



Company Profile Plans and Projects

- National Iranian Oil Engineering and Construction Company (NIOEC)
 Public Relations Publications
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Managing Director's Message

In order to benefit from the world of creation, human beings contrive to meet their own needs and make continuous efforts, discoveries and constructions to reach the peak of their progress and prosperity through the gifts of reason and the power of their choice as well as by modeling on the world of creation. It is based on these basic principles that human beings are in need of resources and the driving force even in the smallest human actions to achieve the desired goals.

In addition to creating a new social identity and a novel world, the Islamic Revolution of Iran commenced a history-making movement through the synergy and integration between social, ideological and cosmological forces in 1978 which led to the formation of ideals, the realization of which required a firm resolution, power and belief. Such ideals led to a rereading of the notions of jihad and martyrdom, which has been used since the beginning of Islam to protect the spiritual unity and the Islamic government as the only strategy for change.

Jihadi thought is subject to an intellectual and cultural framework in which the preservation of the values and fundamental principles of the Islamic worldview are the basis of its models and theories. The world is fleeting and ephemeral in the Islamic worldview, in which the best choice is to use time for salvation. The main path in this world is man's journey from Creation to the Creator.

It is in line with this thought that the true value of world-specific phenomena and events is revealed, and the real force is spent on actions that seek the salvation of man. Alignment of forces in the use of resources to create a superior and better life for human beings is the basis of Jihadi thought.

Jihadi management applied in plans and projects is derived from the same approach and thought. Preventing the waste of resources and capital, achieving goals in the fastest time and through the shortest possible route, and creating the tools of independence and national identity to protect against the onrush of conflicting factors are regarded as the main frameworks of Jihadi management of plans and projects. The ultimate goal in such an approach is, without doubt, to create the highest added value in order to gain a share in national authority and prosperity.

Mohammad Meshkin Fam Managing Director



History

ecessity is the mother of invention and development. Simultaneously with the establishment of the automotive industry in Iran and at the beginning of the 1340s S.H. (March 1961, 21 – March, 20 1971), a new member was created in the National Iranian Oil Company entitled «Special Projects Management» to play a role in the implementation of basic projects of the petroleum industry, including the design and construction of refineries, oil depots and outlets for the sale of petroleum products and the implementation of national oil and gas transmission pipelines, design and construction of refineries No. I and 2 in Tehran in 1965 and 1976 by developing integrated management and engineering networks.

The major design and implementation activities which had been carried out by foreign companies were undertaken by local experts subsequent to the glorious victory of the Islamic Revolution. Self-sufficiency in the petroleum industry and the transfer of technical knowledge into the country were thereupon considered to be important in line with the general policies of the Ministry of Petroleum of the Islamic Republic of Iran.

Managers of the petroleum industry took the first big step in the development of downstream petroleum industries by starting the design, construction and operation of Arak oil refinery with the end of the imposed war in 1989 and simultaneously with the launch of the First Development Plan and promotion of the national will to build the country.

In March 1992, senior executives at the Ministry of Petroleum established one of the four specialized holding companies affiliated with the Ministry of Petroleum, entitled "National Iranian Oil Refining and Distribution Company (NIRODC)", emphasizing the need to beef up the downstream sector of the petroleum industry.

Owing to the significant scope of activities related to the construction of refineries, pipelines and oil depots in the field of production, transmission and distribution of fuel and increase in the number of engineering projects, the National Iranian Oil Engineering and Construction Company was established in 1993 with the responsibility of developing the downstream infrastructure of the petroleum industry in the fields of transportation, storage, refining and distribution of petroleum products to prepare the ground for a second big step in the design, construction and operation of Bandar Abbas oil refinery in 1997. The path of development, however, is an endless and tough one; due to the growing need of the country for energy and petroleum products, the implementation of various projects was put on the agenda of this company.



Perspective of Activities

he perspective of the country's industrial development necessitates extensive activities and investments in the field of petroleum industry. In this way, a great opportunity has been created for the growth and prosperity of Iranian companies active in this field as per the law of «Maximum Utilization of Domestic Capacities».

The National Iranian Oil Engineering and Construction Company is striving to improve its scientific and technical capacity all the more in order to play a worthy role in the implementation of development projects in the petroleum industry by strengthening engineerin centers, preparing databases, developing standards, clarifying procedures and taking advantage of the latest scientific and technical achievements.

In this respect, the activities carried out and the developments that have taken place from the past to the present- which is the result of the actions and efforts of assiduous and go-ahead managers, officials, experts and employees of the company are evidence of the great strides that have been made in development and efficiency.

Approaches and Areas of Expertise

- Design and implementation of, and supervision over, refinery projects, oil depots, crude oil transmission pipelines and petroleum products, as well as oil piers in compliance with safety principles and modern scientific and engineering standards
- Feasibility studies and conceptual design of refinery projects, oil depots, oil piers, crude oil transmission pipelines and petroleum products
- Emphasis on the policy of «Support for Domestic Production» in accordance with the comprehensive development plan via interaction and cooperation with domestic manufacturers to produce new products or beef up the quality of existing goods based on current standards of the petroleum industry
- Development of localized processes and technical documentation for more interaction with local manufacturers and knowledge-based companies
- Maintenance of quality and ecological balance in the process of project implementation via adoption of appropriate methods and in accordance with existing capacities
- Support for research projects, especially applied projects, in interaction with universities and research centers
- Interaction with and support for knowledge-based companies to develop a knowledge- and innovation-based economy, support for entrepreneurship and commercialization of science
- Continuous analysis of knowledge and experience gained in project design and implementation in specialized project management committees



10 N.I.O.E.C

Sustainable Development and Environmental Protection

Industrial development is regarded as one of the multiple dimensions of development, the realization of which requires balanced development of social, economic, biological and industrial sectors. The National Iranian Oil Engineering and Construction Company has made a significant contribution to creation and maintenance of environmental conditions and provision of a safe and healthy community centered on green engineering by playing an effective role in the sustainable development agenda.

Basic Principles of Green Engineering

- Design of processes, and construction of refineries and transmission pipelines for oil and petroleum products and ancillary facilities in accordance with environmental considerations and utilization of the latest and environmentally friendly technologies to achieve the goals of the green industry and prevent the creation and emission of pollutants
- Environmental impact assessment studies in projects subject to EIA studies prior to the start of project implementation activities
- Supervision over and inspection of the process of compliance with environmental considerations of plans and projects in accordance with the approvals of the Department of Environment
- Design and implementation of online monitoring systems in refinery projects in collaboration with the General Directorate for Environmental Protection in the provinces
- Cooperation in locating projects in the feasibility stage, and basic design of plans and projects with respect to environmental requirements
- Planning, directing and managing plans and projects based on reduction and minimization of waste and environmental pollutants
- Implementation of environmental management programs and environmental impact reduction programs during the implementation activities of plans and projects
- Environmental monitoring studies in active plans and projects in the laboratories approved by the Department of Environment.



Outstanding Experiences

Construction and Development of Refineries

- Construction of Tehran First Oil Refinery
- Construction process from 1965 to 1967
- Nominal capacity of 85,000 barrels per day, which reached 120,000 barrels with process reforms in 1976
- Construction cost of \$ 130 million
- Construction of Tehran Second Oil Refinery
- Construction from 1972 to 1973
- Nominal capacity of 100,000 barrels, which increased to a capacity of 110,000 barrels in 2003.
- Construction of atmospheric distillation, vacuum distillation, oil production in vacuum, visbreaking, liquefied petroleum gas, naphtha hydro-treating, kerosene and gas oil, hydrogen, isomerization, Isomax, and sulfur production units



14 N.I.O.E.C

Construction of Arak Oil Refinery

- Construction process from 1989 to 1993
- Nominal capacity of 150,000 barrels
- Construction of atmospheric and vacuum distillation, continuous catalytic reforming, visbreaking, hydrogen production, hydrocracking, liquefied petroleum gas recovery, refinery gas treatment, bitumen production, sulfur recovery, sour water stripping, wastewater treatment, nitrogen generation, water production, electricity, steam and compressed air and feed tanks, and intermediate and final products units

Construction of Bandar Abbas Oil Refinery

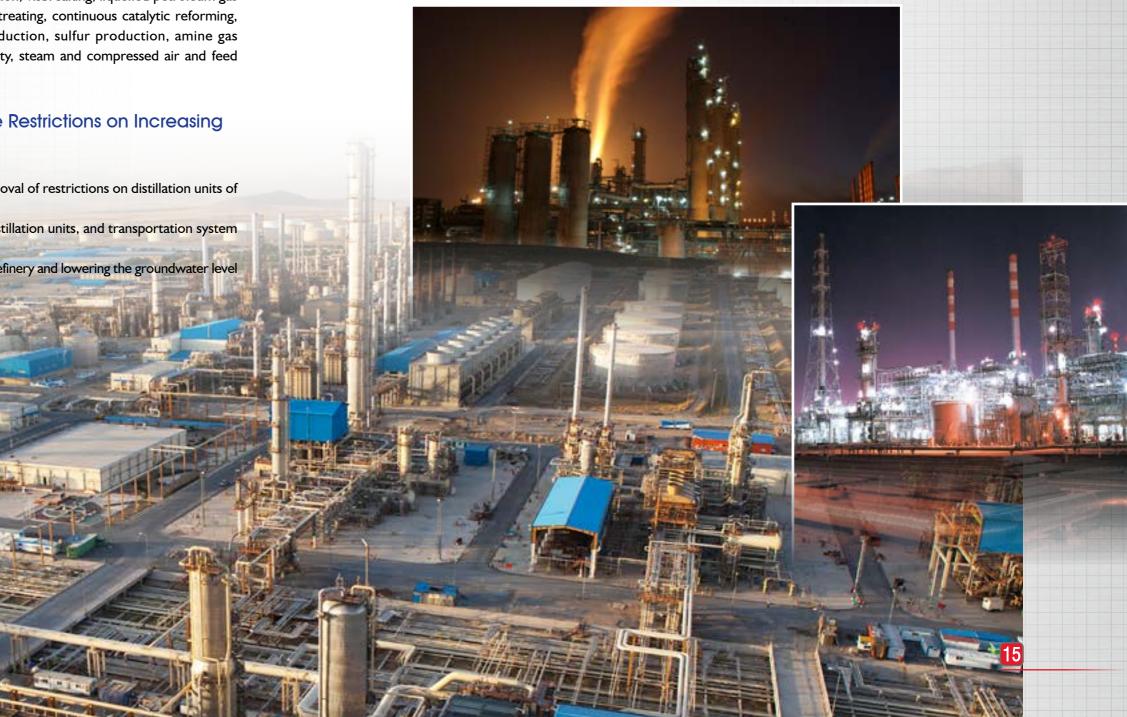
- Construction process from 1993 to 1999
- Nominal capacity of 232,000 barrels
- Including vacuum distillation (No. 1 & 2), atmospheric distillation, visbreaking, liquefied petroleum gas production, kerosene hydro-treating, heavy naphtha hydro-treating, continuous catalytic reforming, nitrogen generation, hydrocracking, blown bitumen production, sulfur production, amine gas treatment, sour water stripping, water production, electricity, steam and compressed air and feed tanks, and intermediate and final products units

Implementation of the Project to Eliminate Restrictions on Increasing Capacity of Bandar Abbas Oil Refinery

- Implementation process from 2005 to 2008
- Increase in capacity from 232,000 to 320,000 barrels and removal of restrictions on distillation units of Bandar Abbas oil refinery
- Construction of pumps, pipelines transporting crude oil to distillation units, and transportation system of the products of this unit
- Completion and repair of communication roads outside the oil refinery and lowering the groundwater level

Implementation of the Project to Renovate and Increase Capacity of Abadan Oil Refinery (First Phase)

- Construction process from 2003 to 2010
- Construction of a new refinery with a capacity of 180,000 barrels per day
- Maintenance of the refining capacity of 360,000 barrels per day by constructing new units and dismantling the old ones
- Maximum increase in gasoline production and improvement in the quality of middle distillates
- Production of products with modern technology based on Euro 5 standard and reduction in environmental pollutants
- Supply of feed for downstream industries (Bandar Imam Petrochemical Company, oil and asphalt manufacturing factory)
- Construction of new storage tanks and collection of 13 old worn-out tanks





- Implementation and construction processes from 2008 to 2013
- Increase in the crude oil refining capacity of the complex from 160,000 to 250,000 barrels per day
- Improvement in the quality of refinery products to comply with the 2005 European standard and maximum increase in gasoline production
- Change in feed (crude oil) of the refinery to a mixture of Ahvaz Asmari and heavier crude oil
- Implementation of the Project to Optimize Process and Improve Quality of Tehran Oil Refinery Products
- Construction process from 2009 to 2011
- Change of crude oil from Central Asian and Ahvaz Asmari to Marun and North Dezful and Ahvaz Asmari crude oil
- Reduction in sulfur output of diesel and kerosene products in accordance with European standards (Euro 5)
- Increase in sulfur production as a by-product in the sulfur recovery unit with a recovery capacity of 110 tons per day

- Implementation of the Project to Increase Gasoline Production in Bandar Abbas Oil Refinery
- Implementation process from 2010 to 2016
- Increase in gasoline production in Bandar Abbas oil refinery by 4.8 million liters per day
- Improvement in the quality of products in accordance with the 2009 European standard
- Production of refined diesel oil at a rate of 7.9 million liters per day
- Production of 120 tons of sulfur due to an improvement in the quality of the products

Construction of Isfahan Lube Oil Complex

- Construction process from 1989 to 1992
- Including refining units for extraction of cyclic unsaturated hydrocarbons with furfural solvent, dewaxing unit, oil stabilization unit, storage tanks, unit for blending additives with base oil, container making unit, equipment for oil loading in bulk and weighing, cooling tower and water softener, oil-contaminated water treatment unit

18 N.I.O.E.C Construction and Development of Pipelines and Ancillary Equipment Overseas Projects ■ Construction of Turkmenbashi gasoline processing unit Construction of more than 14,500 kilometers of pipelines for the transportation of crude oil and Partnership in the study of investment in refinery projects in Malaysia, petroleum products Indonesia, and Syria, as well as carrying out technical and economic stud-■ Construction of more than 170 pumping stations ies and basic design ■ Construction of more than 100 warehouses and storage facilities for crude oil and petroleum products Construction and Development of Oil Piers and Ports ■ Implementation of Mahshahr export port reorganization project ■ Implementation of Shahid Rajaei and Foolad piers development project in Bandar Abbas Retrofitting and Construction Projects Construction and equipment of Arak Di Clinic ■ Carrying out studies on retrofitting of oil depots located farther from oil refineries ■ Carrying out studies on retrofitting of residential ■ houses and facilities located in Morvarid town of Bandar Abbas ■ Carrying out studies on retrofitting of central buildings of the National Iranian Oil Refining and Distribution Company Carrying out studies on retrofitting of pumping stations all over the country Carrying out studies on retrofitting of the country's important refineries Carrying out studies on retrofitting of gas station stations



22 N.I.O.E.C

 Ongoing Plans and Projects of the National Iranian Oil Engineering and Construction Company

Oil Refinery Projects

- Development and capacity Increasing projects of Abadan oil refinery
- Process improvement and optimization projects of Isfahan oil refinery (RHU Unit)
- Overhaul of El Palito Oil Refinery in Venezuela

Pipeline and Pumping Station Projects

- Construction Project of Abadan New Pump Stations and Terminal
- Construction project of Sabzab / Rey sour crude oil transmission pipeline
- Construction project of Bandar Abbas / Sirjan / Rafsanjan pipeline

- Section I: Construction project of Bandar Abbas / Mehraran petroleum products transmission pipeline
- Section 2: Construction project of Mehraran / Rafsanjan pipeline with Sirjan pipeline branch
- Section 3: Construction project of pumping stations and terminals of Bandar Abbas / Sirjan / Rafsanjan pipeline
- Project of an increase in the transfer capacity of Tabriz / Khoy / Urmia petroleum products and complementary projects
- Construction Project of Bandar Abbas Gas Condensate and Crude Oil Branch Pipeline and Related Facilities
- Construction Project of Rafsanjan / Yazd pipeline and Development Project of Rafsanjan and Yazd Transfer Centers
- Construction Project of 5000 Ton Pier in Qeshm Island
- Construction Project of 300,000-barrel Shahid Soleimani Oil Refinery







Overhaul of El Palito Oil Refinery in Venezuela

Goals

- Enhancing the refinery's nameplate capacity to 140,000 barrels per day
- Provision of spare parts and materials for overhaul operations of El Palito Refinery
- Preparation of the refinery for refining Iranian heavy crude oil
- Provision of technical engineering services
- Facilitating cordial relations between the two countries

Job Increasing According to the contract, the overhaul operations will cover the following units:

- 1- CDU/VDU/SOLVENT
- 2- MEROX/FCC
- 3- UTILITIES
- 4- TANKAGES

The repairs will also entail the supply of spare parts and materials needed for the overhauling the above units, the two-year supply of spare parts for the sustainable and safe operation of the refinery's units.

Workload Details

- Preparation and arrangement of 218 contract packages including:
- 4500 items
- **2,000,700** articles

Investment Amount

€I 10 million

Contractor

PDVSA PETROLE,S.A. (PDVSA)

Contract Type



Project of Abadan New Pump Stations and Terminal

Goals

Job

Description

Renovation, reorganization and updating of crude oil receiving facilities, transfer of fuel oil and receipt and transfer of Abadan refinery petroleum products

- Construction of a 16-inch pumping station (Unit 201) for the transfer of products from Abadan to Ahvaz with a capacity of 140,000 barrels per day
- Construction of a 12-inch pumping station (Unit 202) for the transfer of products from Abadan to Ahvaz with a capacity of 50,000 barrels per day
- Construction of a 16-inch pumping station (Unit 203) for the transfer of products from Abadan to Mahshahr with a capacity of 106,500 barrels per day
- Construction of a 16-inch pumping station (Unit 204) for the transfer of ORD from Abadan to Mahshahr with a capacity of 130,000 barrels per day
- Construction of a 16-inch pumping station (Unit 204) for the transfer of ORD from Abadan to Mahshahr with a capacity of 130,000 barrels per day
- Construction of a 26-inch pumping station (Unit 206) for the transfer of fuel oil from Abadan to Mahshahr with a capacity of 250,000 barrels per day
- Construction of a 16-inch terminal (Unit 203) for the receipt of products from Mahshahr with a capacity of 106,500 barrels per day
- Construction of a 16-inch terminal (Unit 210) for the receipt of crude oil from Darkhovin with a capacity of 110,000 barrels per day
- Construction of a 24-inch terminal (Unit 208) for the receipt of crude oil from 40 miles of Mahshahr with a capacity of 210,000 barrels per day
- Design, reorganization and implementation of communication pipelines of pumping stations and terminals inside Abadan oil refinery with a length of approximately 2 km

Workload

Details

Engineering (E):

Preparation of documents and technical specifications, procurement engineering, documents and maps required for project implementation and commissioning: 2,298 documents

- Purchase and procurement of goods and materials (P): Procurement of 92 packages
- Executive operations (C):
- Pile construction and piling: 48,464 meters
- Road construction: 2,000 meters
- Piping: 2,000 meters
- Disposal of contaminated soils: 47,500 cubic meters
- Backfilling and land leveling: 66,000 cubic meters

Investment Amount

- In Local Currency: 4,320 billion Rials
- In Foreign Currency: € 21 million

Contractor

Sepehr consortium (Oil Design & Construction Co. and Pars Kayhan Co.)

Project Consultant

Middle East Energy Development Engineers Company (MED Co.)

Contract Type





Construction Project of Sabzab / Rey Sour Crude Oil **Transmission Pipeline**

Goals

Job

Transfer of sour crude oil from North Dezful oil fields at the rate of 450,000 barrels per day for refining to Kermanshah (Anahita), Arak and Tehran oil refineries with the construction of a 620 km long pipeline

capacity of 450,000 barrels per day from Sabzab oil transfer center to Tang-e Fani oil transfer center (for transfer to Anahita oil refinery in Kermanshah) Construction of a 239 km pipeline with a diameter of 26 inches with a transfer

Construction of a 102 km pipeline with a diameter of 30 inches with a transfer

- capacity of 295,000 barrels per day from Tang-e Fani oil transfer center to Shazand oil transfer center (for transfer to Arak oil refinery)
- Construction of a 279 km pipeline with a diameter of 18 inches with a transfer capacity of 105,000 barrels from Shazand oil transfer center to Rey terminal oil transfer center (for transfer to Tehran oil refinery)
- Construction of 6 intermediate oil transfer centers including Sabzab in Andimeshk, Tang-e Fani in Pol-e Dokhtar of Lorestan, Asar in Pol-e Dokhtar of Lorestan, Pol Baba in Khorramabad, Razan in Khorramabad and Shazand next to Arak oil refinery
- Construction of pressure reducing station in Qom and Rey terminal facilities in Tehran oil refinery
- wer transmission lines and related electrical substations Construction of po in Sabzab, Tang-e Fani, Asar and Razan oil transfer centers
- Construction of two equalization tanks of 240,000 barrels in Sabzab

Engineering (E):

- Preparation of documents and technical specifications, procurement engineering, documents and maps required for project implementation and commissioning: 3,352 documents
- Purchase and procurement of goods and materials (P):
- Procurement of 152 packages
- Executive operations (C):
- Construction of a 620 km pipeline with 18, 26 and 30 inches in diameter with a transfer capacity of 450,000 barrels per day
- Construction of 6 oil transfer centers, I pressure reducing station and
- I terminal
- Construction of 63 kV power transmission lines for Tang-e Fani and Asar oil transfer centers with a length of 36 km, and 132 kV for Sabzab oil transfer center with a length of 7 km

Investment **Amount**

108,000 billion Rials

Contractor

Ghadir consortium (Nasr Misagh Ahvaz Co., Setiran Co., Nardis Co.)

Contract Type

Construction Project of Bandar Abbas Gas Condensate and Crude Oil Branch Pipeline and Related Facilities

Goals

Sustainable supply of crude oil feed to Bandar Abbas oil refinery through Goreh-Jask Pipeline

Job Description Construction of a 30-inch pipeline branch and the required facilities from the gas condensate station of the Persian Gulf Star refinery with a length of about 37 km and a capacity of 300,000 barrels per day for temporary transfer of gas condensate to the station at the intersection with Goreh / Jask oil pipeline until the operation of Goreh / Jask pipeline, and in the next stage, the transfer of crude oil from Goreh / Jask pipeline to the station next to Bandar Abbas Oil Refining Company and supply of feed to the aforementioned company

■ Engineering (E):

- Preparation of documents and technical specifications, procurement engineering, documents and maps required for full implementation and commissioning of the project and development of a three-dimensional model using PDMS software for the project in all disciplines
- Purchase and procurement of goods and materials (P): Supply and procurement of goods and materials required for full implementation and commissioning of the project
- Executive operations (C):
- Executive and construction operations and installation of all devices and equipment until the completion of the project, pre-commissioning, commissioning, compilation of manuals for commissioning, operation, maintenance and elimination of one-year defects
- Total volume of excavation: 1,166,000 cubic meters
- Total volume of backfilling: 135,650 cubic meters
- Pipeline: about 37 km

Investment Amount

Workload

Details

In Foreign Currency: € 32 million

Contractor

Maroun Mechanic Company

Contract Type

EPC

Project Title

Construction Project of Rafsanjan / Yazd pipeline and Development Project of Rafsanjan and Yazd Transfer Centers

Goals

Increase in capacity, renovation and removal of restrictions on fueling operations due to the wear of the 16-inch pipeline on Rafsanjan / Yazd route which will increase the overall capacity of petroleum products transmission lines from Bandar Abbas to other consumption centers.

Job Description

- Construction of a 16-inch pipeline with a length of 228 km
- Development and construction of pumping stations required for Rafsanjan and Yazd transfer centers
- Procurement and installation of intelligent leak detection system (LDS) for the new 16-inch pipeline on Rafsanjan / Yazd / Naein route

Investment Amount

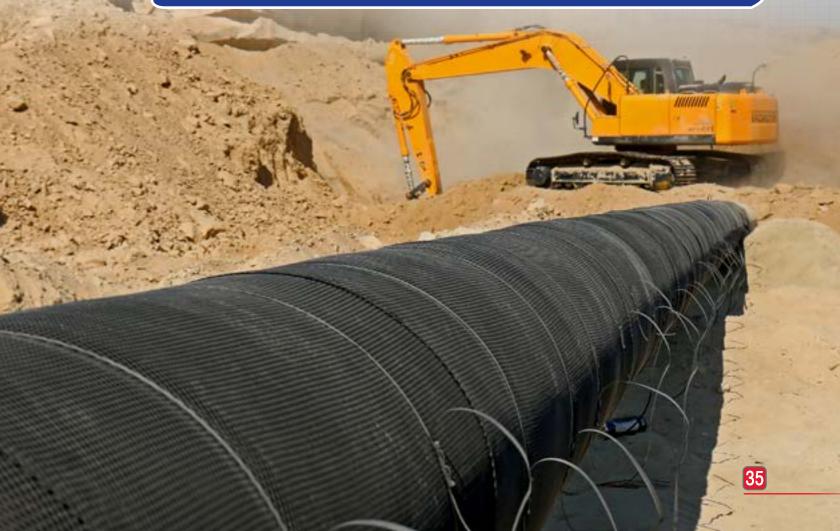
€ 72 million

Contractor

Consultant

Middle East Energy Development Engineers Company (MED Co.)

Contract Type





Construction Project of Bandar Abbas / Mehraran Petroleum Products Transmission Pipeline Section 1 of Construction Project of Bandar Abbas / Sirjan / Rafsanjan Pipeline

Goals

- Transportation of part of diesel oil, kerosene and gasoline produced in the Persian Gulf Star, Bandar Abbas and the future Hormoz refineries to Naein and Kashan and thence to Tehran and the northern regions of the country in a shorter route
- Elimination of the daily traffic of 1,500 tankers and saving on the transportation costs and reduction in environmental pollutants and road accidents

Job Description

- Construction of a 26-inch pipeline with a capacity of 300,000 barrels per day to transport petroleum products from the Persian Gulf Star refinery to Mehraran Oil Transfer Center
- Detailed design and engineering, compilation of manuals for commissioning, operation, maintenance and engineering
- Supply and procurement of goods and materials
- Executive operations of pipeline construction, construction operations and installation of all devices and equipment until the completion of the project, pre-commissioning, commissioning and elimination of one-year defects

Engineering (E):Preparation of d

- Preparation of documents and technical specifications, procurement engineering, documents and maps required for project implementation and commissioning: 303 documents
- Purchase and procurement of goods and materials (P):
- Procurement of 55 types of goods
- Executive operations (C):
- Construction of a pipeline with a length of about 249 km (6 km from the Persian Gulf Star refinery to Bandar Abbas oil transfer center, 132 km from Bandar Abbas oil transfer center to Qotbabad oil transfer center and 111 km from Qutbabad oil transfer center to Mehraran oil transfer center)
- Construction of a 260 km long fiber optic cable for intelligent leak detection systems and data transmission in a separate channel and parallel to the main pipeline channel
- Design and construction of a complete temporary and permanent cathodic protection system with a length of 231 km, including the construction of all cathodic protection stations along the pipeline
- Earthworks: about 5.5 million cubic meters
- Supply of pipes: 21,000 pipes weighing approximately 57,000 tons
- Welding: 23,000 pipe heads with a diameter of 26 inches
- Drilling: 250 boreholes to a depth of 3 meters
- Two-way valve: 22 pieces
- 249 km long road construction, including 39 km of new road construction

Investment Amount

Workload

Details

- In Local Currency: 2,044 billion Rials
- In Foreign Currency: € 66.2 million

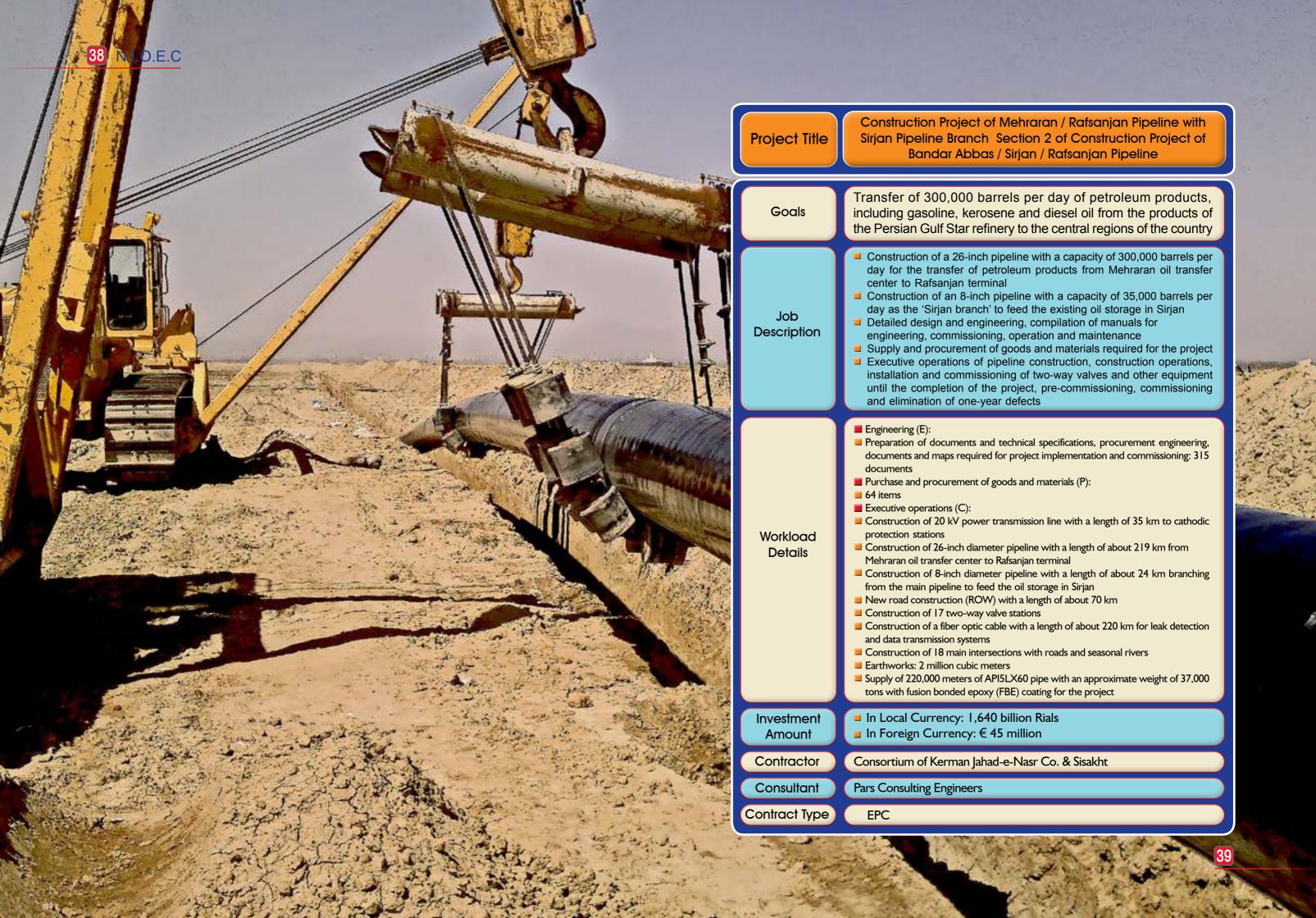
Contractor

Consortium of Khatam al-Anbiya Construction Headquarters and Tadbir Energy Development Group

Project Consultant

Pars Consulting Engineers

Contract Type









Construction Project of 300,000-barrel Shahid Soleimani Oil Refinery

Goals

Construction of a petro-refinery with a capacity of 300,000 barrels per day to refine heavy export crude oil and produce refinery items such as gasoline, diesel, jet fuel and petrochemical products such as benzene, toluene, polypropylene, xylene, HDPE, LLDPE.

Job Description Construction of a petro-refinery with a capacity of 300,000 barrels per day in order to refine heavy export crude oil and produce refinery items with the following process model:

VCC + FCC + BTX + STC

In this model, downstream vacuum distillation towers of process units (VEBA COMBI CRACKER) VCC, which is a process unit with the ability to convert vacuum distillation tower residues to items such as naphtha, diesel, etc. and is used in the catalytic fracture unit. The upstream sector has used aromatization units (BTX) and STEAM CRACKER (BTX) to produce high value-added petrochemical products.

Workload Details

- Civil
- Electrical items, equipment and volumes Safety and firefighting
- Instruments and telecommunications
- Manpower machines
- Catalyst
- Welding items and insulation cover of cathodic protection

Investment Amount Fixed capital: \$12,823 million Annual operating costs: \$641 million

Contractor

€ 10 billion

Contract Type

EPCF



Goals Job Description **Details** Contract Type

Project Title

Construction Project of 5,000 Ton Pier in Qeshm Island

Fuel supply of Qeshm Island

- Renovation and elimination of risks due to the wear of the existing
- Rockfill on the seabed and rock placement around the existing pier
- Increase in the berth capacity of ships up to 5000 tons
- Construction of access road at sea and along the access road to the existing pier with driven steel pile and concrete deck structural system
- Construction of the shed of fire water pumping house and fire building and control room and around the concrete tank of fire
- Change in the fire extinguishing system from non-automatic mode to automatic system with water and foam

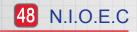
Workload

- Construction of 150 meters of access road with a width of 5 meters in the sea
- Construction of an operating platform and two berthing dolphins and four mooring dolphins using 73 driven steel piles Rockfill and rock placement operations: about 23,000 cubic meters
- Construction of the shed of fire water pumping house and fire building and control room
- Installation of three 6-inch loading arms, three diesel fire pumps
- Construction of two firefighting water storage tanks, each with a capacity of 3,500 cubic meters
- Carbon steel and polyethylene piping
- Other equipment required for mechanics, electricity, instrumenttion, cathodic protection and safety

Investment **Amount**

€ 15 million

Contractor



Real-Time Monitoring and Smart Management Project for the National Petroleum Products Supply Chain

Goals

- Real-time monitoring of road fuel tankers from the point of loading at the origin to unloading at the destination
- Monitoring of potential product losses and clarification of overages/shortages in oil depots
 Ensuring transparency in exports, imports, and inter-company exchanges through accurate product measurement
- Provision and enhancement of measurement systems and communication infrastructure
- Implementation of perimeter protection and pipeline leak detection systems to monitor pipelines and prevent product loss
- Management of transportation and transfer costs through the digitalization of the product transport fleet
- Prompt, detailed, and up-to-date responses to stakeholders outside the Ministry of Petroleum, such as Parliament, audit bodies, etc.
- Real-time, accurate management of the supply chain from production to distribution
- Smart allocation and distribution system for petroleum products, particularly intelligent planning and precise scheduling of major refinery maintenance

Job Description

The Real-Time Monitoring and Smart Energy Management Project for the Production-to-Distribution Chain involves the design, procurement, execution, and commissioning of measurement systems for crude oil and petroleum products, as well as their real-time monitoring across the production and distribution chain. The project includes the following components:

- Equipping delivery and transfer points for crude oil and petroleum products with metering systems, including inlets/outlets of refineries, export/import/exchange terminals, inlets/outlets of oil depots (including loading arms, rail sales, and depot outbound lines), and pipeline deliveries to major consumers such as power plants, petrochemical facilities, and airports
- Completing Automatic Tank Gauging (ATG) systems in oil depots and balancing tanks of the Oil Pipeline and Telecommunication Company
- Implementing perimeter protection and pipeline leak detection systems (DAS & LDS), and completing the optical fiber network of the Oil Pipeline and Telecommunication Company
- Expanding the fuel station tank data transmission system
- Developing a tracking and monitoring system for road tanker cargoes
- Establishing a flowmeter calibration center
- Completing field data transmission infrastructure, and developing and expanding monitoring centers of the Oil Pipeline and Telecommunication Company, the National Iranian Oil Products Distribution Company (NIOPDC), and the National Iranian Oil Refining and Distribution Company (NIORDC), with backup centers if necessary

Based on the above, the project has been structured into four main projects comprising 18 work packages, as follows:

1. Basic Engineering Design Project

Includes basic design for all executable components such as metering systems, monitoring centers, perimeter and leak detection systems, fiber optic network, and flowmeter calibration center.

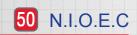
2. Monitoring and Digitalization Project

Establishment of a Geofencing system and equipping the road transport fleet with GPS trackers, weight sensors, and electronic seals

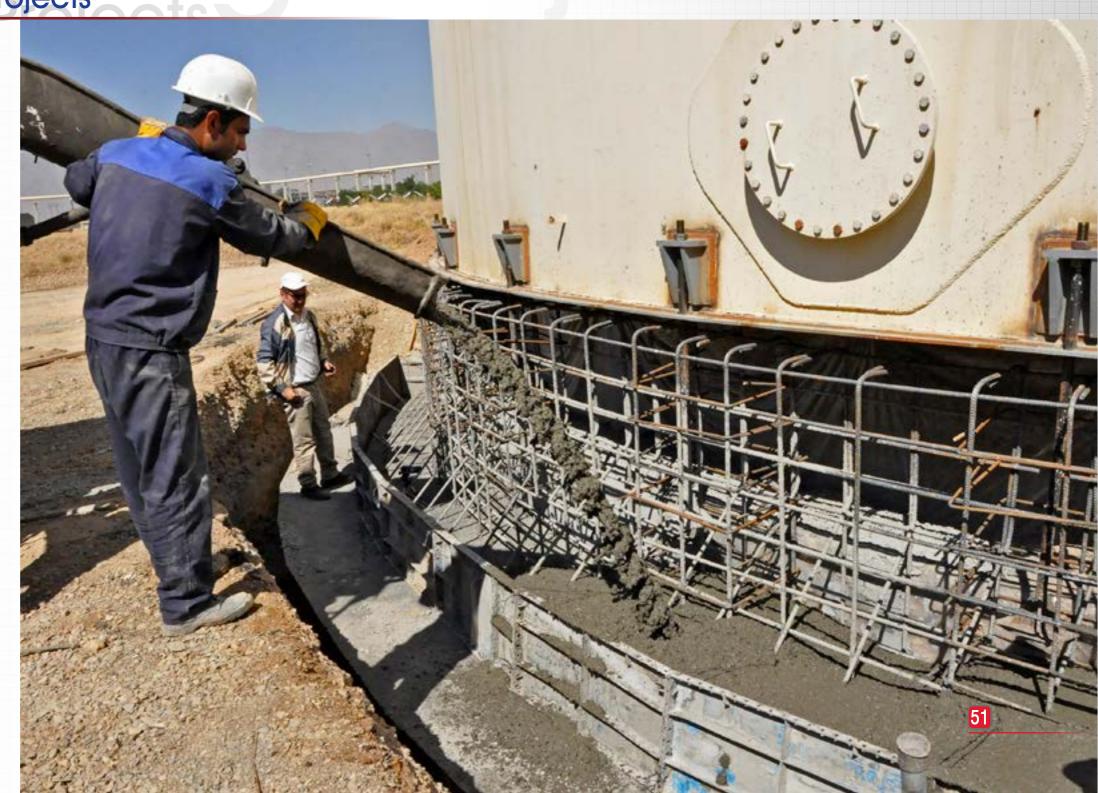
- Expansion of the NIOPDC Monitoring Center
- Expansion of the Iranian Oil Pipelines and Telecommunications Company Monitoring Center
- Expansion of the NIORDC Monitoring Center
- Completion of level sensors/data transmission panels for storage tanks at fuel stations, connecting them to the NIOPDC Monitoring Center

3. Measurement Systems for the Transfer and Distribution Chain Sub-projects include: Completion of level gauge (LG/TG) installation on NIOPDC storage tanks Completion of metering systems on loading arms at oil depots ■ Installation of precision metering systems on pipelines leading to power plants, in accordance with technical documentation Upgrading crude oil metering systems at refinery inlets ■ Installation of mass metering systems at domestic exchange points of NIORDC Construction of a mass flowmeter calibration center Job ■ Installation of level gauges (LG/TG) on balancing tanks of the Oil Pipeline and Telecom-Description munication Company 4. Measurement Systems for the Production and Export Chain (Continue) Sub-projects include: Equipping import/export/exchange terminals with precision metering systems Equipping refinery inlets and outlets with accurate metering systems, as per technical 5. Pipeline Protection and Monitoring Systems Project Sub-projects include: Completion of the optical fiber network for the Iranian Oil Pipelines and Telecommunications Company ■ Implementation of the DAS (Distributed Acoustic Sensing) system ■ Implementation of the LDS (Leak Detection System) The Real-Time Monitoring and Smart Energy Management Project for the Production-to-Distribution Chain entails the design, procurement, implementation, and commissioning of measurement systems for crude oil and petroleum products, along with real-time monitoring across the supply chain. The project includes the following key components: ■ Installation of 5,600 kilometers of optical fiber along petroleum product pipelines Implementation of 9,000 kilometers of Distributed Acoustic Sensing (DAS) systems for perimeter Implementation of 14,000 kilometers of Leak Detection Systems (LDS) on pipelines Upgrading inlet and outlet points of refineries with precision measurement systems Workload Equipping 272 storage tanks in the National Iranian Oil Products Distribution Company (NIOPDC) pipeline network with level and temperature gauges (LG/TG) **Details** Equipping 31 power plants with precision metering systems (31 metering skids) Procurement of 644 loading arm meters for oil depots Equipping 5 export/import terminals with precision metering systems (11 metering skids) Equipping 38 oil depot outlets with precision metering systems (63 metering skids) Equipping 56 oil depot inlet points for petroleum products with precision metering systems (56 metering skids) Equipping 17,000 fuel transport tankers with GPS tracking systems Development and enhancement of the NIOPDC Monitoring Center, pipeline SCADA center, and construction of the NIORDC Monitoring Center Establishment of a calibration center for mass flow meters **Investment Amount** €373 million (net contract value). A joint venture between Irancell, MAPNA Group, Contractor and the Oil Design and Construction Company (ODCC). Contract Type G.C

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Retrofitting Projects



Management of Construction and Retrofitting Projects

he main task of this management unit is to carry out all construction and retrofitting plans and projects defined in the National Iranian Oil Refining and Distribution Company and its subsidiaries. Defined on the basis of organizational and personnel needs at the level of National Iranian Oil Refining and Distribution Company and its subsidiaries, construction and retrofitting projects are notified to this unit subsequent to providing funds and gaining approval for studies and implementation.

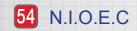
These projects are defined and planned with the aim of maintaining the infrastructure of the petroleum industry and protecting manpower, as well as improving the structural condition and increasing the resilience of oil buildings and facilities in order to improve their serviceability and increase their useful life, the results of which would be a reduction and minimization of the risks of erosion, environmental factors and natural disasters, especially earthquakes. It increases, as a consequence, the importance and necessity of undertaking these projects and providing the required funding for them in the shortest possible time and in the best possible way.

 Key Experiences of Management of Construction and Retrofitting Projects

a) Construction Projects, including:

- Construction of 250 new housing units in Bandar Abbas
- Construction of Arak and Isfahan Di Clinics
- Construction of a 64-bedded hospital in Morvarid town of Bandar Abbas
- Construction of Warsaw (First Central) Building of the National Iranian Oil Refining and Distribution Company
- Construction of a 64-bed hospital in Abadan
- Studies on and design of the Faculty of Chemical and Petroleum Engineering at Hormozgan University













Construction of Shahid Mahdavi Oil Storage Site, Bandar Abbas

Goals

According to the adoption of Resolution No. 1195-406-16384 dated May 16, 2022 of the respected Board of Directors of National Iranian Oil Products Refining and Distribution Company (NIORDC), the planning and implementing of a project to build petroleum products storage tanks of Shahid Mahdavi, Bandar Abbas, with a capacity of 600 million liters on a plot of land with an area of 37 hectares in the southern side of the Bandar Abbas Refinery with the aim of increasing the capacity and number of days of storage and procurement and reliable distribution of domestic consumption of gasoline and oil products supplied by the Persian Gulf Star and Bandar Abbas refineries according to the forecast of the balance plan of production, consumption, import and export of petroleum products, and in order to store, transfer and distribute gasoline and gasoil products according to Euro 4 and 5 standards in metropolitan cities in the form of BOT investment, were awarded to the National Iranian Oil Engineering and Construction Company.

Job Description

- Construction of storage tanks with a capacity of 600 million liters (360 million liters for gasoline and 240 million liters for gasoil) including: 8 tanks of 40 million liters and 2 tanks of 20 million liters capacity with a floating ceiling for gasoline and 4 tanks of 40 million liters capacity and 4 tanks of 20 million liters of fixed capacity for gasoil along with all the ancillary facilities including booster pumps, pipelines, auxiliary equipment for receiving and sending products, tanks and fire-fighting systems, control systems, metering, precision instruments, electricity and other buildings and necessary infrastructure
- Construction of flowlines between the inventory site and the Persian Gulf Star Refinery and connection to Shahid Rajaei Bandar Abbas Storage Site, construction of kerosene booster pumps in Shahid Rajaei Storage Site and two 10-km pipelines with a capacity of 2.5 million liters of gasoline and 5/1 million liters of gasoil

Workload Details

- Leveling and preparation of land with an area of 37 hectares and enclosing it
- construction of 3,800 square meters of building
- construction of foundation of the ring of tanks of 1,850 cubic meters
- concreting
- construction of band wall in the amount of 8,960 cubic meters
- concreting of about 35,000 cubic meters
- earthworks of 15,000 cubic meters for digging canals of a total

of 10 kilometers for laying 20 to 28 inches inlet and outlet lines from the storage site and 34 kilometers of pipe-laying operations and installation of valves in Bandar Abbas and Shahid Rajaei storage facilities installation of 21 above-ground tanks with a total weight of 16,000 tons installation of 15 booster pumps and side pumps for fire extinguishing systems and the fire water network implementation of industrial wastewater treatment system Workload installation of four power transformers and distribution facilities **Details** installation of medium and low-voltage switchboards (Continue) implementation of 12 km of electrical cabling installation of control system and precision instruments and 10 km of precision instrument cables installation of metering systems implementation of landscaping and green space etc. Investment The estimated investment is €85 million **Amount** Contractor Investment memorandum with Bank Melli of Iran Investment contract under build-operate-transfer (BOT) contract terms Contract Type









Construction Project of Naein / Kashan / Rey Pipeline Transportation of part of diesel oil, kerosene and gasoline produced in the Persian Gulf Star, Bandar Abbas and the future Hormoz refineries to Naein and Kashan and thence to Tehran and the northern Goals regions of the country in a shorter route Elimination of the daily traffic of 1,500 tankers and saving on the transportation costs and reduction in environmental pollutants and road accidents Construction of about 420 km of 20-inch pipeline equipped with leak detection system between Naein, Kashan, and Rey Construction of ten fixed and floating roof tanks with a total capacity of 300,000 cubic meters in Naein Construction of new pumping station in Kashan and development Job of pumping station in Naein Description Development and upgrading of the existing Naein 63 / 6.3 kV substation Development of 63 kV power transmission line with a length of 6 km from Kashan to Kashan pumping station and development of 63 kV electrical substation in Kashan Development of Rey terminal Engineering (E): Preparation of all documents and technical specifications, procurement engineering, documents and maps required for project implementation and commissioning: 2,181 documents Purchase and procurement of goods and materials (P): Procurement of 74 packages Workload Executive operations (C): **Details** Pipe-lay, welding, piping and hydrostatic testing operations: a total length of 420 km Construction and installation of tanks: 8.800 tons Construction of industrial buildings and structures: 5,330 square meters Construction of office buildings: 2,867 square meters Installation of rotating equipment: 30 devices In Local Currency: 5,040 billion Rials Investment **Amount** In Foreign Currency: € 84.5 million NASR consortium (Danial Petro Co., Nasr Misagh Ahvaz Co., Contractor Iran Development of Industrial Services Co., & Bina Consulting Engineers) Contract Type EPC

Project Title

Construction Project of High Voltage Power Transmission Line Power Supply Project of Bandar Abbas / Sirjan / Rafsanjan 26-Inch Pipeline

Goals

Construction of 132 kV double circuit transmission lines of Mehraran / Haji Abad and Qotbabad / Haji Abad, development of 63/6.3 kV electrical substation of Bandar Abbas pumping station and construction of 132/6,3 kV electrical substations of Qotbabad and Mehraran

Job Description

- Construction of a total of 100 km of 132 kV transmission line, including 48 km of Qotbabad / Hajiabad transmission line and 52 km of Mehraran / Hajiabad transmission line
- Construction of two 6.3 to 132 kV substations of Qotbabad and
- Mehraran oil transfer centers and development of 63/6.3 kV Bandar Abbas oil transfer center

Investment Amount

1,900 billion Rials

Contractor

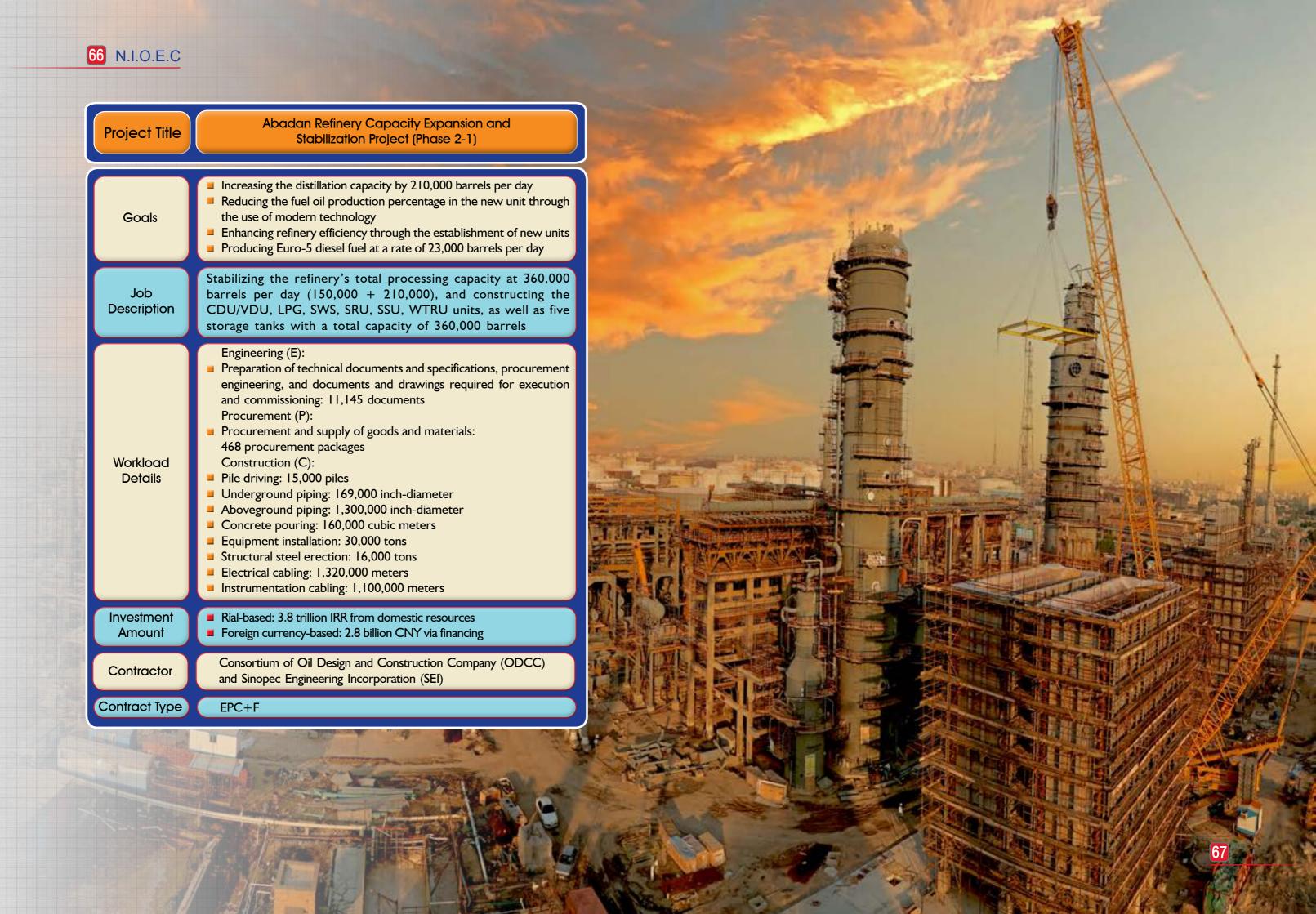
Persian Sazeh Parto Co.

Consultant

Pars Consulting Engineers

Contract Type





Contractor

Contract Type

Reorganization Project of **Project Title** Mahshahr Export Port ■ Reconstruction of 6 piers and dredging for mooring ships of 30,000 to 80,000 tons Increase in loading and unloading capacity of petroleum products from 50,000 Construction of 17 new storage tanks and renovation of 28 existing storage tanks and increase of storage volume by 3 million and 500 thousand barrels Goals Adding equipment for exporting fuel oil, kerosene, diesel oil, gasoline, etc. (totally from 50,000 tons to 90,000 tons) Equipment of new piers with advanced control systems Adding equipment for importing gasoline, MTBE and diesel oil Adding equipment to export various types of ship fuels Updating the existing facilities Construction of tanks and reconstruction of piers and renovation of worn-out Job equipment of Mahshahr export port in order to increase productivity and meet the Description growing need for export and import of petroleum products from Mahshahr export port **Onshore Sector:** Engineering (E): Preparation of documents and technical specifications, procurement engineering, documents and maps required for project implementation and commissioning: 4,082 documents Purchase and procurement of goods and materials (P): Executive operations (C): Excavation operations: 2,400,000 cubic meters Steel reinforcement: 2,000 tons Formwork: 95,000 square meters Concreting: 23,000 cubic meters Workload Piping: 103,000 meters **Details** Welding: 370,000 inches in diameter Construction of 17 new storage tanks with a total capacity of 557 million liters Construction of surface water conduction channels with a length of 12,000 meters Construction of industrial and non-industrial buildings: 6,500 square meters Road construction: 17 km Electrical cabling: 694 km Construction of 132 and 33 kV double circuit transmission lines with a length of 17 km Construction of 132 to 133 kV main electrical substation and development of 132 kV Dobi in 400 kV substation of Mahshahr and the export port **Offshore Sector:** Engineering (E): Preparation of documents and technical specifications, procurement engineering, documents and maps required for project implementation and commissioning: 2,180 documents Purchase and procurement of goods and materials (P): Executive operations (C): Demolition and construction of 6 new piers In-situ concrete: 18,000 cubic meters Centrifuge piling: 22,000 meters Metal piling: 3,000 meters Piping: 53,500 meters Dredging: 2 million cubic meters Investment Amount 9.000 billion Rials Offshore Sector: Khatam al-Anbiya Construction Headquarters, Omran Sahel Co.

Onshore Sector: Mashin Sazi Arak Co.









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