

KALIBRAK Geometry Tool Pipeline Internal Geometry Inspection



The **KALIBRAK** is a specially designed tool for the **detection, location** and **sizing** of changes in the internal geometry of the pipeline (out-of-roundness anomalies and fittings)

PRINCIPLE OF OPERATION



KALIBRAK tools use a system of radially mounted mechanical arms equipped with deflection sensors which measure internal pipeline diameter.

During an inspection survey measurement arms ride directly on inner pipe wall. Deviations from nominal pipeline diameter cause a deflection of measurement arms, which is proportional to the deformation volume.

This mechanical deflections are converted by sensors to an electric signal, which is digitized, processed and stored in the computer nonvolatile memory.

MAIN FEATURES

- KALIBRAK tool detect and measure with high accuracy the following pipeline geometry features: dents, buldges, ovalities, wrinkles, girth welds and pipeline installations (tee's, valves etc.)
- results of a KALIBRAK survey can be used for the pipeline correct construction assessment and for technical accessibility check of a pipeline for intelligent pigging (metal loss inspections)
- the tool can be optionally equipped with an inertial navigation system for measurement of pipeline location coordinates (x,y,z)
- trustworthy inspection results confirmed by many years of experience in the pipeline survey field
- accurate and reliable inspection data evaluation and reporting by means of the advanced software
- inspection documentation complies with operator specific requirements

KALIBRAK TOOL SPECIFICATIONS

Tool sizes	10" - 48"
Active distance	250 km or more
Optimal speed	1.0 m/s
Maximum speed	1.7 m/s
Temperature range	0 - 50 °C
Maximum pressure	70 bar
Minimum bend radius	3D
Minimum passage	75 % of nominal dia
No of transducers	6 - 24
Medium	liquid, gas



MEASURED DEFECT PARAMETERS

Min depth of deformation	2.0 mm
Min length of deformation	2.5 mm
Min width of deformation (depending of tool type)	29 - 150 mm
Ovalization range (% of nominal diameter)	75 - 100

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