



NARVAN ARRA
OIL & GAS



■ Energy & Environment
■ Oil & Gas
■ Drive & Control



Narvan Arra

Established in 1997, Narvan Arra's prime objective and the vision of its Managing Director Kamran Kavian, was to inspire a quality culture within Iran's industry and infrastructure.

Today we are able to meet the varied requirements of industrial, infrastructure and environmental projects, through forming workable partnerships between local and leading international companies, ensuring the expertise in each key area essential to project fulfillment.

Narvan Arra are committed to offering systems and solutions from the most reliable and reputable sources for a vast coverage of industry sectors; e.g. Hydro Power & Water, Oil & Gas, Petrochemical, Automotive, Steel, Marine & Offshore, to assist our clients in achieving quality and long term profitability in their overall pursuits.

Narvan Arra's three business units focus on a core of expertise in specific industry sectors as follows:

- Energy and Environment
- Oil and Gas
- Drive and Control



NARVAN ARRA
Committed to Environmental Issues



Oil & Gas

Narvan Arra's Oil & Gas business unit is able to meet the specialized requirements of companies involved in major Oil, Gas and Petrochemical developments; delivering quality products alongside bespoke project services, thereby ensuring satisfaction to both projects owner and customer.

Based on the specific requirements of a project and in order to provide the full range of expertise, equipment and services, we build teams of experienced manufacturers and suppliers; contractors, design and engineering companies to meet the clients' objectives.



Our expertise is in providing procurement, engineering, consultation, and after sales services. Our world-recognized brands along with our experienced teams of contractors, designers, bankers, financiers and managers can meet your most demanding requirements. Narvan Arra offers you the unique package of comprehensive tailor-made solutions for the Iranian Oil & Gas and the Petrochemical industry.



Applications

Narvan Arra's Oil & Gas division has been involved in the procurement, installation, training, commissioning and provision of warranty services to the following applications within the Oil, Gas and Petrochemical sectors:

▣ Oil Refineries

In consideration of the current level of refining capacity within Iran and the current drive to substantially increase it, Narvan Arra is well placed, having a reputation as a trusted supplier of specialized products and equipment to Iranian refineries.

▣ Petrochemical Plants

In line with Iran's recent year's boost in the petrochemical sector, Narvan Arra has demonstrated its strong capabilities thus establishing itself in this rapidly growing industry.

▣ Oil & Gas Pipelines

Together with partners in engineering and construction firms, and pipe mills, Narvan Arra has become a recognized player in major pipeline projects.

▣ Tank Farms and Terminals

Narvan Arra Oil and Gas division is the supplier of 70% of tank equipment to the refining and distribution sectors in Iran and is in line to become the first in equipping crude oil and product terminals with storage and transfer capabilities.

▣ CNG Technology

In line with Iran's aim to build 7000 CNG stations, Narvan Arra has secured key partnerships to go forward within this emerging industry.

▣ Offshore Platforms

Offshore platforms stand for 18% - 20% of Iran's annual crude oil production. To cover the demands of this sector, Narvan Arra has established sound and reliable relationships with key players within this segment.

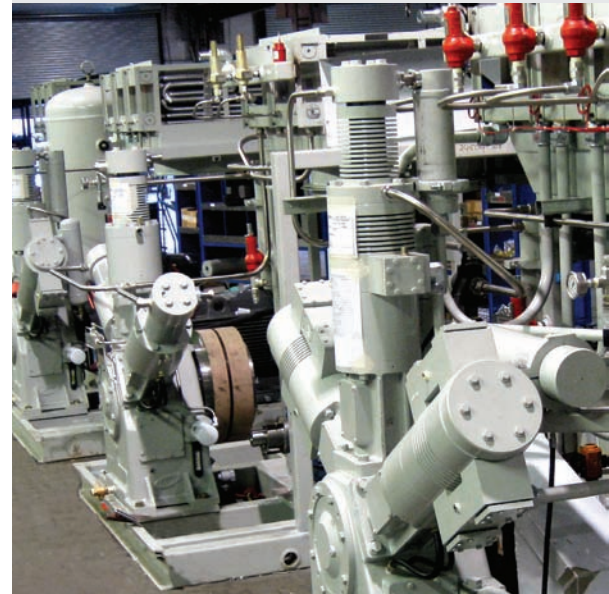




Products

Narvan Arra can provide a wide range of high technology equipment for the following applications:

Applications \ Products	Pipes & Tubes	Sheets & Plates	Valves	Flanges & Fittings	Gaskets & Insulation	Pumps	Compressors	Steam Turbines	Storage tank Equipment	Loading Arms	Instrumentation
Refineries	•	•	•	•	•	•	•	•	•		
Petrochemical Plants	•	•	•	•	•	•	•	•	•		
Oil & Gas Pipelines	•		•	•	•	•					
CNG Technology	•		•	•	•		•				•
Tank Farms & Terminals	•	•	•	•	•	•			•	•	
Gas Boosting Stations	•	•	•	•	•	•					
Storage Facilities	•	•	•	•	•	•			•	•	
Offshore Platforms	•	•	•	•	•	•	•	•		•	
Power Plants	•	•	•	•	•	•	•	•	•		•
Desalination Plants	•	•	•	•	•	•	•		•		•





Narvan Arra are positioned as one of the most innovative and reliable providers of piping in Iran integrating new standards and technologies as they emerge.

The piping is an essential part of all plants used to convey steam, water, gas, refrigerant, etc. The piping must be of sufficient size and strength to handle the service for which it is required. It must be installed with the necessary valves and fittings and with provision for expansion and contraction, drainage, support, and insulation. The corrosive effects of the liquid or gas must also be considered.

▣ Pipes

Line pipes, casing pipes and boiler pipes, seamless pipes and welded pipes: ERW, SAW, EFW, HF, FM.

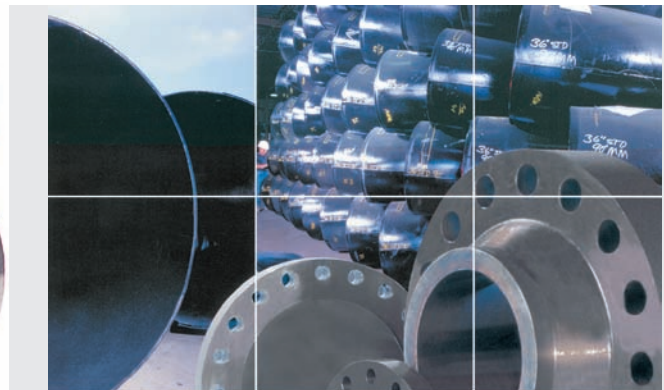
▣ Tubes

Heat-exchanger tubes, condenser tubes, boiler and heater tubes, seamless tubes and welded tubes: ERW, SAW, etc.

▣ Assembly Tube Bundles, U Tubes, Finned Tubes for Air-Cooling System

Seamless tubes and welded tubes: ERW, SAW, etc.





Flanges and Fittings

■ Flanges

Blind, socket welding, slip-on welding, lap joint, screwed and welding neck type.

■ Large Diameter Flanges

Welding neck, slip-on welding, and socket welding.

■ Butt Weld Pipe Fittings

Seamless and welded: LR or SR 45° and 90° elbows, LR or SR 180° return bends, hot induction bends, cold bends, equal tees, caps, reducing tees, concentric and eccentric reducers.

■ Forged Fittings

Threaded and socket-weld fittings: elbows, tees, caps, hex. head plugs, crosses, straight couplings, half couplings, reducing couplings, hex. shoulder nipples, reducing hex, straight nipples, sewage nipples, M/F reducing bushings, street elbows, unions.

Sheets and Plates

Cold rolled, Hot rolled, hot dip galvanized plates, sheets and round, flat and hexagonal bars.

Gaskets & Insulation

Different types of Asbestos free metal, EMI, weave line and textile gaskets for the refineries, petrochemical, oil and gas plants. Also all types of compression, packing, and seals. Thermal, acoustic and fire insulating products for industrial and marine applications.

Industrial Valves

A valve is a vital part of a good operation within all industrial installations. NarvanArra is specialized in providing valves, according to client's specifications, on demand, meeting the client's needs and together advising the best solutions available in the market.

Ball, Globe, Check, Gate, Plug and butterfly valves, motorized and manual, supplied in different sizes, configurations and pressures according to international standards including API, ANSI, ASME, BSI, DIN, GHOST, etc.



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Rotary Equipment

Rotating equipment such as pumps, compressors, and turbines are the heart of an industrial plant, so quality and reliability are essential. Narvan Arra offers a wide array of technological and tailor-made options to meet the most challenging requirements.



▣ Pumps

Narvan Arra provides pumps appropriate all areas of Oil & Gas, Water, Desalination and Power Generation. These Pumps are used in industrial and marine applications, the oil and gas industry and water fields. Centrifugal pumps are used for high-pressure multistage, Vertical pumps, mixed or axial flow, single or multistage; Horizontal pumps with divided casing; single-stage, double suction; single stage end-top type.

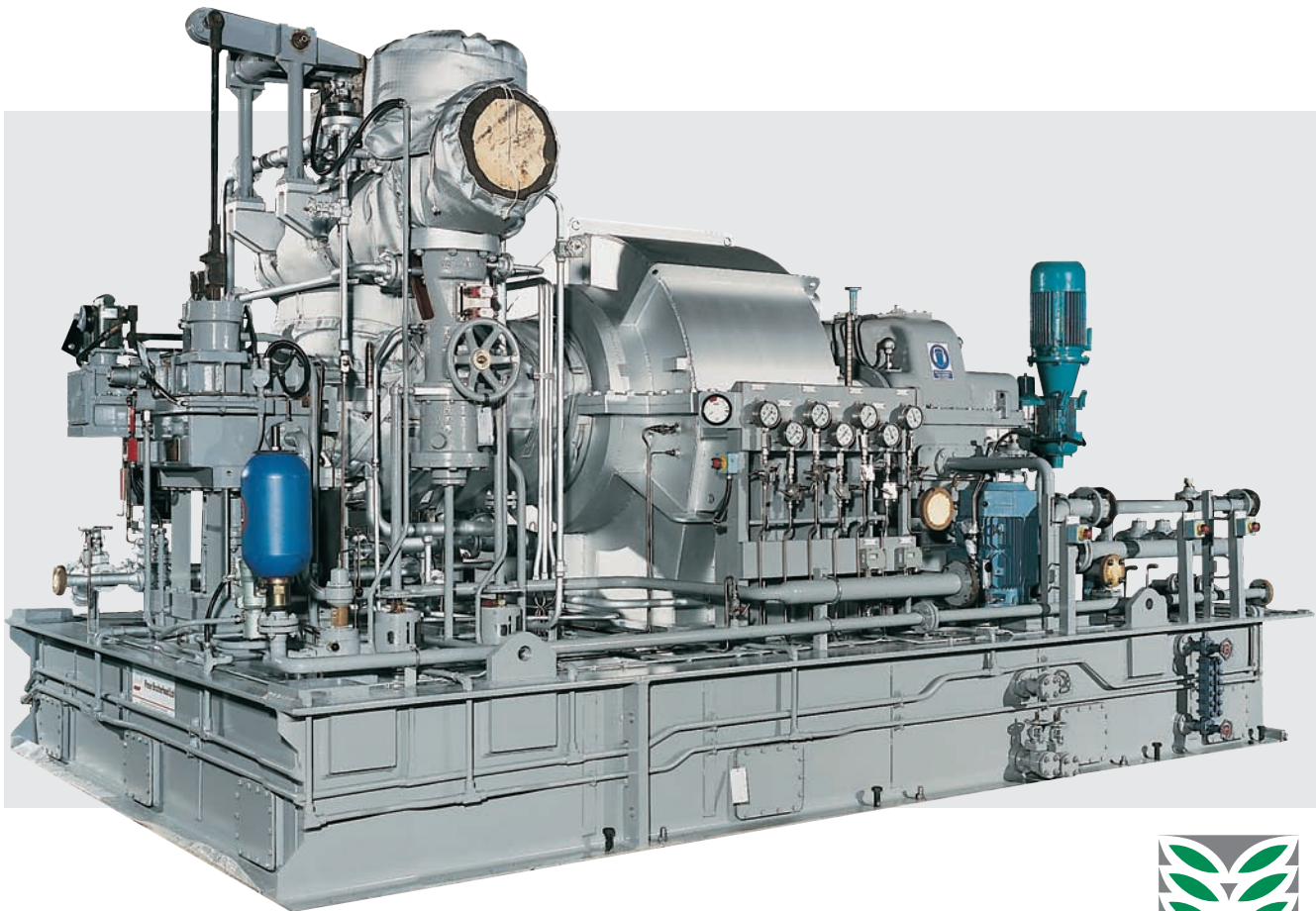
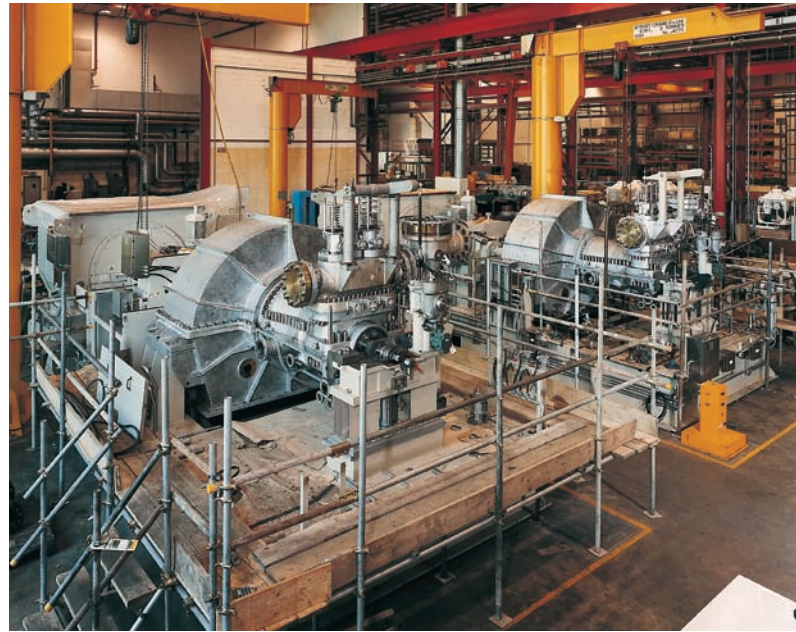
▣ Compressors

Narvan Arra offers the complete range of centrifugal compressors for all major compression applications. They are used in oil & gas production, gas transportation, refinery and petrochemical industries, fuel gas boosting and other similar processes.



■ Turbines

Narvan Arra provide Steam & Gas turbines that have earned a reputation as the most modern, reliable and versatile drivers in the industry. Combining engineering expertise, robust designs and precision manufacturing. These turbines are built to perform and endure years of continuous service. The units can be built to API standards and can be customized to meet exacting customer specifications or other industry standards. Our partners design and manufacture a complete line of steam & gas turbines for mechanical and generator drive applications and for all major services. They are designed for top thermodynamic and mechanical performance, for installation in chemical, petrochemical and industrial plants, provided as either stand-alone drivers or as part of an oil & gas complete turbo set.



NARVAN ARRA
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Storage Tanks Equipment

Together with our partners in the field of storage tanks' accessories, we are able to provide our clients with storage tanks suitable for all types of products where safety is paramount. We provide quality design, manufacture and field Service to the above-ground Oil Storage Tank Industry.

▣ Tank Accessories

Pressure & vacuum relief valves, flame arrestors, emergency vent, level gauges transmitters, gauge hatches, tank mixing educators, jet mixer and tank suction heater.

▣ Aluminum Geodesic Dome Roof

The Heavy Duty Geodesic Dome Roof is the result of 25 years of manufacturing experience in tank equipment by our partner.

Our aim is to provide a dome to the oil industry that is extremely durable and overcomes many design problems that exist in other well-known brand domes.

These days when the concern is "Whole of Life Cost", we believe our partner's quality-engineered Geodesic Dome Roof offers tank owners the best possible value for money.



▣ Seals

Narvan Arra provides seals using a variety of elastomers with metal parts galvanized or stainless steel. Additionally, rigid tip primary wiper and secondary wiper seals are available. Primary pantograph shoe seals, together with secondary roller seals are the best combination for at least 20 years of services in the storage tanks.

▣ Drain Systems

Floating roof drain systems are custom designed and engineered to suit your tank. Drain joints are designed for long life maintenance free service. Multiple drains for large tanks can easily be installed. Drain flow rate calculations provided with quotation. Narvan Arra can supply full drain systems with piping, or arrange to design your drain system, whereby you purchase the Joints and fabricate your own piping.

▣ Aluminum Internal Floating Roofs

High section modulus main I- beam and sheeting clamp channel sturdy extruded rim, providing excellent support for the IFR shoe seal large diameter, high strength support legs at the rim and centre deck. All centre deck legs are connected to the IFR frame, not to pontoon ends. This eliminates the possibility of pontoon end cracking due to IFR flexing in normal service.

▣ Specialized Floating Suction Lines & Skimmers

A wide range of suction lines and skimmers can be custom designed to suit every application. Swing Master's central type swing joints are the ideal choice for floating suction lines.

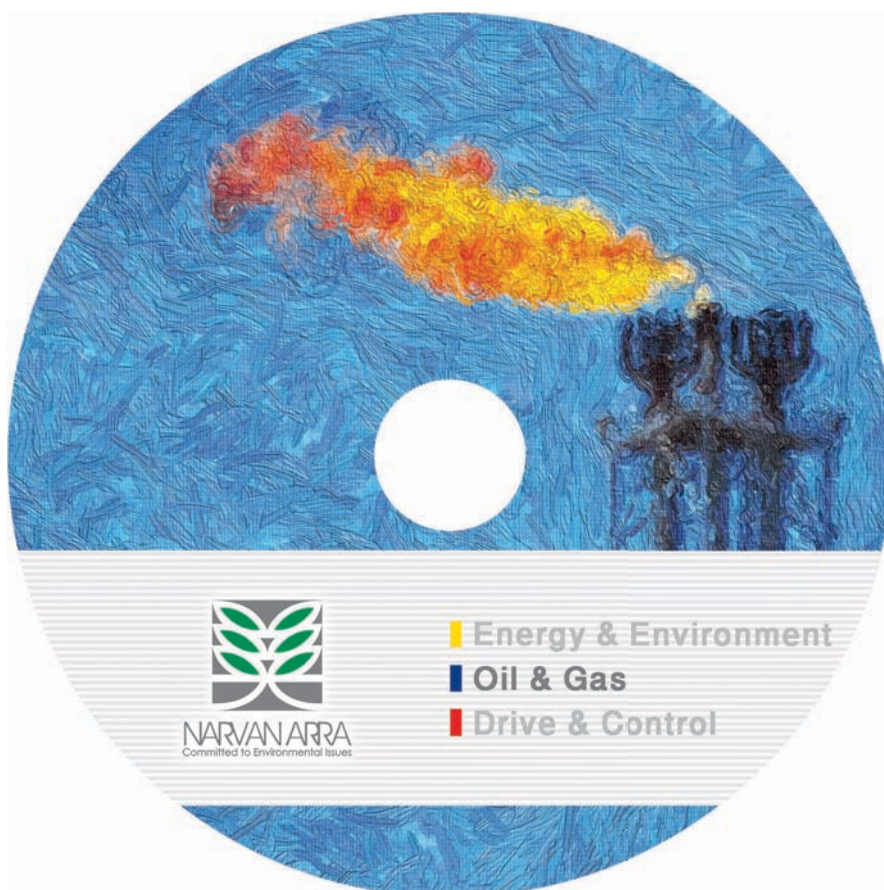
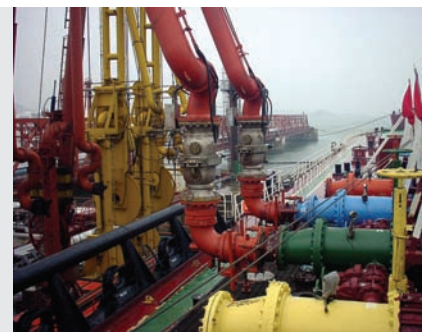


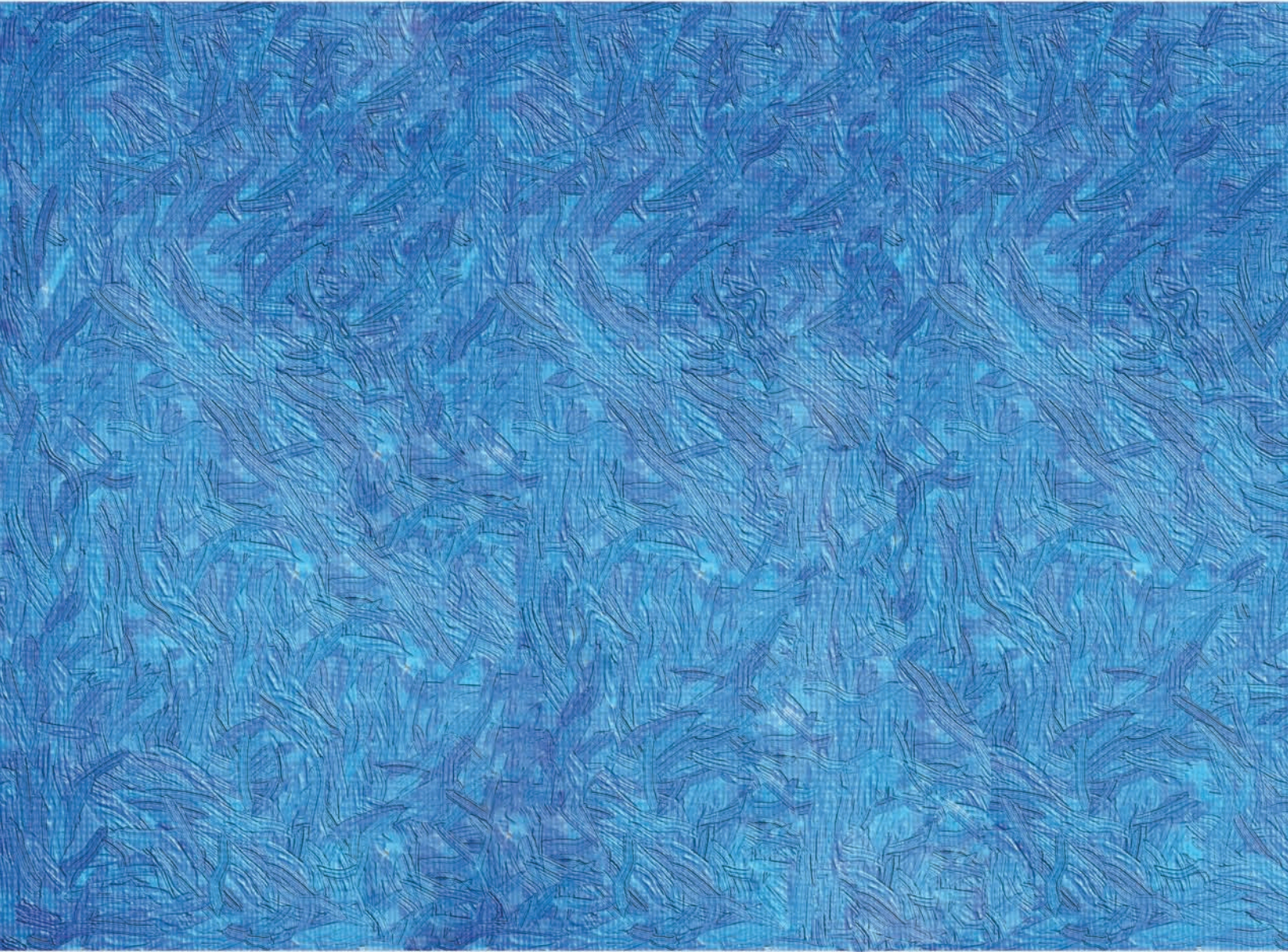
■ Swing Master Joints

Constructed in cast iron with plain Ni-Resist plain bearings (copper free), Swing master joints are internally & externally epoxy painted for Jet A1 service. All flanges are ANSI 150lb. flat face.

Marine and Truck Loading Arms

Loading Arms are designed to transfer liquids and gases between the pipe system of a jetty and a tanker or barge. We provide tailor made arms for all Marine Loading, Railcar & Truck Loading, QC / DC (Quick Connect/ Disconnect Coupler), ERC (Emergency Release Coupler) System, Twin Sealed Guide Way Valve and Gangway/Quick Release Hook.





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