



**Novin**  
**Danesh Ayandeh**



## ORGANIZATION BACKGROUND

Founded in 1984, Novin Danesh Ayandeh has more than three decades of experience with continuous development and improvement.

In the early years of activity, we focused on industrial automation exclusively. Later on, we extended our activities firstly to electrical utilities for different industries, renovation & retrofit of various plants. In the next steps, Novin Danesh Ayandeh engaged in supply of a vast range of instruments, F&G equipment and industrial valves.

The very first Iranian PLC (Programmable Logic Control), was designed and produced by Novin Danesh Ayandeh in 1980's and has been employed in various industrial projects, since then.

For our first major breakthrough, Novin Danesh Ayandeh, independently from the main European licensor, successfully performed complete DCS (Distributed Control System) and ESD (Emergency shutdown System) for process units in the country (Desulfurization Plants in Tehran Refinery).

Novin Danesh Ayandeh, as the first Iranian company, started for renovation and retrofit of oil and gas pump stations and turbo – compressors (Rolls – Royce, Ruston,...), from 2001.

Novin Danesh Ayandeh has performed more than 200 projects in diverse industrial fields Since 1984.

Novin Danesh Ayandeh launched its production facility in 2007. The facility includes 4000 m<sup>2</sup> Production hall within 1.6 hectares land. It has an annual capacity of 1000 sets of automation panels and is equipped with test station, training center & indoor warehouse.

## FIELD OF ACTIVITY

- Design, Procurement, Integration & Commissioning of Industrial Automation Systems, using original hardware and software of major brands.
- Design, procurement, installation & commissioning of electrical utilities for distinct industrial plants.
- Design, procurement, installation & commissioning of Fire & Gas detection systems.
- Plants renovation and retrofit including Turbo-compressors, Gas/Oil pump stations, Boilers.
- Design, supply, installation and commissioning of kiln shell scanners, particularly for cement plant furnaces.
- Supply of different PLCs.
- Supply of a wide variety of instruments from reputable manufacturers
- Supply of different ranges of industrial valves
- Supply of Hipps Packages (High Integrity Pressure Protection System).

## Novin Danesh Ayandeh Workshop & PRODUCTION FACILITIES

4000 square meters of workshop facilities comprising of assembly and production hall, fully equipped with testing area, training center and indoor warehouse.  
The workshop production capacity is 1000 Automation panels per annum.







## ■ MARKETS AND FIELD OF EXPERTISE

- Oil and Gas refineries
- Oil and Gas Offshore facilities
- Petrochemical plants
- Turbo-compressor stations
- Cement plants
- Mineral plants including Copper, Steel, etc.
- Power plants and Industrial distribution systems
- ...





## Shiraz Petrochemical Project

Total control and automation system of utilities and power plant of Urea and Ammonia plant, have been performed by Novin Danesh Ayandeh, employing series 800XA and Foundation Field-bus of **ABB** technology.

## Gas Pump Stations

Design, Procurement and construction of station control system (SCS), emergency shut down system (ESD) and Fire & Gas system (F&G) based on SIEMENS technology in more than 20 Gas stations have been carried out by Novin Danesh Ayandeh:

- 8 Stations on IGAT- 4
- 4 Stations on IGAT- 1
- 5 Stations on IGAT- 8
- 1 Station in Nar Gas injection area







## Momtazan Cement, Kerman

For the first time in the country, Novin Danesh Ayandeh carried out the complete design, procurement, installation and commissioning of a cement plant electrical and automation systems without the assistance from foreign contractors. The project's scope included:

- Control, Automation and Instrumentation
- Electrical Distribution System (MV, LV)
- 132/6.3 KV substation

Similar projects have also been implemented in other cement plants, such as: GILAN-E SABZ, ZAVEH and BAGHERAN







## Mahshahr Product Export Terminal

MAHSHAHR petrochemical product export terminal includes 56 large reservoirs. EPC scope of work of the company, with more than 7000 I/Os consisting of:

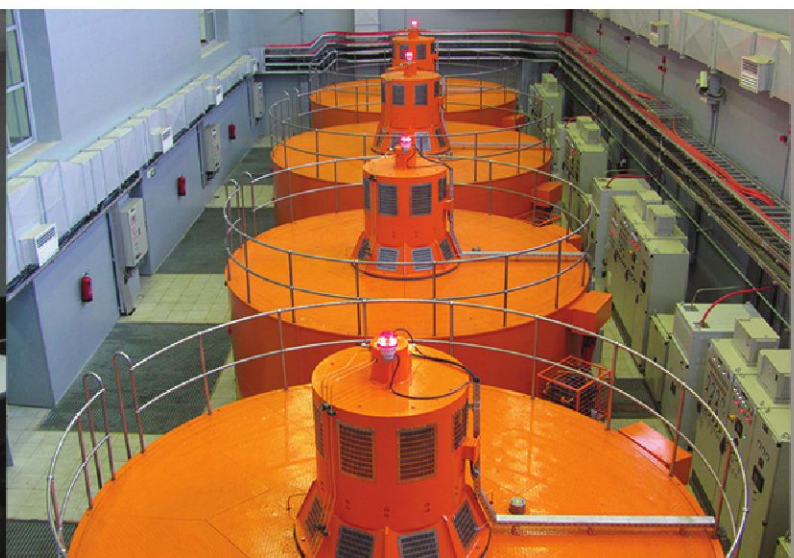
- Control system, comprising DCS and ESD (SIEMENS)
- Instrumentation and tank gauging system
- F & G system

## Tana Hydro Power Plant

Design, Procurement and Commissioning of control system of four units of hydro power plant located in KENYA.

Similarly, complete Control and automation of other hydro power plants have been done by Novin Danesh Ayandeh in:

- Seymareh dam
- Azad dam







## Tehran Refinery Products Upgrading Project

Design, Procurement, integration and commissioning of automation and Control system as well as emergency shutdown system of following production units in Tehran refinery, using SIEMENS products in DCS and HIMA products in ESD.

This was the first time which following process units were automated without presence of European licensor:

- Desulfurization in kerosene (KHDS)
- Desulfurization in gas oil (GHDS)
- Desulfurization in gasoline
- Hydrogen production unit





## Oil Pump Stations

Novin Danesh Ayandeh has performed renovation of control system (SIEMENS) and instrumentation of " VERESK-2 " and 21 other oil pump stations in all over the country for " IRANIAN OIL PIPE LINE AND COMMUNICATION CO. " , in :

- North Region
- Khuzestan Region
- Esfahan Region
- Central Region
- Tehran Region





## South Pars Gas Field's Offshore Platform Control System– PHASES 17, 18

The Project consisting of design, Procurement and Supervision on erection & Commissioning of :

- Control System (DCS)
- Emergency Shut-down System (ESD)
- Fire and Gas Alarm system (F&G)

Which due to the client's requirements, has been implemented within half of normal duration.



## Fajr- e- Jam Refinery

Renovation of automation, instrumentation and monitoring system of ROLLS-ROYCE Turbo – Compressors for propane refrigerant plant in Fajr-E-Jam refinery.

The project includes renovation and replacement of control system (SIEMENS), fuel system (WOODWARD), vibration monitoring (BENTLY NEVADA).

Similar gas turbine renovation projects have been done in several plants such as :

- Six units of ROLLS – ROYCE Turbo – Compressors in gas transmission trunk line No.1(IGAT-1)
- One unit of ROLLS – ROYCE in Kharg petrochemical plant
- Two units of RUSTON TB-4000 in Karoon oil field





## Modernization Of Transmission Line for Blast Furnaces 1& 2, Esfahan Steel Co.

The project includes : Design, Supply and installation of automation, instrumentation, control and electrical systems, which has been performed as an EPC basis by Novin Danesh Ayandeh, employing **SIEMENS** hardware and software.

Further more, automation system of Ghaem1 & 2 Units in Esfahan Steel co. the same as 2 ladle furnaces in Mobarakeh Steel Co. Performed by Novin Danesh Ayandeh.





## Revamping & Optimization of 4x90 Ton/H Boilers of Abadan Refinery

The project was defined for production improvement and lowering the cost of operation. The EPC scope of work, consisting :

- Detail Engineering
- Procurement, including control system, Burners, Control, On-Off and manual valves, Instrumentations and all required bulk materials.
- Installation, Commissioning and Start-Up.

Similar job is done for 480 T/H boiler in Loshan power plant.

## Combined Cycle Power Plants, As Siemens Local Partner

Novin Danesh Ayandeh has performed two major contracts as local partner of **SIEMENS** (power Generation division), for DCS of 23 units of combined cycle power plants, installed in 10 power plants in the country.

Total DCS detailed engineering and control system integration as well as fabrication of control and marshalling panels and supervision over commissioning and installation, were in the scope of our job.



## Equipment Supply

Novin Danesh Ayandeh offers comprehensive procurement services to the end-users and major EPC contractors on full range of packages, including Precision and Field Instrumentation, Valves, HIPPS Packages, Fire & Gas detection systems, furnace control and monitoring equipment at competitive prices.

Backed by experienced team of engineers at Novin Danesh Ayandeh, we offer complete procurement, engineering, site visits, technical support, on-time delivery, erection, commissioning and after sales services to our customers.

With a track record of supply to major projects in Oil, Gas, Petrochemical, Power, Metal and Mine Industries, we offer original equipment from all major and reputable European and Japanese manufacturers, complete with all relevant certificates and guarantees.



High Integrity Pressure Protection system (HIPPS)



# Field Instruments

We supply all types of Pressure, Flow, Temperature, Level Gauges, and Transmitters, as well as Tank Gauging systems from reputable world manufacturers.



**Fire & Gas Equipment**



**Control and On-Off valves (Ball, Globe Gate and Butterfly) ESD valves**



**Orifice Flange Element (Flow Element with differential pressure)**



**Coriolis Type Flow Transmitter (Low Flow measurement)**



**Differential Pressure Transmitter (Differential Pressure, Flow, and Hydrostatic Level Measurement)**



**Rotameter Type Flow Indicator (Float, and tube type Flow measurement)**



**Magnetic Type Flow Transmitter (Non-contact type for conductive Fluids)**



**Vortex type Flow Transmitter (long-term stability and high accuracy)**



**Radar type Level Transmitter (non-contact Level Measurement used for high accuracy)**



**Level Gauge (side mounted Indicator for storage tanks)**



**Ultrasonic type Level Transmitter (non-contact Level Measurement)**



- DECADES OF EXPERIENCE
  - ADVANCED TECHNOLOGIES
  - CUSTOMER SATISFACTION



## Major Customers

- Iranian Gas Engineering and Development Co. (IGEDC)
- National Iranian Oil Products Distribution Co.
- Oil Industries Engineering and Construction Co. (OIEC)
- Iranian Central Oil Field Co.
- South Zagros Oil and Gas Production Co.
- Petro Pars Co.
- Azarab Co.
- Iranian Off-shore Oil Co. (IOOC)
- Iranian Oil Pipe Line and Tele-Communication Co.
- National Iranian South Oil Co. (NISOC)
- Pars Oil and Gas Co. (POGC)
- Tehran Refinery
- Shiraz Refinery
- Shazand (Arak) Refinery
- Shiraz Petrochemical Co.
- Maroon Petrochemical Co.
- Kharg Petrochemical Co.
- Khorasan Petrochemical Co.
- Fajr Petrochemical Co.
- Ilam Petrochemical Co.
- Razi Petrochemical Co.
- Arvand Petrochemical Co.
- Amirkabir Petrochemical Co.
- Esfahan Steel Co.
- National Iranian Copper Industries co. (NICICO)
- Mobarakeh Steel Co.
- MAPNA CO.
- FARAB Co.
- SIEMENS Co. (Power Generation Division)
- Different Cement Plants (Momtazan, Doroud, Kerman, Ghaen, Bagheran, Mazandaran, Ardebil, Behbahan, Zanjan, Sarouj, ...)
- Loshan Power Plant
- Shahid Rajaee Power Plant
- Abadan Power Plant





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