The efficient and effective movement of natural gas from production wells to consumer regions requires an extensive and elaborate transportation system. Natural gas produced from a particular gas field will have to travel a great distance to reach its final point of use. Natural gas is transported by a complex and extensive network of international and regional gas pipelines.

Along with pipelines, mid-stream processing of the gas industry also includes underground storage facilities that provide improved reliability of gas supplies to consumers.

Siemens offers an innovative portfolio of field instruments and process analytics for your natural gas pipelines monitoring and underground storage control. Our products meet the stringent measurement requirements of the natural gas industry without high installation costs and will help you to manage your assets more effective.

Furthermore, Siemens supplies control systems that include the latest in communication equipment, such as wireless data transmission. Our wireless systems provide monitoring and control of remote locations where cable installation are impractical and phone lines unavailable. It eliminates the expense, time, and installation costs of cable circuits.

In addition to field devices with 4-20 mA communication protocol, Siemens instrumentation and analytics are available for traditional HART, fieldbus-based PROFIBUS, or other buses.

Here is a sampling of the instrumentation and analytic products that Siemens is supplying for new construction and maintenance projects on gas pipelines throughout the world.
Siemens understands your requirements – regardless which stages of natural gas transmission and storage require instrumentation, various measurement technologies are available for different applications.

**Siemens quality:**
- High degree of product safety – through maximum process transparency
- Optimal resource efficiency – through innovative platform concepts
- Increased productivity – with optimal solutions for the operating phase
- Greater availability – through innovative service and support concepts
- High long-term investment security – through continuous innovation and maximum compatibility

**Siemens results:**
- Fast commissioning, short ramp-up times
- Accurate and reliable measurement
- Low total cost of ownership
### Clamp-on flow measurement
**SITRANS FUG1010 clamp-on flowmeter**
- **Applications:** Gas pipeline monitoring, check measurement in compressor stations, and underground gas storage facilities
- **Technology:** WideBeam ultrasonic, clamp-on
- **Benefit:** Bi-directional flowmeters provide zero stability and additional diagnostics at low installation costs as no pipe penetration and no system shutdown are required. Due to non-intrusive installation these flowmeters are absolutely environmentally friendly and ensure zero fugitive emissions. Additionally, it features piping correction algorithm, excellent turndown, and has no pressure limits.

### Inline flow measurement
**SITRANS FC MASS flowmeter**
- **Applications:** Non-custody CNG metering in dispensers, compressor stations and underground storage facilities
- **Technology:** Coriolis flow meter with multi parameter measurement of mass flow rate volumetric flow rate, density and temperature.
- **Benefit:** Excellent measuring performance – 0.5% rate up to 5075psi; Low cost of owner ship with no moving parts; Space-saving – enabling smaller and more efficient dispenser layout and construction; Flexibility – available in three sizes, 0.3 inch, 0.5 inch, and 1.0 inch ensuring a broad application fit; High capacity – flow rate up to 1100 lb./min for faster fueling

### Pressure measurement
**SITRANS P DSIII/SITRANS P500 pressure transmitter**
- **Applications:** Pressure measurement in compressor and metering stations
- **Technology:** Gauge, absolute and differential pressure
- **Benefit:** Applicable in hazardous zones, designed with local pushbuttons for setup and numerous diagnostics functions, such as operating hours counters, recording process extremes, and doing simulation checks during startup, help simplify operations.

### Temperature measurement
**SITRANS TH temperature transmitters and sensors**
- **Applications:** Temperature measurement in underground storage facilities, compressor plants and check metering stations.
- **Technology:** Universal design supports various types of sensors
- **Benefit:** High accuracy across entire ambient temperature range.

### Valve control
**SIPART PS2 valve positioner**
- **Applications:** Provides valve control along the pipeline, in valve and metering stations and compressor plants
- **Technology:** Digitally designed device that uses piezo-technology
- **Benefit:** Can be used for valves from almost all manufacturers. It features negligible air consumption and numerous diagnostic capabilities to detect a variety of abnormalities, such as pneumatic leaks or deposits in pipelines or fittings. Additionally, the partial stroke testing capability ensures proper valve performance and increases safety.

### Gas chromatography
**MicroSAM/SITRANS CV gas chromatographs**
- **Applications:** Analytical process monitoring and control in compressor stations, fiscal metering, gas quality control, calorific value measurement (only SITRANS CV can perform this measurement)
- **Technology:** Online microprocess gas chromatograph
- **Benefit:** Compact and modular design permits simple installation directly at the sampling point. It provides faster analysis and allows user-friendly remote operation. Further features are medium power consumption, low utility gases consumption, and low operational costs.
Get more information:

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