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GPE
PETRO ENERGY CO.

Engineering, Procurement,
Construction of Oil, Gas,
Petrochemical, Offshore, Marine
& Power Plant Projects

GPE Truck Loading Arms

2024

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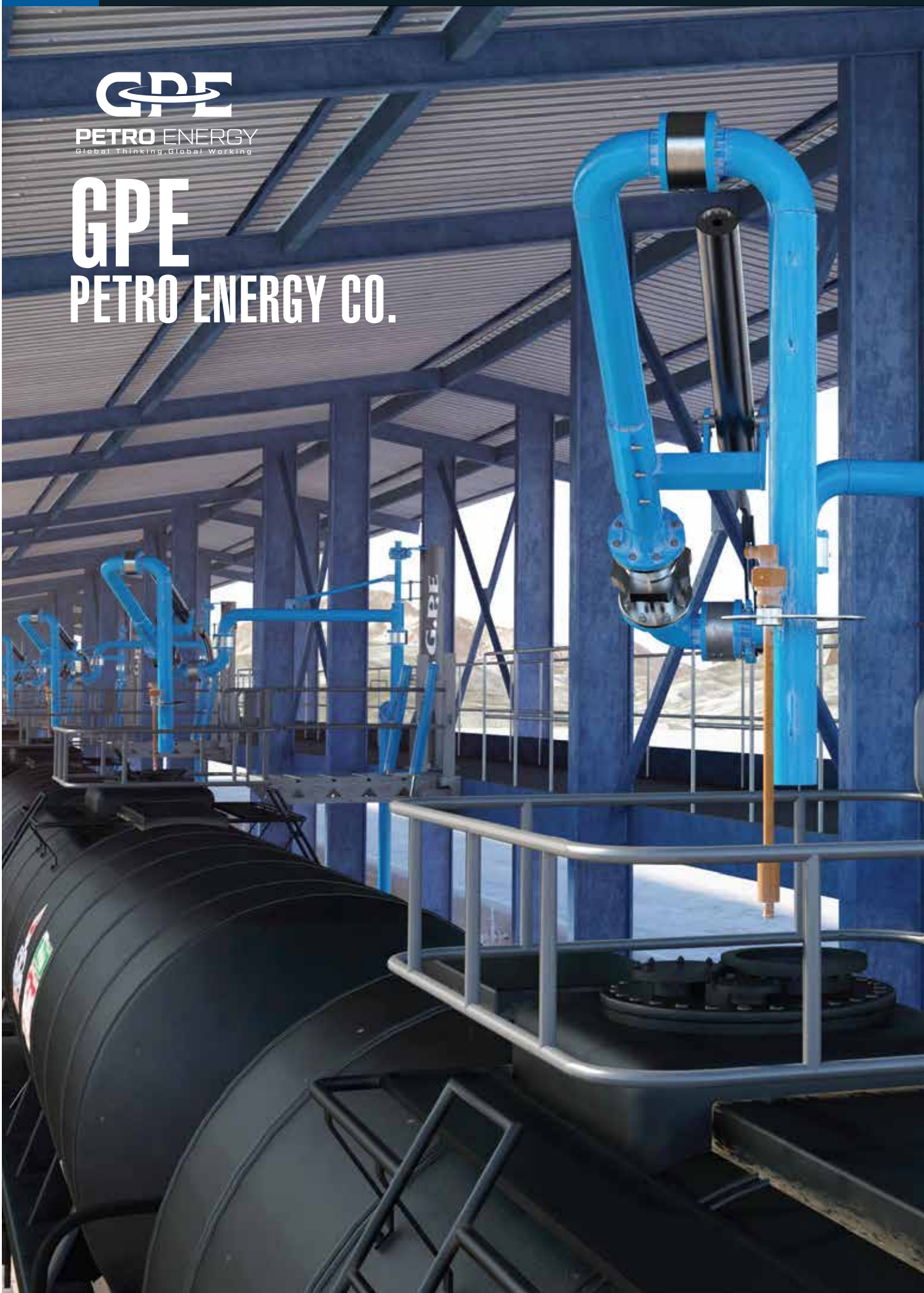

The truck/train loading arms are used to ensure safe and rapid loading/unloading operations. By using these, fluids are loaded/unloaded into/from tank trucks or trains in accordance with their category or characteristics, and then are transported to different locations. Different loading arms are used for different loading methods, depending on the type and state of the fluid to be loaded. Regardless of type of loading position (Top/Bottom) or loading method (open for normal petroleum and chemicals products/closed for high volatile and hazardous products), GPE loading arms are always considered as the safest, most cost effective and reliable solutions of loading and unloading operations within the industry.

GPE
Truck Loading Arms

The GPE truck/train loading arms are consist of a combination of top-quality components, each with unique design features. GPE considers in-house design and fabrication for loading arms according to project exact specifications. As the very bases of design, a typical loading arm should have sufficient range to reach the farthest compartment without re-spotting the vehicle plus parameters such as specifications of products to be handled (temperature and pressure), flow rate, physical facility dimensions and limitations, specification/dimensions/elevations of nozzle in loading/unloading bay and vehicle compartment nozzle should be considered too.
These cannot be achieved unless an accurate design in sketch of the loading arms are considered to meet these in final configured products. As the outcome of design sketch optimization, different individual parts are undergo the manufacturing process to configure and produce the loading arms.
In GPE truck/train loading arms all swivels are designed in compliance with requirements of each individual project to yield the best performance in operational conditions. Internal electrical bonding of swivel parts are met to eliminate the necessity for separate earth wiring. Swivel sealing packing materials are chosen according type of application. To meet the exact piping specification of each project, a variety of spools and drop hoses are available for maximum installation flexibility. These proactive approach in design of GPE truck/train loading arms, assures the compatibility of configured loading arms with a wide range of products and service conditions.
All GPE products including truck/train loading arms are designed and manufactured within GPE certified ISO quality management systems. All arms and swivel joint assemblies are fully hydro tested and NDT test procedures including PT and Radiography are carried out to required specifications.

Features and Benefits

- Rail or truck applications
- Cost effective
- Easy operation;
- Available in 2", 3", 4"
- Smooth, easy operation
- Modular construction for ease of installation, maintenance and repair
- Variety of configurations to fit your application
- Available in carbon steel, stainless steel, aluminum
- Choice of flanged, threaded or all-welded construction
- Available with different balancing mechanism (spring cylinders, torsion springs, hydraulic cylinders, pneumatic cylinders)

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Folding Stairs

GPE is committed to effectiveness and safety of its truck/train loading arms in operational conditions including the safety concerns related to operator during the loading, unloading, venting and inspecting operations. To facilitate a safe and reliable access of operator to loading nozzle compartment on vehicle in top loading arm, GPE folding stairs as a versatile product, are available as a folding/rotating mechanism. Unless the loading/unloading job is in progress, folding stairs are raised to stored position to provide a secure clearance while the vehicle approaches to the loading/unloading bay to avoid any clashes with vehicle, loading arm and loading platform structures. Once the safe operation of the loading arm is finished and before the vehicle starts moving, the folding stairs is raised back to the stored position. Folding stairs are available in 3, 4 or 5 (or more according the order) step type upon the loading bay and platform specifications and dimensions. Considering the attaching to stairs safety handle/cage for the vehicle nozzle compartment is optional.

Features and Benefits

- Robust and wear free structure
- Easy and smooth rotation to/from operational position
- Using the spring cylinder to make the rotation of stair with minimum hassle
- Enhanced interconnections mechanism
- Locking device to avoid unforeseen movements
- Fully balanced and tilt free configuration
- Available in manual or powered operation

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Loading Valve

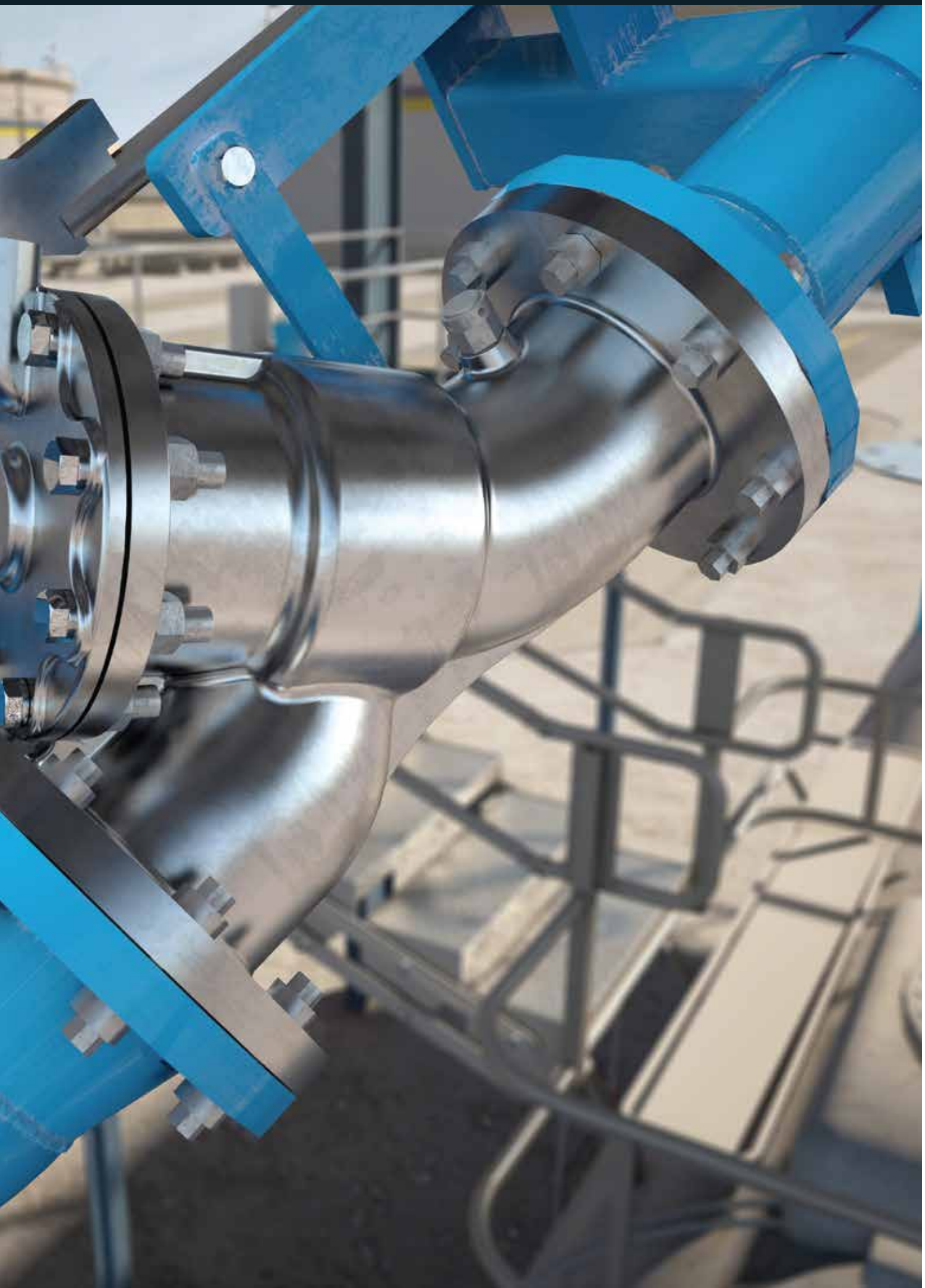
Starting and shutting off the flow in loading and unloading operation involves undesirable hammer effect in piping and arms. This may reduce the effective operational life of the arms and the connections and interfere in correct performance of instrumentation of the loading system. GPE loading valves are hydraulically operated from the pressure in the process line to which they are connected, and are fitted as flow restricting valves. GPE loading valves are pre-adjusted valves, though their calibration can be done easily on site. With a unique adjustable configuration, the flow can be easily cut or regulated to achieve the optimum discharge needs.

Features and Benefits

- Soft seat / Metal seated
- Bidirectional
- Antistatic stem
- Anti blow out stem
- Auto adjustable packing
- Self cavity pressure relief
- Fire safe

Standards

- Top flange ISO 5211
- Material according NACE MR-0175
- Testing API 598, ISO 5208
- Fire safe API 607, API 6FA, ISO 10497
- Safety, Efficiency & Ease of Operation



Platforms

To provide the full package of loading/unloading operation, GPE designs, engineers, and fabricates loading platform to fit the exact requirements of the project. GPE exactly compliant design provides the operators with a convenient, safe, and durable solution.
No matter if the design is the centre column type (for limited space) or multiple column type (for greater bearing load), in GPE design safety being the main concern, operator mobility is the second most important consideration. Work area and operator mobility should be unobstructed. Canopy heights provide ample clearance for loading arm positioning.
All rack systems can be equipped with safety bridges, safety stairs, or safety enclosures for access to the entire loading bay.

Accessories

GPE provides a wide range of loading and unloading accessories including:

- Vapor Couplers
- Loading Arm Counter Balances
- Loading Valves
- Safety Breakaways
- API Couplers (Bottom Loading)
- Vacuum Breakers
- Deflectors
- Strainers
- Remote Controlling Systems
- Parking, Position and level Sensors
- Earthing and Metering Systems
- Heaters (Electrical and Vapor)
- Vapour Recovery Line and Coupling


G.P.E

www.iranpetrographic.ir / +98 912 42 120 42
Design by: Mh.mohsenifar

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Central Office

Units 3 and 5,Hakimi Alley, Pakistan St, Beheshti Ave,
Tehran,Iran
Tel: +98-21-88513495 / 96
Fax: +98-21-88526805
www.gpeco.com
E-mail: info@gpeco.com

Factory

Unit 889, 9th Kolahdouz St, Boroujerdi Ave,
Phase 2, Shokouhie Industrial zone,
Qom, Iran
Tel: +98-25-33342862
Fax: +98-25-33342601
E-mail: factory@gpeco.com