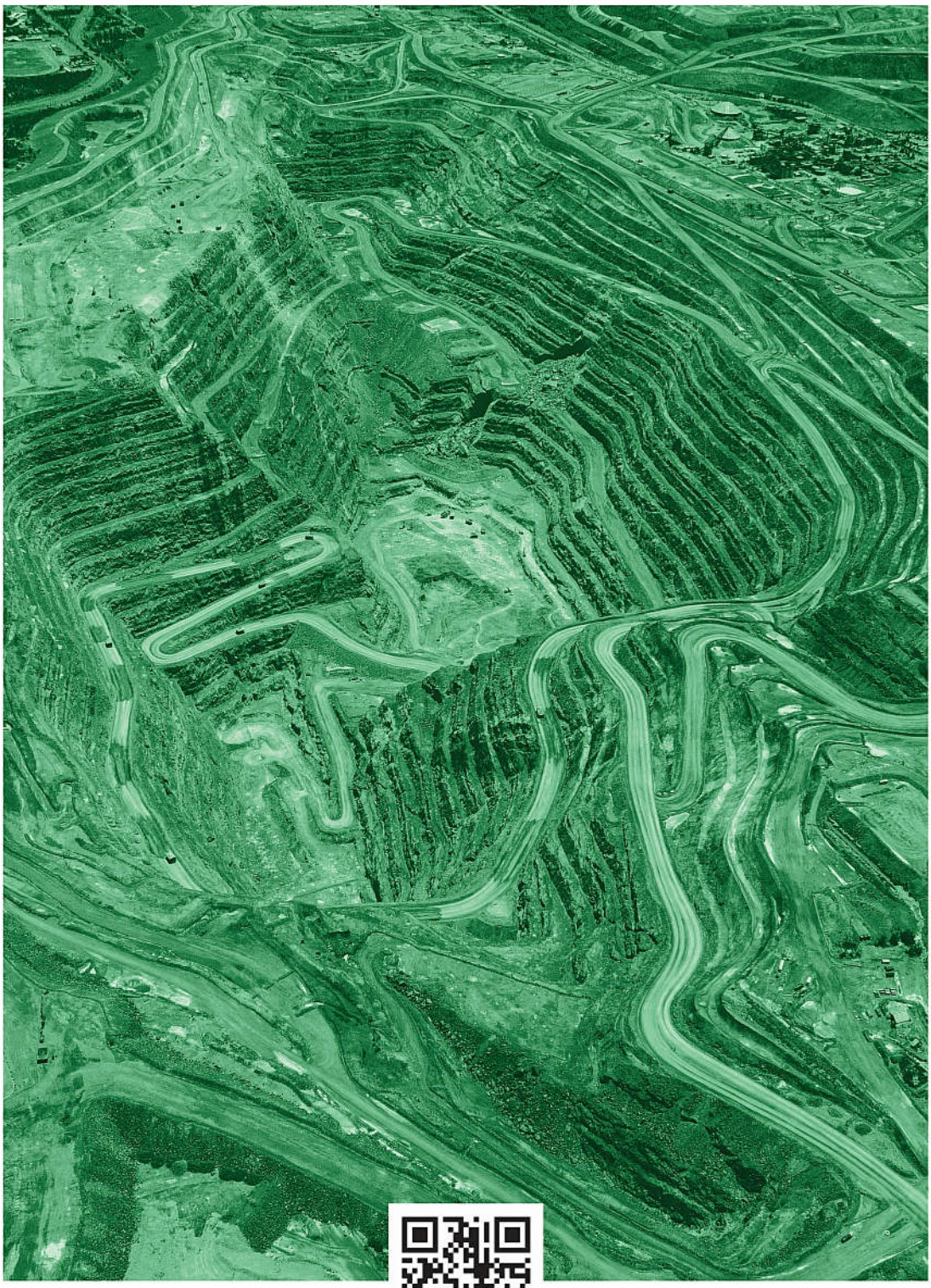
به مدت ۲ سال می تواند از تسهیلات «قانون حمایت از شرکتها و موسسات دانش بنیان و تجاری سازی نوآوری و اختراقات» استفاده نماید. لازم به ذکر است پذیرش نامه مذکور شرکت/موسسه دانش بنیان تولیدی نوع ۲ (صنعتی) مشمول معافیت مالیاتی نخواهد بود لکن مشمول تمامی تسهیلات و حمایت‌های دیگر قانون می‌باشد. همچنین بعد از پایان مدت ۲ سال، شرکت مجدداً ارزیابی می گردد.

شرکت می‌تواند نتیجه تفصیلی ارزیابی مربوط به تک تک کالا و خدمات خود را در لینک «ثبت اطلاعات» گزینه «کالا/خدمات ارزیابی شده» از طریق کلیک کردن بر روی کالا/خدمت مورد نظرکه در کارتابل خود مشاهده نماید.

لازم است شرکت ارتباط خود را از طریق این کارتابل به منظور مشاهده آخرین پیام‌ها و رویدادهای دانش‌بنیان، اعلام دقت فرمایید. در صورت عدم مشاهده این پیام‌ها توسط شرکت مسئولیت عدالت توجه امده بر عهده شرکت خواهد بود. این شرکت محترم می‌تواند از طریق ورود به سایت (لینک) از تسهیلات و حمایت‌های دانش بنیان «اگاهی پیدا نمایند» همچنین از شرکت محترم دعوت می‌شود، با عضویت در کانال دانش بنیان (@daneshbiyan_ir) در پیام‌رسان «اتا»، از اخبار و رویدادهای دانش‌بنیان آگاهی یابد. شرکت می‌تواند سوالات خود را از طریق ارسال به پست الکترونیکی (info@daneshbiyan.ac.ir) یا از طریق ارتباط با مدیر (ممس) کانال (@daneshbiyan_ir) رفع کند.

با تشکر

کارگروه ارزیابی و تشخیص شرکت‌ها و موسسات دانش بنیان



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