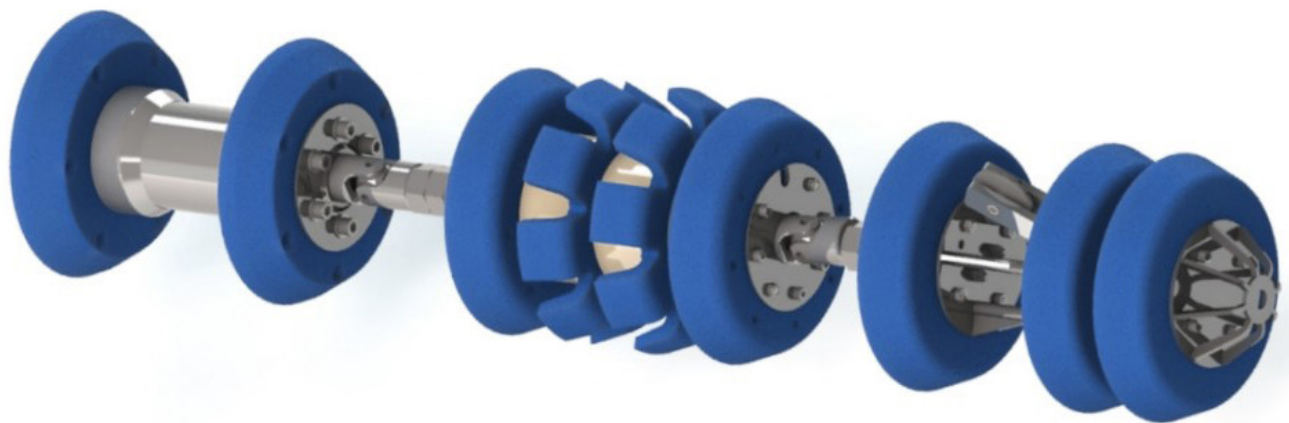


SYSTEM DESCRIPTION

GEO

GEOMETRIC INSPECTION



The GEO inspection tool is a fully electronic system with all features of a modern in-line inspection tool. It delivers continuous multi-channel data about the internal geometry of the pipeline and associated information, covering the entire pipe circumference.

Particular advantage of the GEO tool is the quick access to results. Data download and determination of size and location of pipeline restrictions is done on site within just a few hours after retrieving the tool from the pipeline.

SYSTEM DESCRIPTION

3P Services' GEO tools operate in liquid, multi-phase and gaseous environments. Depending on tool size they can negotiate bore restrictions of up to 30 %, 1 D and mitre bends, and can run at relatively high speed. They can be built to be launched and received via short pig traps

designed for cleaning tools. Single or double body devices are often possible.

Mechanical sensors run in contact with the internal pipe wall. If these are deflected, the relative movement between sensor and pig body is measured electronically.

The GEO delivers a highly detailed inspection including the following specific data:

- › Distance record
- › All weld distances, thus the Pipe Tally
- › All bends with direction of bend:
 - › Angle and radius (when fitted with XYZ module)
- › Readings on pipe geometry: Average and minimum internal diameter per joint
- › Local restrictions with length, width, depth sizing and circumferential position
- › Distribution of geometric discontinuities over length and circumference
- › Comparison with previous geometric data (if available)

PRACTICAL APPLICATIONS

Target is to determine any geometric discontinuities of the inside of pipelines. This inspection is usually performed in the following situations:

- › on newly constructed pipelines in order to verify that they are built in accordance with the construction specifications
- › to monitor a pipeline for deformations originating from settlement (and line resting on a rock), third party damage, earthquake, landslide etc.
- › to monitor a pipeline for any bore restrictions prior to an MFL (or other) in-line inspection in order to ensure the free passage of the inspection vehicle



REPORTING

Operations Report	Determine critical reductions or bends that would prevent run of a subsequent ILI tool	2 days after data download
Final Report	Standard complete report	6 weeks
Client view software	Available	
Special applications	On request	
Use in integrity assessments	Fitness for service, FEA dent assessment, dent strain, bending strain	

TECHNICAL DATA

Available tool diameters	2" – 48" (50 – 1.200 mm) (further on request)
Min. bend radius	≥4" (100 mm) 1,5 D <4" (100 mm) 3 D (tighter on request)
Dual / multi diameter	Available
Combo tools	XYZ, MFL, DMR, SRD, UT
Media	Gas, liquids
Operating pressure	High pressure versions available (water depth to 3.000 m or higher)
Bidirectional tools	Available
Operating temperature range	0 – 70 °C
ATEX	Available from 6" (152 mm)

Related documents:

- › GEO Defect Detection and Sizing Performance
- › Tool data sheet

Each pipeline is assessed individually.

For applications outside these parameters, please contact us directly.

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