

Custody Transfer Metering and Analysing System





About Us

As a strategic business unit, Petro Payesh Energy Kavir was established as one of the subsidiaries of ELECTRO KAVIR INDUSTRIAL GROUP with the focus on Custody Transfer Metering system solutions. Petro Payesh Energy Kavir is a specialized engineering company for design, construction and commissioning of field-proven innovative solutions or Custody Transfer Flow Measurement in the Oil & Gas Industry.

With our vast experience and project-oriented approach and relying on our local engineers and our European suppliers, we always strive to supply the best techno-commercial solution to our clients in line with the applicable project specific requirements, industry codes and standards and national regulatory rules and guidelines.

Scope of Supply

Our scope of supply typically covers all stages of project execution, including :

- Detailed design & engineering
- Project management
- Manufacturing
- Calibration & integrated testing
- Site supervision
- Shipping & packing
- Training & support



Workshops

Petro Payesh Energy Kavir has one 4,500 sq. meter workshop facility established unit in Yazd Special Economic Zone which operates under ISO 29001 & ISO 45001 ensuring compliance with international quality standards. The new workshop with area of 12,000 sq. meter is under construction. Our workshop personnel specialize in the fabrication and assembly of skid-mounted process packages mainly focus on Metering packages, Sampling systems and Analyzers, Chemical injection packages, which are destined for use in the Oil, Gas, Petrochemical and Power industries.

Activities include:

- Process skid packages: Assembly, E&I installation and hook-up, painting and testing of complete systems.
- High-quality pipework: A range of welding and testing processes are available for the production of pressure pipework, in a range of materials to suit the requirements of standards and codes of practice.
- Structural steel: Welding, cutting and machining processes.

Materials of construction include carbon steel, stainless steel and duplex alloys.



Applications

Petro Payesh Energy Kavir can provide complete design, manufacture, assembly and test of the following types of metering systems for the following applications:

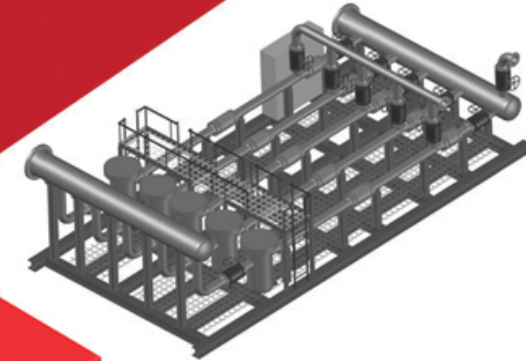
- Petrochemical facilities
- Power stations
- Pipelines
- Offshore platforms and FPSOs
- Onshore installations including terminals and refineries



Metering

Petro Payesh Energy Kavir designs & manufactures fiscal, custody transfer and allocation metering Systems; sampling & analysis systems from simple meter tubes to complete skid-mounted for a wide range of fluids including hydrocarbon applications such as crude oil, conventional or unconventional natural gas and condensate as well as refined products including LPG, lubricants, fuel oil, kerosene and naphtha. Typical applications include production, transmission/distribution pipelines, import/export for oil, gas and LNG terminals and storage facilities. Flow meter is the heart of every metering skid. The type and size of a flow meter is selected based on fluid properties, required system uncertainty, flow rate, pressure drop, maintenance, proving requirements and many other parameters. Our engineers in-depth knowledge of all meter types, such as the Positive Displacement meter (PD meter), Turbine meter, Ultrasonic Flow meter (UFM), Coriolis meter, etc. gives us a chance to provide you with the best metering solutions. Every metering system requires a metering control and supervisory package, our computation and reporting packages can range from simple flow computers to full supervisory systems with graphical control functions and communication with Distributed Control System (DCS), Integrated Control and Safety Systems (ICSS) or other systems.

We utilize all forms of metrology and all systems are designed to International standards of AGA, IP, ISO, OIML as well as National standards !



All of our systems are built, assembled and tested at our own fabrication facilities in Yazd Special Economic Zone.



Proving and Calibration

During its operating lifetime, a flow meter must be validated and calibrated at certain intervals to guarantee the reliability and uncertainty of the system. The validation methodology with its calibration intervals is a delicate matter and shall carefully be specified. Validation and proving is not just an operational issue, but is playing a major role in the design of the metering system design.

Petro Payesh Energy Kavir provides you with below types of calibrations:

- Sphere Prover
- Master Meter Prover

Also, Water Draw solution is available for sphere prover calibration which is fully designed by our team.

For liquid systems we supply the following types of provers:

- Portable, remote, online
- Bi-directional
- Uni-directional
- Low temperature piston

Bi-Directional Provers

A bi-directional prover is one of the most reliable means available to verify meter readings and establish meter factors. It is an easy and accurate way to calibrate meters in the field, in order to ensure exact measurement of liquid flow.

The principle of operation is based on positive displacement with flow and displacer travelling in both directions by means of a 4-way diverter valve. The bi-directional prover is constructed of pipe which can be configured in many ways.

The bi-directional prover offers long-term reliability with minimum maintenance.

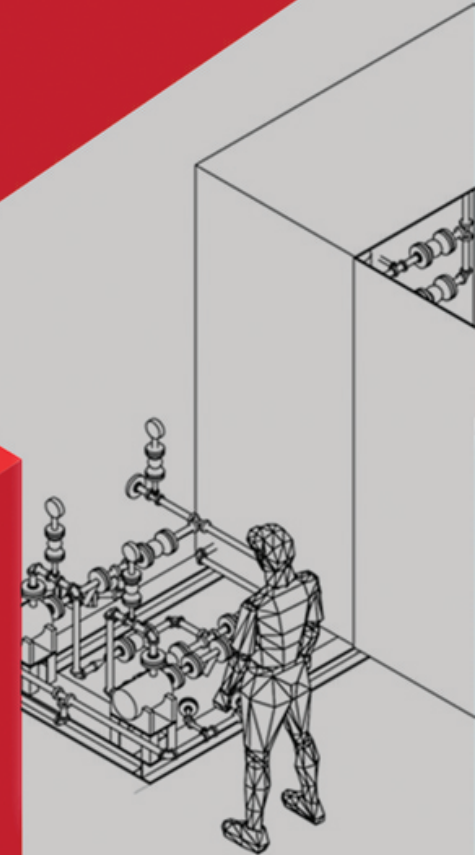




Sampling System

Like quantity, the quality of the fluid (especially in hydrocarbons) is of equal importance when it comes to determining its fiscal value. A representative sample of a hydrocarbon product is necessary to ensure proper accounting for transactions and efficient product processing. The amount of hydrocarbon product that is transported between producer, processor, distributor and end-user is significant. To be able to verify the exact composition of the product is important from an economic and product treatment standpoint. A small percentage saving made by correctly determining composition will quickly recoup the investment made in the purchase of a system designed to obtain an optimum sample. In addition, if the best sampling procedures are followed, the potential for disputes between supplier and customer will be greatly reduced.

A wide variety of sampling and analysis systems can be designed and manufactured in our workshops. These range from analyzers locally mounted in simple enclosures to complete analyzer houses for Gas applications containing all necessary equipment including sample take off, pressure let down, fire and gas detection; and HVAC as required. For Oil applications we can provide fast loop sampling systems as well as more complex power mix sampling systems.





Supervisory & Control System

One of the most critical items for an optimum performance and operability of a Fiscal Metering System is the Metering Control System. The design of a Metering Control System depends on various functional applications and requirements and is primarily responsible for transforming the available accurate field data in valuable information which ultimately leads to strategic decisions for operation and maintenance of the metering system. As a subsidiary of Electro Kavir Industrial Group, we can meet end users preferences for Flow Computer, PLC and HMI manufactures also Petro Payesh as an independent integrator designs and supply a Metering Control System fully in line with the preferred operator infrastructure.

Our Metering Control solutions scope depends on the project requirements and can be:

- Complete integrated Metering Control Systems;
- Supervisory Computers and Metering HMI Systems;
- Flow Computer cabinets.



We work with all major flow computer suppliers, including : Krohne, ABB, Omni and Emerson but our independence and technical ability mean that we can provide the metering controls solution that best meets your budget and individual needs.



Measuring Instrumentation & Safety Equipment

Petro Payesh Energy Kavir is specialist in supplying a wide range of measuring instrumentation from local gauges and switches up to most high-tech transmitters and analyzers, covering all process parameters including Pressure, Diff. Pressure, Temperature, Level, Flow, Density, Viscosity, Corrosion monitoring, etc. We are also capable to provide wide range of flame arresters, breather valves, pressure safety and relief valves, tank equipment from reputed international manufacturers

We have identified a variety of sources around the world to broaden our activity imports and the supply of instrumentation and safety equipment. We offer a unified solution to our clients with full scope packages covering engineering, procurement, spare parts supply, after sales services and supervisory services for commissioning in the shortest time as possible as with appropriate price and best quality.



**“ Our Priority is to maximize
the value and efficiency
of our customres’ energy
assets ”**

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