CAMERON
A Schlumberger Company

JISKOOT JetLine

Line conditioning, sampling, and analysis system

APPLICATIONS

- Production and allocation operations
- Land and offshore applications
- Transmission and storage
- Processing and refining

BENEFITS

- Greater operational visibility to process conditions
- Negligible pressure loss
- Minimized operational and financial risk
- Piggable alternative to traditional static mixer
- Significantly improved certainty of fluid properties
- Improved data quality and operational control

FEATURES

- Complete line conditioning for low-viscosity fluids with low pressure drop
- No obstruction in the line, within pigging operations
- Easy retrofitting with existing inline and fast loop sampling systems

Creating a homogeneous fluid with light-density, low-viscosity crude oils and condensates has traditionally been a challenge using static mixer and traditional jet-mix technologies that use quills and nozzles to extract and reinject fluids into the pipeline.

Because static mixers create mixed fluids by obstructing the flow of the fluid using plates or baffles within the line, they often cannot add enough turbulence to truly condition the pipeline when mixing ultralight-density and low-viscosity fluids. However, additional obstructions inside the pipeline can create a pressure drop that affects the quality of the fluid that the system is designed to mix.

The compact, dynamic JISKOOT JetLine* line conditioning, sampling, and analysis system provides custody-transfer-quality line conditioning for light-density, low-viscosity fluids in smaller line sizes. Its nonintrusive design eliminates the risk of fluid alteration caused by pressure drop, making it ideal for custody transfer, allocation, and production applications. Whereas static mixers typically have an effective 5:1 turndown, the JetLine system flow rate turndown is infinite.

Reduced measurement uncertainty through complete homogenization

Any pressure drop within the custody-transfer process, requires pumping the fluid at a higher pressure. This requires an increase in energy at the pump and increased operational costs for the life of the project. Additionally, a pressure drop immediately before the sample point can alter the physical properties of the fluid, bringing uncertainty bringing uncertainty to the fluids appraisal.

In contrast with conventional equipment, the JetLine system creates a truly homogenous fluid without obstructing the line before the sample point, and better homogeneity equates to less measurement uncertainty. The system also enables improved sampling representativity, better-quality data, and the ability to pig the line without removing probes, quills, or nozzles.

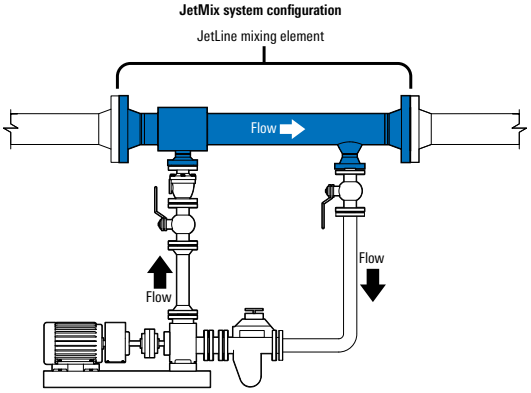
JISKOOT JetLine

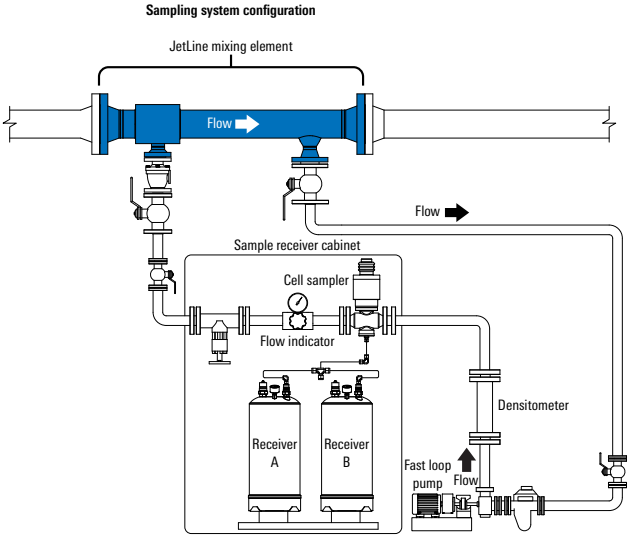
Technical Specifications	
Pipeline diameter, in [mm]	3, 4, 6, and 8 [80, 100, 150, and 200]
Process connections	Raised-face (RF) flanges
ANSI pressure rating range	Class 150, 300, and 600
Temperature	–4 to 212 degF [–20 to 100 degC]
Density range, lbm/galUS [kg/m^3]	5.84-7.9 [700 to 950] (consult factory for process conditions outside of this range)
Viscosity, in^2/s [mm^2/s]	Minimum: 0.001 [0.65]
	Maximum: 0.542 [350]
Water cut range, %	0–100
Materials	Low temperature LF2, 316 stainless steel and duplex

Integrated system engineering

The JetLine system can be configured in a JISKOOT JetMix* pipeline mixing system or fast loop configuration.

- JISKOOT JetMix system: The fluid is reinjected via jetted nozzles that are radially mounted within the pipe wall of the JetLine system spool. By jetting the fluid into the flow stream, the system adds energy into the pipeline near the location where the representative sample will be taken. This can be used in front of an existing inline sample probe or fast loop sampling system to ensure the representativeness of the sample.
- Fast loop system: This configuration is similar to the JISKOOT JetMix system loop design with a pump-driven flow loop, but instead of installing the sampler after the conditioning loop, a cell sampler and other analytical devices, such as a densitometer or Water in Oil Meter (WIOM), can be placed into the JetLine system flow loop. This enables operators to receive a representative sample and real-time analytical data of fluid within the pipeline.





cameron.slb.com/measurement

CAMERON
A Schlumberger Company