

JISKOOT In-Line Sampling System

TECHNOLOGY



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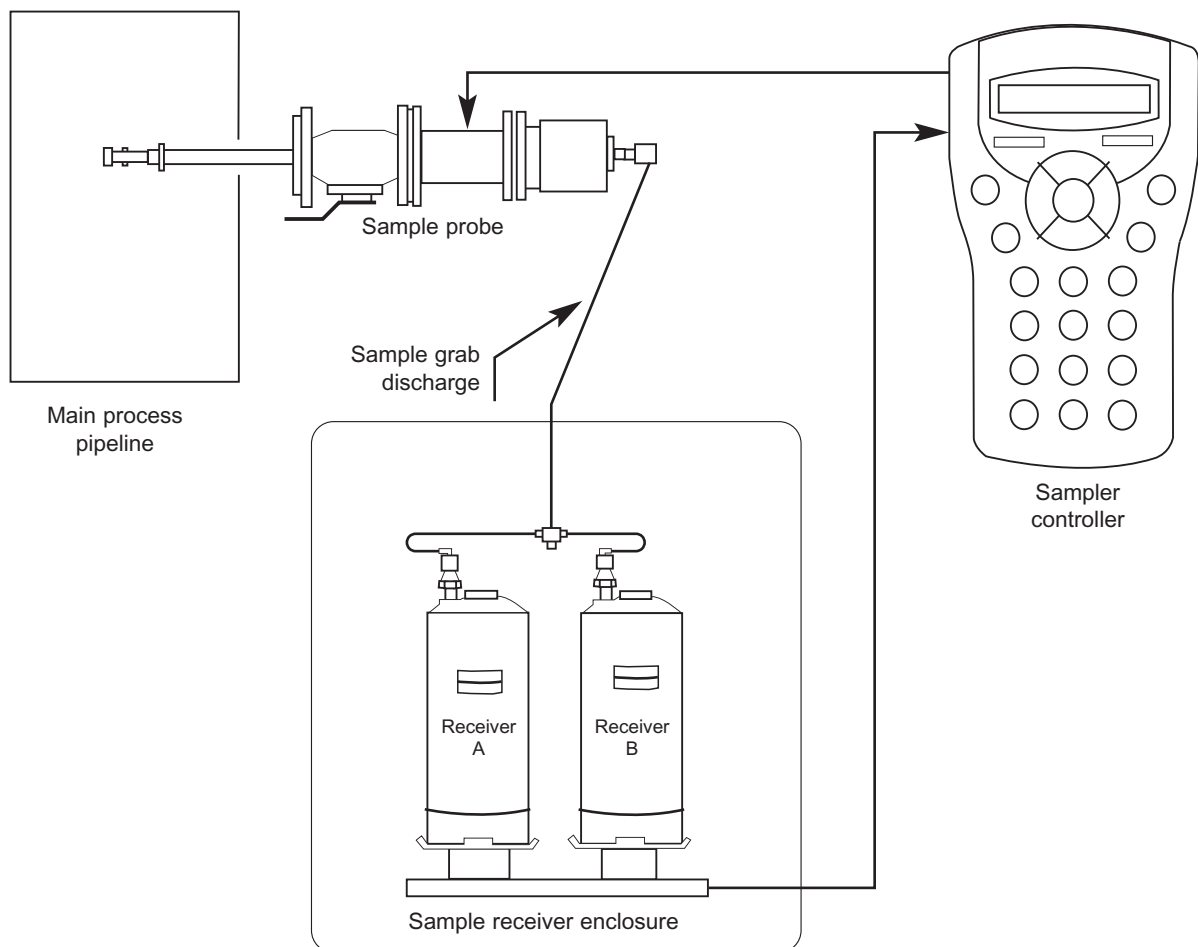
In-line samplers represent a simple but cost effective means of sampling a broad range of process fluids in accordance with the ISO, API, IP and ASTM standards.

When installed at a location where the fluid is representative (well mixed and dispersed)¹ an in-line sampling system can achieve a measurement accuracy of $-0.118\%^2$. This is significantly lower than tank dipping or ship manifold samplers, which typically have an accuracy of more than -0.225% .

Repeatability of Cameron's JISKOOT™ in-line sampling system is achieved by using a positive displacement sampling technique. This method is unaffected by process viscosity, wax and pressure. The probes are inserted directly into the main pipeline and extract a calibrated and repeatable sample volume.

Liquid hydrocarbon sampling
0.118% measurement uncertainty¹
ISO, EI (IP), API and ASTM compliant
Operator friendly and simple to maintain

Typical System Schematic



¹An online assessment of pipeline mixing can be performed at www.c-a-m-.com/jiskoot

²Based on data from over 200 water injection proving tests.

Applications

- Crude oil
- Liquid hydrocarbons
- Refined products
- Hazardous liquid sampling

The probe length is selected so that the probe head is located in the central half of the pipeline.

The unique sampler head is designed to prevent flow distortion or sample bias. The sample probe actuator can be enclosed and protected by a weatherproof enclosure.

The enclosure contains the control electronics and can be heated to prevent waxing of products like crude oil.

Sample probes can be safely and easily removed for maintenance without de-pressurization of the process using a JISKOOT hydraulic extractor.

Cameron offers a range of JISKOOT in-line probes that can be pneumatically, hydraulically or electrically operated.

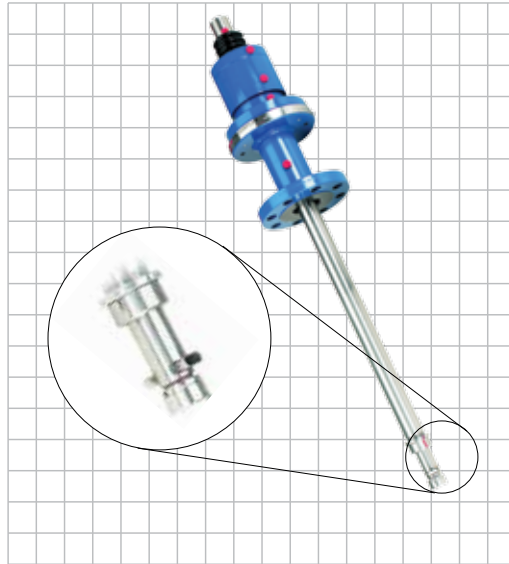
Our probes are available to extract either 1 or 2 cc samples per operation at rates of up to 120 grabs per minute. The samples are typically collected in either fixed volume (PR-103, PR-53, PR-23) or constant pressure sample receivers (CPC) with manual or automatic changeover.

The enclosure, which is located close to the probe, can be heated to maintain an even temperature to avoid solid or wax formation.

Dynamic performance measurement can be achieved by fitting a CanWeigh system for PR receivers or a level-sensor system for CPC receivers. A sampler controller can be installed providing configuration, monitoring and control functions with DCS integration capability.

Where a higher accuracy or incremental return on investment is required a CoJetix® System or fast-loop system is recommended.

210 Probe Sampler



PR Sample Receivers



NORTH AND SOUTH AMERICA

14450 JFK Blvd.
Houston, TX 77032
USA
Tel 1 281 582 9500
ms-us@c-a-m.com

EUROPE, AFRICA, CASPIAN AND RUSSIA

JISKOOT Technology Centre
Longfield Road
Tunbridge Wells
Kent, TN2 3EY
United Kingdom
Tel 44 1892 518000
ms-jiskootuksales@c-a-m.com

ASIA PACIFIC

Suite 16.02 Menara AmFirst
No. 1 Jalan 19/3
46300 Petaling Jaya
Selangor Darul Ehsan
Malaysia
Tel 603 7954 0145
ms-kl@c-a-m.com

MIDDLE EAST

Level 9, Al Jazira Club Tower A
P O Box 47280, Muroor Road
Abu Dhabi
United Arab Emirates
Tel 971 2 596 8400
ms-uk@c-a-m.com

Learn more about measurement at:
www.c-a-m.com/measurement



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HSE Policy Statement

At Cameron, we are committed ethically, financially and personally to a working environment where no one gets hurt and nothing gets harmed.