

# 2023 MIN-TEC Company Capability Statement

Engineering, Consulting , Procurement, Equipment

Manufacturing & Management Services

شرکت کانی فرآور کاسپین

Caspian Mineral Processing Eng. Co

# Who we are?

## MIN-TEC in Brief

Caspian Mineral Processing Engineering Company (under trade name MIN-TEC) established in 2009 by a group of qualified engineers with many years work experiences in copper & iron mine industries of Iran. MIN-TEC objective plans providing engineering, manufacturing and procurement services as an engineering, consultant or Integrated Project Management Solutions.

MIN-TEC stockholders have sufficient experiences in several the mining projects of Iranian huge mineral processing plants.

Within the years of the hi-level projects experiences, our management team learned how to serve to the clients and meet their requirements.



[Process Engineering](#)

[Equipment design](#)

[Equipment Supply](#)

[Our Workshops](#)

# Our View/ Our Philosophy

World Class Engineering Services, Best Solution for More Efficiency with Qualified Experts and Engineers

We are focused on providing Integrated & Tailored Solutions to our clients across four main services ; Engineering design Services, Mineral Processing Engineering, Equipment Supply and Specialist Engineering services. Let us help you achieve your business goals through our Tailored & Integrated Solutions.

We plans to be a well-known in mineral processing equipment supplying company and try to find and develop the newest technology in our field as we want to show " WE KNOW HOW".

MIN-TEC's plans have been identified in the following priority policies:

- Right recognize our client requirements.
- Well-organized engineers and staffs to present best services.
- Continuous Improvement and development in all levels of MIN-TEC's staffs .
- Develop of cooperation with well-known companies around the world to share abilities.

We believe to catch the above priority policies, effective cooperation and all engineers and staffs have to act in this manner.

Director Manager is responsible to accede the mentioned goals and right recognize and execute the policies. Also our policies will checked and revised by management commission.

# Management Team



## **A. Alibakhshi**

### **Director Manager , CEO**

- Mechanical Engineer
- Designer of Copper and Iron Plant
- Lime Plants
- Steel Plants
- More than 27 years Experiences



## **N. Tayebi**

### **Project Manager , Board Member**

- Co-founder
- Industrial Engineer
- Project Control Expert
- More than 12 years Experiences



## **R. Moghani**

### **Factory Manager-ARVAND Factory**

- Mechanical Engineer
- Production Expert
- Factory& Site Manager
- More than 15 years Experiences



## **M. Alibakhshi**

### **Board Member**

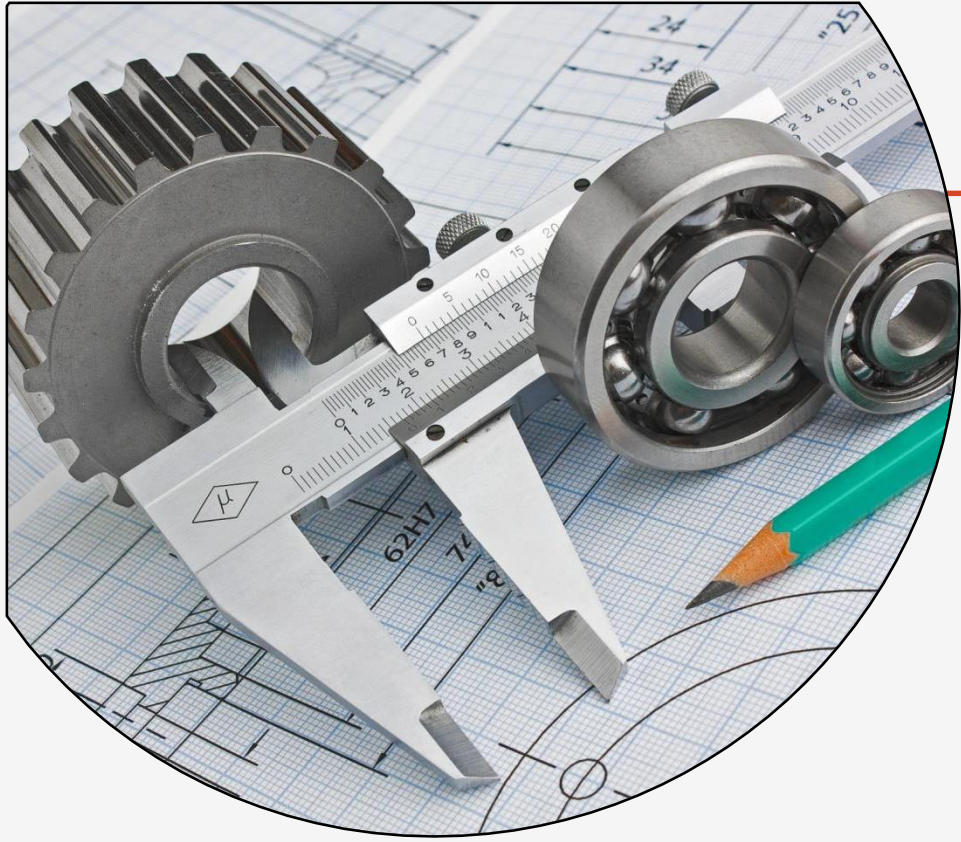
- Co-founder
- Ph.D. Civil Engineer
- Concrete & Structural Expert
- 21 years Experiences



## **M. Faramini**

### **Factory Manager- Alborz Factory**

- Mechanical Engineer
- Production Expert
- Factory& Site Manager
- More than 33 years Experiences



Engineering Services

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# Engineering Services and Consulting



Conceptual Design



Basic Design



Detail Design



Consulting



Site Supervision



# Our Services

Available Engineering Services of MIN-TEC are as following:

## **Feasibility and Scope Study & Optimization**

The Scoping Study is the first attempt at assessing the business case established by the venture analysis and the basic project parameters such as geological and deposit characterization, mineral resource configuration, head-grade, product quality, production rate, power requirements and water consumption.

## **Conceptual & Basic Design**

The original conceptual plan of the mining operation developed during the Feasibility Study would be extended and include amongst others; Design criteria; Equipment lists; Process description; General arrangements and outline drawings

## **•Engineering services**

We offer technical advice and engineering solutions adapted to our customers specific applications and requirements

## **•On-site start-up service**

We offer start-up service for new or rebuilt jobs on site. Our technicians will witness, advise and help at the start up of the project.

process Engineering

plant design

project management

plants audits

- Mineral processing
- Mechanical & piping Engineering
- Engineering design
- Project management

## ➤ Mineral Processing

- Pre-Feasibility and Feasibility studies of mining & industry projects
- Design & perform of laboratory and pilot plant metallurgical test works
- Selection & sizing of crushing, grinding, flotation & dewatering equipment
- Flow sheet development
- Conceptual Design and Study
- Basic & detail design of copper, iron and Lead-Zinc concentration plant (flotation, leaching, magnetic separation)
- Basic & detail design of industry minerals such as gypsum, limestone, sand, barite and etc.
- Project Development
- Design of performance And Acceptance Test
- Commissioning

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- Mineral processing
- Mechanical & piping Engineering
- Engineering design
- Project management

## ➤ Mechanical

- Arrangement Drawing and Plant layout
- Material Handling Solutions (Belt conveyor, Elevator, Screw conveyor)
- Design of Crushing & Screening Plants
- Design of Mobile Plants for Crushing, Screening and Concentrating of Copper, Iron and Lead-Zinc mineral processing plant.
- Designer of Vibratory Equipment ( Screen, Feeder, and Elevator)
- Designer of Stockpile, Bin and Storages.
- Designer of reagent tanks, agitator and distribution Equipment
- Drafting and preparing shop drawing

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# Engineering Services Mechanical & Piping Engineering

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- Mineral processing
- Mechanical & piping Engineering
- Engineering design
- Project management

## ➤ Piping

- Piping Lay-out
- Arrangement Drawing
- Isometric Drafting
- Materials selection
- Designing Slurry, Process and potable water pumps



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# Engineering Services Electrical & Automation Engineering

- Mineral processing
- Mechanical & piping Engineering
- Engineering design
- Project management

## ➤ Power and Electrical

- Basic and Conceptual design
- Detail design
- Motor & Cable List
- Motor and Drive selection
- Fire Fighting, Lightning
- Communication Systems
- Drafting
- Cost Advises & Estimation

## ➤ Instrumentation and Control

- Control Philosophy
- Logic Diagram
- PLC programming
- Instruments List
- Instrumentation Specification
- Drafting
- Cost Advises & Estimation

## ➤ Civil & Architecture

- Site Preparation documents
- Architectural design
- Concrete & Steel Structures
- Site Supervision
- Topography
- Land Scape and green space
- Drafting
- Cost Advises & Estimation

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- Mineral processing
- Mechanical & piping Engineering
- Engineering design
- Project management

➤ **MIN-TEC could manage EPC projects on following disciplines:**

- Processing packages
- Mechanical packages
- Structural packages
- Piping packages
- Electrical packages
- Instrumentation packages
- Procurement
- Civil packages



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Procurement & Supplying

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# Procurement , Manufacturing & Equipment Supplying



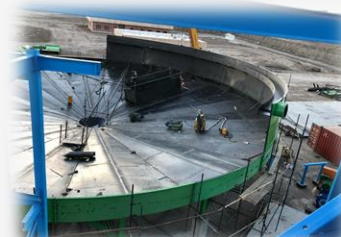
Pumping Solutions



Material Handling



Filtration & Dewatering



Thickening



Agitators

# Procurement & Supplying

MIN-TEC capable to supply a wide range of mineral processing equipment for use in Copper, Iron and Steel plants and other metal or non-metal mine industries.

- Classification equipment: special screens, hydro-cyclone, spiral classifier and air classifier.
- Material handling equipment
- Dewatering & Tailing Management equipment: thickener & filtration systems.
- Slurry and water pumps.
- Slurry and Control valves
- Steel works such as Chute, Gate, Bin, Hopper and Pump box
- Pneumatic Conveying Systems
- Agitators & Mixing Equipment
- Chemical preparation Skid plants

# Work-Shops and Facilities

To aim to our goals, MIN-TEC has two manufacturing facilities according to our client requirements :

## ARVAND FREE ZONE Work-Shops and Facilities

- Total Area: 8000 m<sup>2</sup>
- Production Hall: 1750 m<sup>2</sup>
- Crane: 5 ton
- Machinery: Rolling machine, turning machines, drilling machines, Plasma CNC cutting machine, Sandblasting and painting equipment, welding machines, hand tools and .....
- Sandblast and Painting yard: 1000 m<sup>2</sup>

## Mission and productions:

- Agitators
- Thickeners
- Material handling and accessories



# Work-Shops and Facilities

To aim to our goals, MIN-TEC has two manufacturing facilities according to our client requirements :

## Alborz, Mahdasht Work-Shops and Facilities

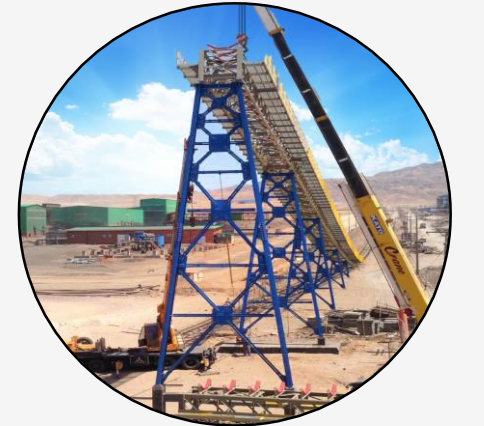
- Total Area: 2500 m<sup>2</sup>
- Production Hall: 850 m<sup>2</sup>
- Crane: 5 ton
- Machinery: Rolling machine, turning machines, drilling machines, Plasma CNC cutting machine,, welding machines, hand tools and .....

## Mission and productions:

- Agitators
- Pneumatic Conveying Systems
- Lime and Rotary Kiln and accessories
- Steel works and steel stractures

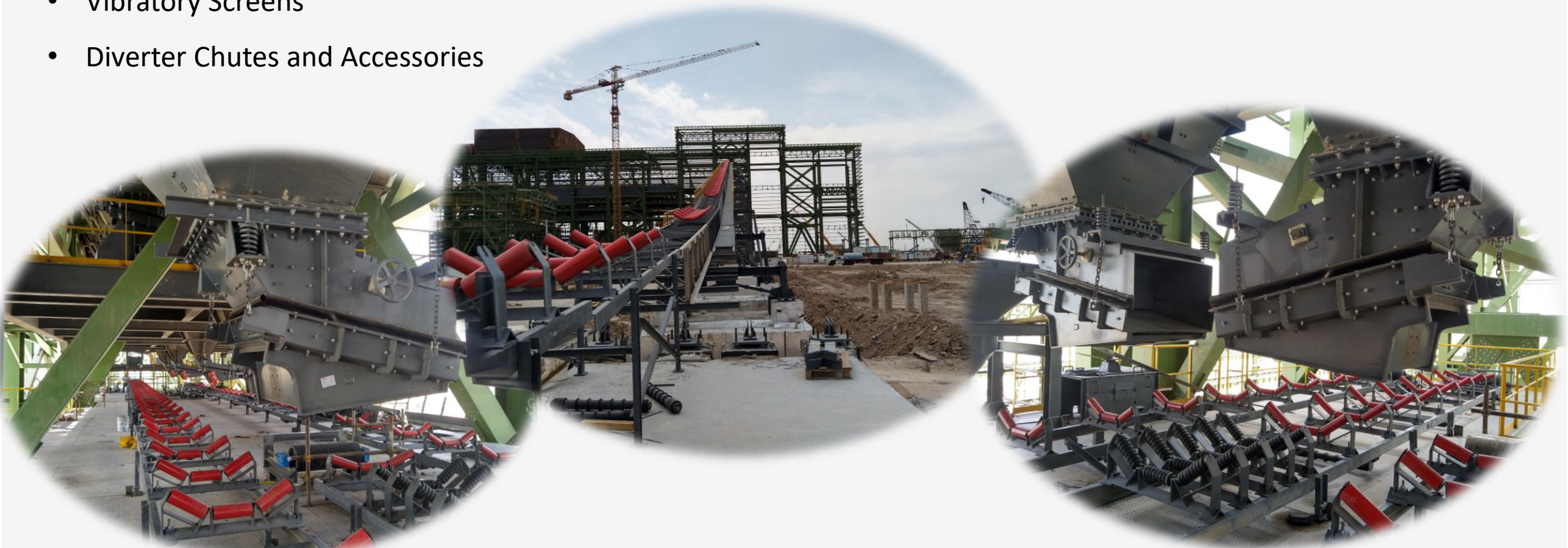
# Material Handling

- Belt Conveyors, up to 3400 ton/hr, 1.65 km lengths
- Pneumatic Conveyor System for fine powders up to 20 ton/hr
- Z-Type belt Elevators ( Side wall conveyors) up to 450 ton/hr/ 55 m heights
- Screw Conveyors
- Bucket Elevators
- Slat Conveyors
- Diverter Chutes and Accessories



# Material Handling

- Material Handling Full Package Solutions
- Vibratory Feeders
- Vibratory Screens
- Diverter Chutes and Accessories

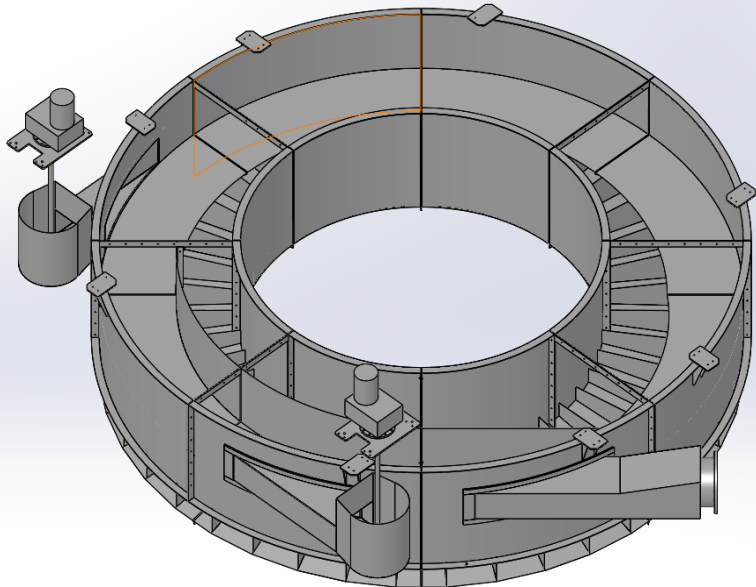




# Dewatering & Thickeners



Thickener Dia. 45



- Full Package Solutions
- Prefabricated metal thickener
- Drive & rake system solutions
- Feed-well & Dilution Solutions
- Accessories



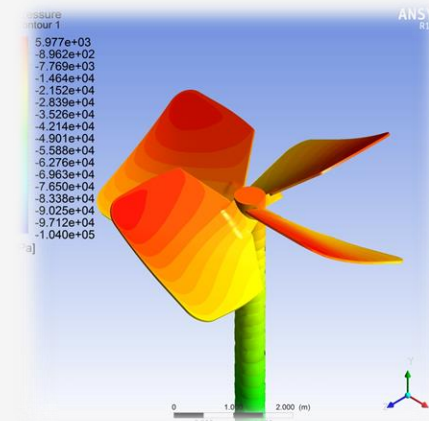
Thickener Dia. 25

# Agitation& Mixing Tanks

- Tailor Made Agitation Systems
- Wide range 0.37 KW up to 200 kW
- Processing Base Design
- In-House Engineering Solutions
- Accessories

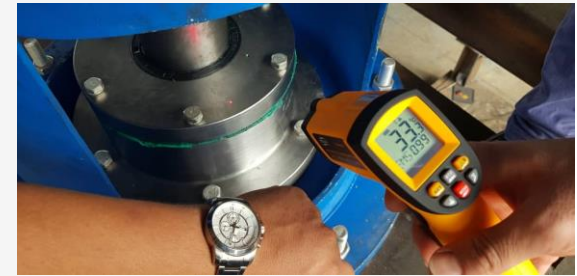


200kW, 6.5 m dia





# HE3 High Efficiency Impellers



Iron Ore Tailing Agitator,  
90kw, 3.7m dia



# HE3 High Efficiency Impellers

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Copper Tailing Holding Tank  
200kw, Impeller dia5.9m, Weight:19.5 ton



# Axial Flow Impeller Technology



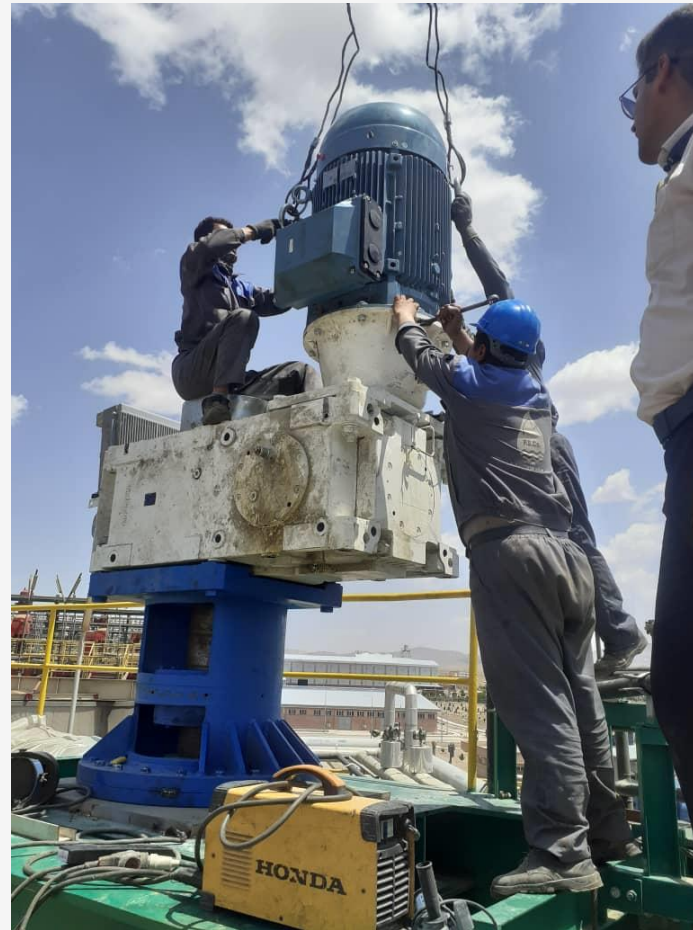
▲ Bioleaching Copper Reactor  
22kw, 2.5m dia

▲ Bioleaching Copper Reactor  
110kw, 5.8m dia



In-House Manufacturing

# Axial Flow Impeller Technology



Bioleaching Copper Reactor  
110kw, 5.8m dia

# Installation & Commissioning Services

MIN-TEC able performing a range of services related to Installation, Pre- Commissioning, Commissioning management for Mineral Processing plants.

- Erection and Installation Supervision
- Mechanical Supervision
- Design and Perform Performance tests
- No-Load Tests for Mechanical Equipment
- Preparation Commissioning, Operation & Maintenance Manual
- Training Programs



# Our Experiences

## ➤ Feasibility Studies

Technical and economical studies

- 25 & 50 t/h copper concentrator plant (flotation)
- 1000 & 5000 t/year cathode copper (heap leaching) (Iran Itok)
- 22 million m<sup>2</sup>/annual Plaster Board gypsum plant. (Sepid Gatch co)
- 300,000 ton/annual Precipitated carbonate calcium (Persian Holding)
- 150,000 ton/annual lime& hydrated lime plant (Sabzevar Lime Co)
- 25000 ton/annual Paper stone (Persian holding)
- 7500 ton/year copper concentrated tank leaching plant
- 1700 ton/annual copper concentrated tank leaching plant

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plant design

project management

plants audits

# Our Experiences

## ➤ Mineral Processing

- SARCHESHMEH Copper concentrator project 500 ton /day ore feed (EP):
  - Design & perform of laboratory & pilot plant test works.
  - Basic & detail design of crushing, grinding, flotation & dewatering units.
- CHIROOK Foundry Sand Co. 150.000 ton/year foundry sand plant.(E)
  - Design & perform of laboratory & pilot plant test works.
  - Basic & detail design of crushing, grinding, Washing, classification & dewatering units.
- Basic design of Sungun molybdenum plant. (E)
  - Design review and endorsement.
- SARCHESHMEH anode furnace expansion plant. (E)
  - Design review and endorsement.
  - Procurement supervision
  - Detail design

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# Our Experiences

- SANAT ROY ZANGAN Zinc-Lead Flotation plant 175000 ton/year. (E)
  - Basic & Conceptual Design
  - Detail design
- GOLGOHAR tailing disposal project 1800 m3/hr tailing feed (EPC):
  - Basic & detail design of crushing, grinding, flotation & dewatering units.
  - Procurement and equipment supply
  - Construction , Installation
  - Commissioning and operation
- MIDUK copper Complex Flocculant Preparation Plant 280 m3/day (EPC)
  - Design & perform of laboratory test works.
  - Basic & detail design.
  - Automation
  - Procurement and equipment supply
  - Construction , Installation
  - Commissioning and operation
- SEPID GATCH SAVEH Plaster Board Plant 22million m2/year (EMC)
  - Basic & detail design.
  - Technology provider selection study
  - Procurement and equipment supply Management
  - Site Supervision & Installation
  - Commissioning and operation

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# Benefits of Cooperation with Us

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1. Collected experiences of many well-known mineral engineering consultant and general contractor companies of Iran in one company.
2. Well-organized company that result optimum services and costs.
3. Comprising one of the most qualified & experienced engineering team in all disciplines.
4. Capability of wide range of services; Engineering, procurement, manufacturing, installation and commissioning together.
5. Engineered order equipment solutions
6. Special designed equipment to ore dressing and mineral processing

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# Our software

A wide range of soft-wares are used in MINTEC, they take us toward best services and accuracy

## ➤ Mechanical & Piping

Inventor 2020  
Auto Cad 2020  
Solid works 2022  
PDMS  
Nawis works 2020  
Belt analyst 07  
Ansys12  
Pumpdim(for slurry pumps)

## ➤ Civil

SAP 2017  
SAFE 2017  
TEKLA2017

## ➤ Electrical & Instrumentation

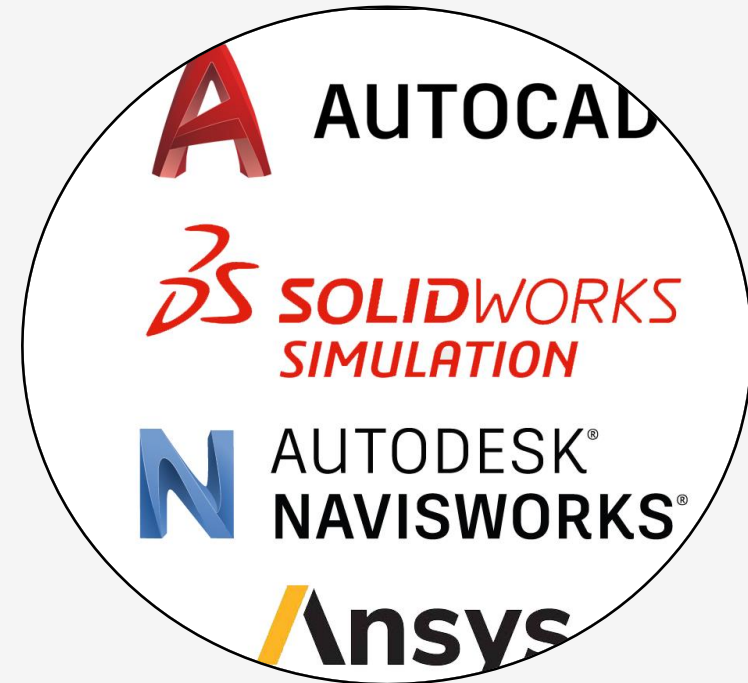
Pascal  
Delphi  
Network

## ➤ Planning

PRIMAVERA3  
MS Project

## ➤ Processing

USIMPACK  
J.K.SimMet



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# Material Handling Projects' Reference list

Years 2014-2015

| Item | Subject, Project name   | Client/ Enduser                                | Type of contract | Project conditions |
|------|---|--|------------------|--------------------|
| 1    | Engineering, Supply, Manufacturing and installation of Copper Tailing & Dewatering Management | NICICO, CHEHEL KOREH Copper Complex            | EPC              | Under Service      |
| 2    | Engineering, Supply, Manufacturing and installation of Copper Concentration Storage area      | NICICO, KAHTOON ABAD Copper Smelting Plant     | EPC              | Under Service      |
| 3    | Engineering, Supply, Manufacturing and installation of Copper Concentration Storage area      | NICICO, BABAK Copper Iranian Bioleaching Plant | EPC              | Under Service      |



# Material Handling Projects' Reference list

Years 2016-2017

| Item | Subject, Project name  | Client/ Enduser                  | Type of contract | Project conditions      |
|------|--|----------------------------------|------------------|-------------------------|
| 1    | Material handling Project for Re-grinding plant  | MANA-SISCO                       | EP               | Under Service from 2016 |
| 2    | ARVAND JAHAN ARA Steel Complex whole material handling systems (14 different belt conveyors)     | SARRALLE Group-<br>ARVAND Steel  | EPC              | Under Service from 2020 |
| 3    | ARVAND JAHAN ARA Steel Complex whole material handling systems (39 Vibrating Feeders )           | SARRALLE Group-<br>ARVAND Steel  | EPC              | Under Service from 2020 |
| 4    | Wagon Loading plant (1650m conveyor + wagon-loading equipment's hopper, telescopic chutes.....)  | FARAZIN-SANABAD<br>STEEL Complex | EPC              | Under Service from 2019 |
| 5    | PARS HASTI ASIA SABZEVAR PCC Plant, 15 vibrating feeders, 12 Belt conveyors , 31 Screw Conveyors | PARS HASTI ASIA                  | EPC              | Under Service from 2020 |
| 6    | Vibratory Screens & Feeders (3 screen 650ton/hr +4 feeders 250 ton/hr)                           | GOHARZAMIN<br>Pelletizing Plant  | EPC              | Under Service from 2019 |

# Material Handling Projects' Reference list

Years 2018-2019

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| Item | Subject, Project name  | Client/ Enduser  | Type of contract | Project conditions         |
|------|--|--|------------------|----------------------------|
| 1    | Engineering, Supply, Manufacturing and installation of iron Ore Tailing & Dewatering Management ( filter press cake Belt feeders (7 sets) belt conveyors and truck loading station (4 conveyors+ truck loading facilities) | GOLGOHAR Complex<br>Phase2, Golgohar<br>dewatering Plant | EPC              | Under Service from<br>2021 |

# Material Handling Projects' Reference list

Years 2020-2022

| Item | Subject, Project name  | Client/ Enduser                                    | Type of contract | Project conditions                    |
|------|--|--|------------------|---------------------------------------|
| 1    | Engineering, Supply, Manufacturing and installation of iron Ore Tailing & Dewatering Management ( filter press cake Belt feeders (7 sets) belt conveyors and truck loading station (4 conveyors+ truck loading facilities) | GOHAR ZAMIN<br>Complex Phase1,<br>dewatering Plant | EPC              | Under contract from 2021              |
| 2    | Engineering, Supply, Manufacturing and installation of iron Ore Plant belt conveyors (9 belt conveyors BW=1000 & 1200mm)   | CHADOOR MALUE<br>Complex Phase5                    | EPC              | Under contract from 2022              |
| 3    | Engineering, Supply, Manufacturing and installation of BENTONITE Storage & Conveying, 500 ton silos, pneumatic conveying, de-dusting package   | KHORASAN STEEL &<br>PELLETIZING PLANT              | EPC              | finished on 2021 not commissioned yet |
| 4    | Engineering, Supply, Manufacturing and installation of BENTONITE Storage & Conveying, 500 ton silos, pneumatic conveying, de-dusting package   | GHADIR IRANIAN STEEL<br>& PELLETIZING PLANT        | EPC              | Under contract from 2022              |

# Material Handling Projects' Reference list

Early Year 2023

| Item | Subject, Project name  | Client/ Enduser                | Type of contract | Project conditions             |
|------|--|--------------------------------|------------------|--------------------------------|
| 1    | Engineering, Supply, Manufacturing and installation of Pelletizing Plant 5.000.000 MTPY (2 conveyors+3 lines truck loading facilities) | SANGAN MOBARAKEH STEEL COMPLEX | EPC              | Under contract from JULY 2023  |
| 2    | Engineering, Supply, Manufacturing and installation of TAFTAN Leaching GOLD MINES Plant (Leaching Reactors)                            | TAFTAN GOLD MINES              | EPC              | Under contract from Early 2023 |
| 3    |  |                                |                  |                                |
| 4    |  |                                |                  |                                |



## Our Contact Details:

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