

Mineral Processing
Equipment
& Materials Handling
Systems



FAKOR
Meghnatis Spadana Co.



Design, Manufacturing & Supply of
Mineral Processing & Materials
Handling Equipment



FAKOR
Meghnatis Spadana Co.

Mineral Processing Equipment
Materials Handling Systems



PRODUCTS

Mineral Processing Equipment

- > Wet Drum Separator
- > Belt Drum Separator
- > Housing Drum Separator
- > Iron Ore Mobile Processing Line
(Semi Mobile & Mobile Unit)

Materials Handling Systems

- > Vibrating Screen
- > Roller Screen
- > Vibrating Feeder

Sampler

MINERAL PROCESSING EQUIPMENT

Magnetic Wet Drum Separator
Magnetic Belt Drum Separator
Magnetic Housing Drum Separator
Iron Ore Mobile Processing Line
(Semi Mobile & Mobile Unit)

Wet Drum Separator

Wet magnetic drum separator is used to separate and enrich iron ore fines and micronized materials. This equipment is used for producing iron ore concentrate as well.

Features

- Designed for wet separation of micronized iron ore;
- High efficiency in iron ore separation;
- Especial design of the machine with high gradient leading to high attraction force of drum;
- Clean separation mechanism;
- Dense media tank design to achieve maximum separation efficiency;
- Wide range of magnetic field intensity up to 5000 gauss;
- 1200 mm diameter (as the optimum diameter for wet drum separator).

Performance

Wet magnetic separation is used for processing wet micronized iron ore. The dense media tank devised in the machine makes flow of fluid agree with drum rotation. This provides further time of immersion and separation of iron particles, and extreme enhancement in grading will be resulted. The high gradient magnetic field intensity equipment makes the attraction power to increase and impede iron ore to be lost in tailings.



Belt Drum Separator

Belt drum, as a dry magnetic drum separator, is used to separate coarse iron ores over 10 mm in size within various field intensities.

Features

- Capability of separating coarse iron ore with maximum dimension of 350 mm;
- High efficiency in iron ore separation;
- Magnetic arrangement design based on the customer needs (preprocessing, grading, purification);
- Ease of use;
- Wide range of magnetic field intensity up to 4000 gauss;
- Adjustable to achieve optimum recovery and grade.

Performance

In magnetic belt drum separator, a belt (shock absorbing rubber) is used to protect the drum against the stone strokes. Iron ores are fed to the belt by feeder, and exposed slowly to magnetic field when the stroke reduced. Separation, is accomplished through absorption of iron ore particles within magnetic field, leading to recovery increase. This drum is usually used in cobbing stage.



Housing Drum Separator

Housing drum separator is used to separate fine iron ore that is manufactured in various magnetic field intensities. Optionally, it can be equipped with exhaust fan system.

Features

- Highly adjustable for process settings to improve recovery and grade;
- Tunable magnetic arrangement based on the customer needs (preprocessing, grading, purification);
- High efficient in iron ore separation;
- No water required;
- Preventing dust sealing by means of surrounding chamber of drum separator (housing);
- Wide range of magnetic field intensity up to 6000 gauss;
- Minimum cost service and maintenance.

Performance

This machine is designed for dry separation of iron ore particles below 20 mm. The machine consists of a fixed magnetic set encompassed by a rotating steel housing, a feeder provide material distribution before separation. Being exposed to magnetic field, Iron ore is then separated from the tailing. Efficiency and grade of the equipment can be tuned with the parameters like rotation speed, place of separator blade, and feeding rate.



Mobile and Semi Mobile Iron Ore Processing Unit

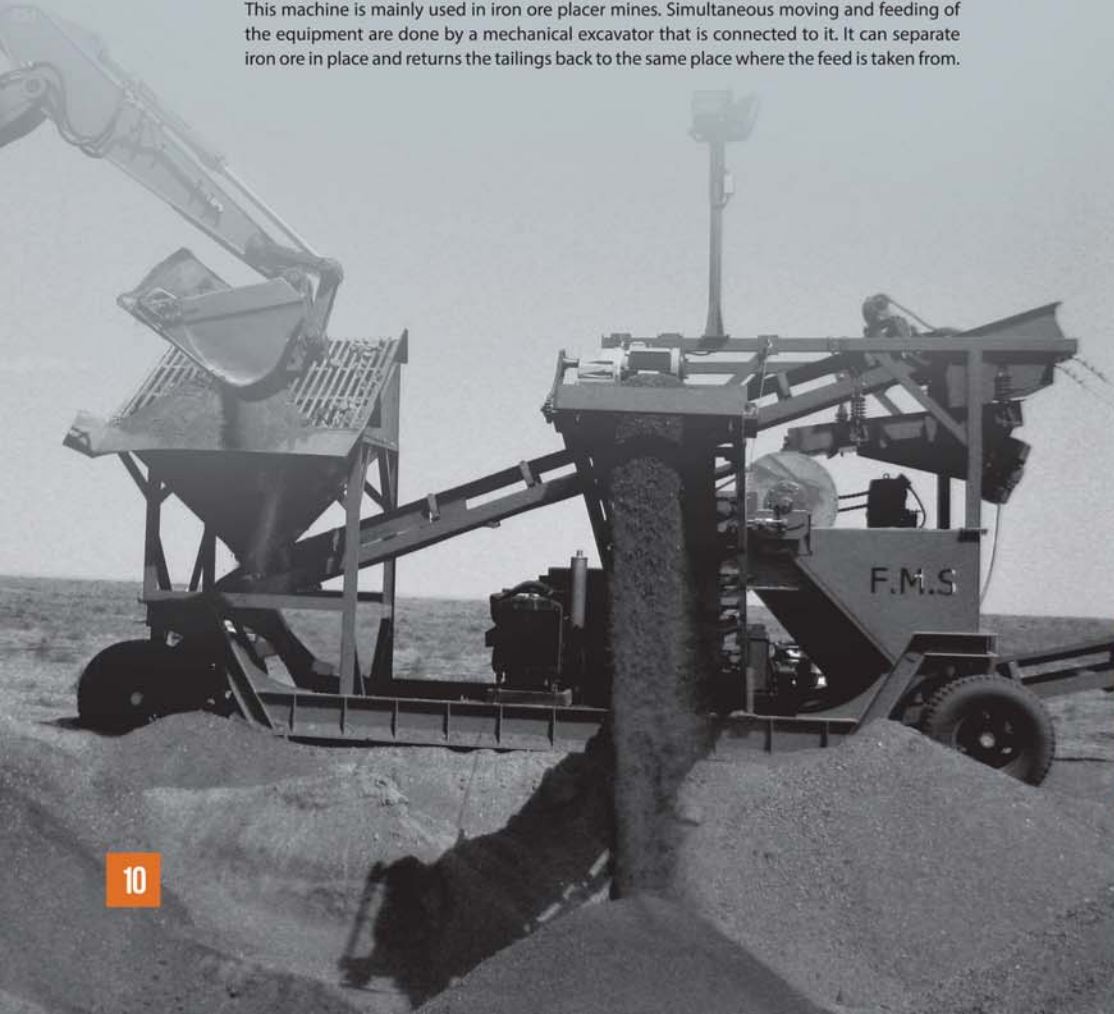
Mobile Iron Ore Processing Unit

Features

- Reducing processing costs and making economic justification for low grade ores;
- Exclusive design for placer mines;
- Ability of displacement along with the processing and advancing within the mining panel;
- Installation and commissioning in no time;
- No change required in the topography of the area and no environmental law violations due to in-place waste discharge.

Performance

This machine is mainly used in iron ore placer mines. Simultaneous moving and feeding of the equipment are done by a mechanical excavator that is connected to it. It can separate iron ore in place and returns the tailings back to the same place where the feed is taken from.



Semi Mobile Iron Ore Processing Unit

Features

- Reducing processing costs by minimizing the feed and tailing transport fees;
- Easy displacement by a tractor;
- Installation and commissioning in no time;
- Suitable for small mines;
- Sizing input materials by the screen installed on the equipment.

Performance

This machine can be used as an independent processing unit in iron ore mines. Ease of installation, commissioning, and displacement is the competitive advantage of this equipment. Considering the possibility of installing different drums and screens on this equipment, the machine can be optimized as for the desired processing condition.





**MATERIALS
HANDLING
SYSTEMS**

Vibrating Screen
Roller Screen
Vibrating Feeder

SAMPLER

Screen

Screen is mainly used for material sizing. Sorting, scalping, dewatering and washing operation are other capabilities of the screen.

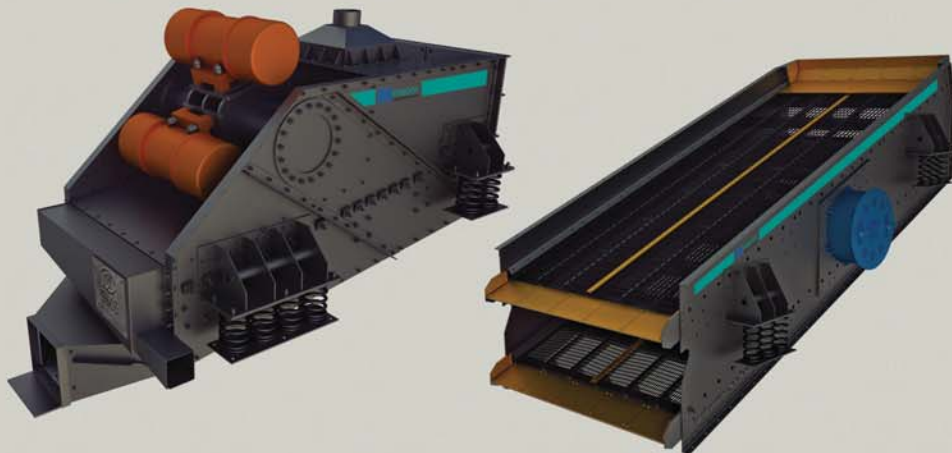
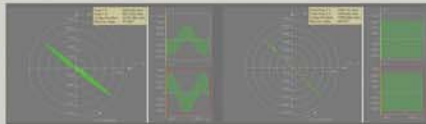
Vibrating Screen

Vibrating screen with perforated surface is generally used for material sizing. The optimal particle size is from 50 μm up to 350 mm. Based on the screen operation which may be circular, linear, or elliptical, the driving system can be selected to be an oscillator, an unbalanced motor or an exciter system.

In FMS Co., the biggest localized screens with the capacity of 1440 t/h for the linear motion and 2000 t/h for the circular motion were designed and manufactured. In addition, the engineering team designed and manufactured screens for separating particles up to 350 mm.



The quality of all vibrating equipment of FMS Co. are controlled by the most advanced noise and vibration testing equipment prior to packing and shipping.



Single deck sizing screen with unbalanced motor

Double deck sizing screen with oscillator

VIBRATING SCREEN



Double deck heavy duty wet screen with exciter

Roller screen (RS)

The RS can be used for material sizing with particle size 3 to 300 mm. The main characteristic of roller screen is its smooth movement and integrity preservation of brittle particles. RS also provides higher performance, slight sound and capability of separating high moisture sticky materials.

Roller screens are generally used in Iran iron ore processing plants for concentrate scalping before HPGR and for sizing pellets after the balling disc.

Considering the roller screen function, design parameters like slope, roller coating material, and surface finish, driving system and sealing system should be chosen accurately.

Chain wheel power transmission system with elastic tension and air sealing



**ROLLER
SCREEN**
(RS)

Feeder

Feeders are widely used in material handling industry mainly for uniform discharging, distribution, dosing and batching of powder or solid materials.

Vibrating Feeder

Vibrating feeder is a feeding and material conveying equipment commonly used for mining and mineral processing projects. This equipment due to the adjustable oscillating motion system, material speed is optimally tunable.

FMS Co. provides vibrating feeders in 3 categories as follows:

- Vibrating feeder with magnetic vibrator drive
- Vibrating feeder with unbalanced vibrator drive
- Vibrating feeder with exciter drive



SAMPLER

Samplers are normally used to collect samples from the moving conveyor belt and can be set on customized sampling time and duration interval automatically.

Features

- Automatic sampling (operator-free);
- Customized number and duration of sampling;
- No need to change the material-carrying conveyor belt;
- Equipped with separate chassis and cover, and a tailing chute equipped with wear-resistant liners.

Performance

Developed with a separate chassis and cover, sampler can easily be installed on conveyor belt as is and free from any need to change in design and components of the conveyor belt. It has a sampling hammer attached to a hollow shaft gearbox motor.



FMS FACTORY

INFORMATION

FMS factory is located in Oshtorjan industrial park of Isfahan with the following specifications:

- > Administration Building : 5 Floors
- > Factory Area : 5,000 Square Meters
- > Production Area: 3,500 Square Meters
- > Number of Salons: 5

DEPARTMENTS

- > Factory Manager Office
- > Technical Office
- > Planning Office
- > Design Office
- > Finance Office
- > Administration Office
- > Mineral Processing Laboratory
- > Procurement Section
- > Painting Section
- > QC Section
- > Warehouse



Some of Our Customers


Khouzestan
Steel Co.


Mobarakeh
Steel Co.


Esfahan
Steel Co.


IMPASCO


Chadormalu


Iran Central Iron Ore Co.


Ehya Sepahan
Iron Ore Co.


Sangan Iron Ore


Golgohar


Zarand Iranian
Steel Co.


Sirjan Iranian
Steel Co.



MISSION

Relying on Our Knowledge
& Innovation, Manufacturing
& Supply of Equipment,
and Creative Solution Providing,
We Help Our Customers
Make Gem out of the Soil

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