

POF specifications and requirements
for intelligent pig inspection of
pipelines.

In Line Inspection

In Line Inspection : One of the best means to detect features of a (buried) pipeline.

Pig propelled by product or other media (nitrogen, water) or self propelled (rare).

Main techniques : geometric tools, UT waves and MFL.

Different features can be detected :

- Dents or geometric anomalies,
- Metal loss (large defects or pittings),
- Cracks (axial, radial, SCC ...)

Limits :

- Probability of detection < 1 ,
- Features sizing and localisation accuracy,
- Costly verifications.

—————> Specifications required

POF specifications

POF = Pipeline Operators Forum :

- 21 members :
BP, Chevron, Conoco Phillips, Dong, Enagas, E.ON Ruhrgas, Exxon Mobil, Gassco, GdF – Suez, Gasunie, MOL, OMV, Petrobras, Qatar-Petroleum, Saudi Aramco, Shell, SMPR, SNAM-Retegas, Statoil-Hydro, TAL, Total.
- Goals of the POF :
 - Promote pipeline integrity management globally from an operators perspective
 - Work with industry to improve the services required to meet integrity objectives
- More informations ... See website www.pipelineoperators.org

POF specifications

POF specifications and requirements for intelligent pig inspection of pipelines :

- This document is intended to serve as a generic in-line inspection specification.
- Cannot cover all pipelines specific issues.
- Version 2009 available on website (free).
- Topics covered :
 - Anomalies and features,
 - Assessment methods,
 - Tools,
 - Personnel qualification,
 - Reports,
 - Verification dig ups,
- Topics not covered :
 - Commercial aspects,
 - Liabilities,
 - Insurance ...

In-Line inspection

To prepare an in-line inspection :

- Pipe tally, pipe design, pig launcher –receiver and in-line valves drawings, minimal radius bend, barred tees ...
- Features expected : pitting, cracks, general corrosion ... -> selection of the technique(s),
- Requirements,
- Prequalification of the providers,
- Call for tender and selection provider,
- Determination of the programme which should include :
 - Gauge plates,
 - Cleaning tools (importance of the cleaning for UT pig)
 - Geometric tools,
 - Intelligent pig(s),
- Pipeline modifications required (pig launcher, valves ...),
- ILL + field report,
- Data analysis,
- Report and assessment,
- Verification dig up,
- Final report,
- Action plan.

Specifications & requirements for an in-line inspection

- Technical requirements are covered by POF spec.
- Standardisation introduced by this document helps to compare different bids.
- HSE aspects (except ATEX), liabilities, paiements conditions ... are not covered.



Shall be compiled with company's specification

- Based new technology intelligent pigs are commonly arriving on the market .



POF members have to evaluate these tools and spec. has to be upgraded.

- Verification of the accuracy



Dig-ups required and statistical file used (still under development).