

NORSOK STANDARD

SYSTEM REQUIREMENTS

AUTOMATIC GAS SAMPLER

I-SR-101

Rev. 1, January 1995

Please note that whilst every effort has been made to ensure the accuracy of the NORSOK standards neither OLF nor TBL or any of their members will assume liability for any use thereof.

1 FOREWORD

This standard has been developed by the NORSOK standardisation work group and agreed by the Norwegian industry for the widest possible national and international application.

Annex A is normative.

2 SCOPE

The scope of this standard is to establish the system requirements for the design of Automatic Gas Sampler System.

3 NORMATIVE REFERENCES

ISO/CD 10715 "Natural Gas - Sampling Guidelines"
I-CR-100

4 DEFINITIONS AND ABBREVIATIONS

4.1 Definitions

None

4.2 Abbreviations

ISO/CD The International Organization of Standardization/Committee Draft

5 FUNCTIONAL REQUIREMENTS

5.1 General

The system shall collect and store a representative oil sample at line conditions, allowing it to be transported to the laboratory for repeatable analysis. The system shall be mounted close to the pipeline to collect samples over a sample period unattended. The system shall be in accordance with ISO/CD 10751 and as described below and in NORSOK I-CR-100 .

5.2 Products/Services

Not applicable

5.3 Equipment/schematic

The system consists of a probe, a by-pass loop, two separating devices (sample collection pumps), an instrumentation supply system, a timing system and two sample receivers (collection cylinders) for sample transportation. The system shall be designed as specified in annex A.

A typical block diagram (informative) is shown in Fig. 1 below:

- The sample equipment shall be contained in a cabinet with exception for:
- the probe.
- piping to/from the mainline.
- the back pressure system.
- The cabinet shall be located as close as possible to the sample point.
- The cabinet shall be insulated, and if necessary, heated to keep the temperature 5 °C above the condensation temperature (if applicable).

5.4 Performance

Ref. to ISO/CD 10715.

5.5 Regularity

The availability for the system shall be 99 %.

5.6 Process/Ambient Conditions

References is made to data sheets (project specific).

5.7 Operational Requirements

The control function shall be done from either a dedicated controller, UAS (Unified Automation System) or a metering system.

There shall be continuous monitoring in the control unit of the sample volume collected and of max. filling alarm.

5.8 Maintenance Requirements

Easy access in cabinet(s) to all main components and valves.

5.9 Isolating and Sectioning

It shall be possible to isolate the system from the main process.

5.10 Layout Requirements

5.11 Interface Requirements

The system shall be able to communicate with:

- the pacing device.
- controlling device (if metering computer or UAS).
- UAS (if the system has dedicated computer).

5.12 Commissioning Requirements

None.

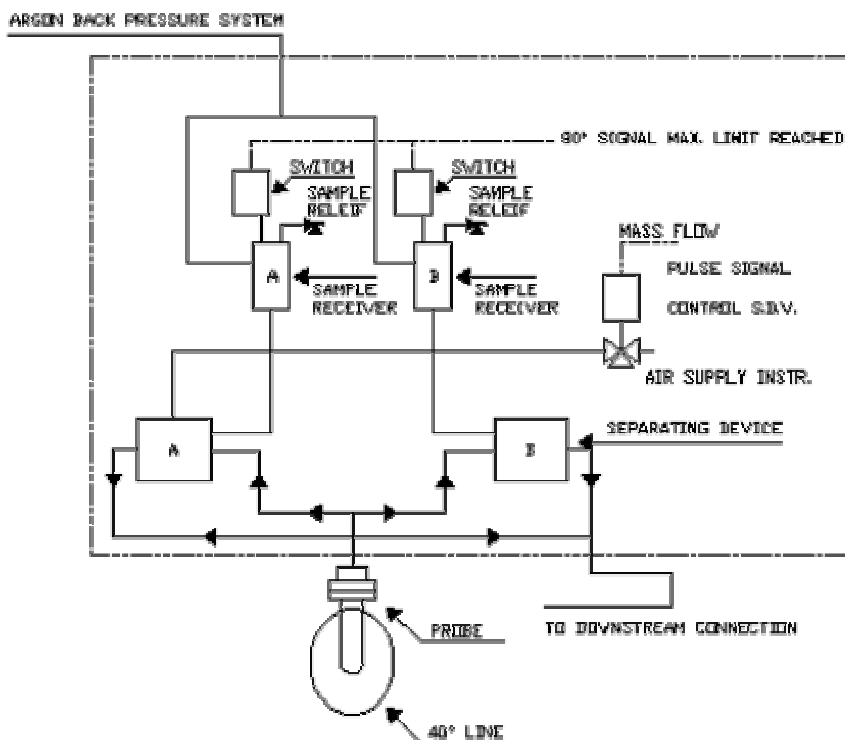


Fig. 1 Gas sampler system