





IRANIAN FARTAK
RESEARCH AND INNOVATION CO.





About us

Iranian Faratak Research and Innovation Company was established with the aim of growing and developing technological innovations in the mining industry by utilizing the knowledge of industry experts. The company strives to facilitate the institutionalization of research and innovation and achieve sustainable development in the Middle east Mineral Industries Development Holding Company (**MIDHCO**) by creating synergy and convergence among the capabilities of its subsidiaries. Since its inception, the company has been seeking to create value for stakeholders in the mining and mining industries sector of the country by designing an appropriate structure for providing its services.



Missions



The mission components of the Iranian Fartak Research and Innovation Company are as follows:

- Futurology and technology monitoring
- Market studies and financing of innovative projects
- Developing management development strategies
- Technology and innovation
- Developing sustainable development programs
- Collaborating in solving technological challenges in holding companies of MIDHCO
- Playing an active role in technological collaborations of holding companies of MIDHCO
- Solving operational challenges through innovation in business, process and product
- Providing engineering services in innovative projects
- Guiding the innovation process from idea to commercialization at the MIDHCO headquarters
- Promoting the development of technology and innovation discourse in MIDHCO holding companies.



Strategy





Based on the mentioned missions, the main strategies of Fartak Company are as follows:

- Diversifying the customer portfolio in the long run
- Promoting a creative mindset within the MIDHCO holding
- Focusing on identifying and addressing the challenges of MIDHCO holding companies in the short term
- Holding innovation events to identify needs and challenges and provide solutions
- Using global experiences in providing solutions
- Establishing and managing a network of technology and innovation partners
- Establishing and managing a network of mineral laboratories
- Monitoring and identifying opportunities and challenges outside of the MIDHCO holding
- Active presence on operational sites to identify needs and challenges and provide solutions
- Developing services within the framework of requirements and opportunities of the fourth generation of information technology
- Utilizing external capacities to address stakeholders' challenges.



Departments Introduction

Iranian Fartak Research and Innovation Company has been pursuing the goal of creating value for stakeholders in the mining and mineral industries of the country by designing a suitable structure for its services since its establishment.



Through conducting numerous studies and investigations based on its own philosophy of providing optimal management and engineering consulting services in the mining industry, the company has structured itself into the following three groups, and the activities of these three groups follow the company's most important goals and strategies:

- Department of Engineering, Research and Optimization
- Department of Strategic Studies, Innovation, and Commercialization
- Department of Design, Consulting and Engineering Projects



Department of Engineering, Research and Optimization

Services

Conceptual , basic and detailed design of processes and equipments
Optimization and development of production processes, including:

- Maintaining and increasing production capacity and process design
- Increasing equipment accessibility coefficient
- Production, repair and maintenance costs management
- Energy, water and environmental management
- Deployment of green technologies and renewable energies
- Modeling and simulation of processes and equipment
- Industrial unit automation
- Acquisition and development of advanced equipment manufacturing knowledge
- Innovative solutions for technological challenges
- Research and development in operations
- Providing solutions for creating wealth from industrial waste.





Department of
Strategic Studies,
Innovation, and
Commercialization

SERVICES

Conceptual , basic and detailed design of processes and equipments Optimization and development of production processes, including:

- Developing strategies in technological, marketing, and human resource dimensions
- Futurology and developing a technology roadmap in various mining industries
- Designing business ecosystems, entrepreneurship, and innovation
- Monitoring technology in the mining industry
- Identifying, evaluating, and prioritizing key technologies
- Studies in Financial Supply Chain and Commerce Management
- Designing sustainable development strategies at corporate and industrial levels
- Designing and implementing technological cooperation mechanisms
- Identifying and nurturing innovative ideas by providing infrastructure and laboratory services
- Solving challenges and issues of companies using expert networks in mining and mining industries
- Technical and economic feasibility of innovative projects
- Evaluation, valuation, and pricing of technology
- Providing technology commercialization services
- Consulting and implementing mechanisms to enhance innovation capacity in companies
- Holding training courses and innovation events
- Supporting startups in mining and mining industries.





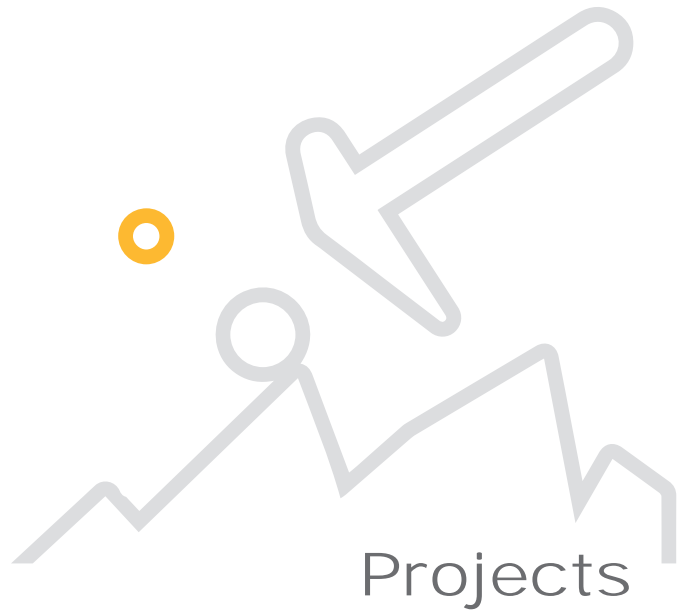
Department of Design,
Consulting and Engineering



SERVICES

- Evaluation and review of feasibility reports
- Conceptual studies
- Basic design
- Detailed design
- Procurement engineering
- Workshop, commissioning, and start-up engineering
- Providing excellent supervision and workshop supervision services







Department of Engineering, Research and Optimization Projects

Troubleshooting, simulation and Engineering Design with the approach of Process optimization and ESP Problem solving for Butia Iranian pelletizing Plant

air conditioning system Design of chahmusa cathode plant

Feasibility and environmental study of coal processing tail optimum management for pabdana preparation plant

Feasibility study of a 35,000 ton graphite electrode manufacturing plant

Conceptual design of coke transfer at high temperature

feasibility study of alloy steel production unit

Troubleshooting, simulation and Engineering Design for Solving problem of water absorption loss in micronized bentonite powder production line

feasibility study of Purchase or construction of bentonite micronized powder line

Feasibility study of construction a steel mill balls plant

feasibility study of drill rod production

feasibility study of the construction of the pre-concentration unit

Feasibility study of Fluorine production

Investigation and experimental lab tests for iron production by bioleaching method

feasibility study of Construction a magnesium alloy production line

Design and consultant services of Bardsir Complex (54 sub projects)

capacity increase of Sirjan Iranian pelletizing plant

Optimization of bentonite consumption and Engineering design of dosing unit in Sirjan Iranian pelletizing plant

image processing-based approach to control Pelletizing disc speed

Re-design and manufacturing a slurry pump of sirjan Iranian beneficiation plant

Feasibility study of iron recovery from low-grade hematite and magnetite dump of sirjan Iranian beneficiation plant

Basic and Detail Engineering Design of the re-Grinding line of Sirjan Iranian pelletizing plant

Re-design of the concentrate plant belt filters with the approach of availability increasing and maintenance promotion

Recovery of iron concentrate from wet tailing of iron ore concentrate plant

Conceptual design of Converting wet screener to dry screener of concentrate plant

Basic and Detail Engineering Design of Bentonite Storage Tanks of Sirjan Iranian pelletizing plant

Re-design and modification of the tail de-watering of Sirjan Iranian concentrate plant.

Provide technical specification of equipment of Bardsir steel plant.

Feasibility study of galvanized sheet manufacturing line

Provide technical specification of equipment of Sirjan Iranian plant.

clarifier Design for de-watering plant of Sirjan complex

Cons Recovery from tail of beneficiation Plant

Troubleshooting, simulation, Problem Solving and Engineering Design to increase working capacity of the copper annealing furnace

Troubleshooting and Problem Solving of copper tube plant

Investigation and design of a new by-products extraction method from copper cathode production process

Investigation and design of precious metals extraction method from copper cathode production process

Problem solving to decrease compounds with foul odor emission in coking plant

Study of copper sulfide recovery from tailings of Zarand iron ore concentrate plant

optimal techno-economic model determination for blast furnace charging regime of Iranian Zarand Steel Company

Providing IOT infrastructure to transfer, save and monitoring of data through cloud platform

Providing equipment controllability infrastructure by developing software & hardware to connect to controller modules



Department of Strategic Studies, Innovation, and Commercialization Projects

Studies on disruptive technologies (the Fourth Industrial Revolution)

Evaluation and enhancement of digital maturity in MIDHCO

Developing a roadmap for digital transformation

Developing and implementing regulations for research, technology development, and innovation

Developing regulations for efficiency

Study of hydrogen technologies and futurology with technical and economic approaches

Holding employee evaluation centers

Developing concepts and approaches to urban mining

Field studies to measure and evaluate community satisfaction approaches

Examining the concept and approaches of environment-centered economies

Examining the concept and approaches of technology-centered economies

Studies and development of branding activities (branding)

Developing a strategic document for technology and product development

Developing and reviewing research, technology development, and innovation structures

Laboratory studies on the production of iron by bioleaching

Evaluating generation gaps

Preparing and developing reports on social responsibility and sustainable development

Preparing and developing research, development, and innovation reports

Steel market studies based on a dynamic system

Developing a sustainable development plan

Examining the status of groundwater and surface water prices for collection and use

Designing and developing a business model for an innovation factory

Studying major energy trends worldwide



Department of Design, Consulting and Engineering Projects

coal tar refinery expansion Project

Engineering services including basic and detailed design, purchase engineering and related works of the Zarand direct reduction plant with a capacity of 1.5 million tons.

Basic and detailed design, purchase engineering and related works of development of Bardsir direct reduction plant.

Basic and detailed design of the Hamedan ferrosilic plant with 12000-ton annual capacity

Consultancy and supervision services for KHOMROOD coal mines project

Consultancy and supervision services for TABAS coal mines project

Jalalabad Cooper Recovery Consultancy And Site Supervision Project

Jalalabad Gyratory crusher and Transportation Consultancy And Site Supervision Project

Conceptual and basic design, and supervision of BISCO Iron Ore Beneficiation Plant

Basic and detail design of Dewatering Plant for Tailings of SISCO Iron Ore Beneficiation Plant

Basic and Detailed Design for Fluorite Plant Construction Project

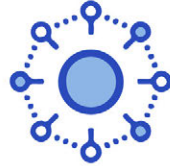
Basic and detail design of Copper Recovery from Iranian Babak Copper Company Neutralization Residue

Consulting services of design review, site supervision and supervision of the molten Coke transmission line from Coke Making Factory No.1 to Coke Making Factory No. 2 construction project of Zarand Iranian Steel Company

Retreading of mining tires project management consulting



Automation



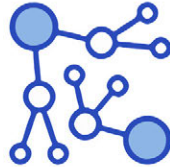
Connection



**Intelligence &
Simulation**



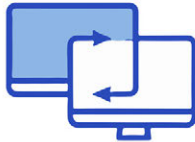
**Internet
of Things**



Big Data



**System
Integration**



**Cloud
Computing**



**Corporate Social
Responsibility**



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