Deformations in pipelines such as dents and buckles cause stress concentrations and may initiate failure by fatigue. As such these features pose a major threat to pipeline integrity. Conventional methods simply taking into account feature dimensions length, width and depth or strain based assessments do not necessarily reflect defect severity. This ROSEN Fitness-For-Service Assessment utilizing the ROGEO XT tool offers a high definition service to accurately assess pipeline deformations with regards to severity and remaining life. This applies to dents, buckles and, under certain boundary conditions, to wrinkles.

THE SOLUTION
ROSEN provides a stress based assessment for deformations of the pipeline wall. The assessment basis are geometry data recorded with ROSEN high resolution geometry tools. They combine traditional mechanical caliper arms with a touchless, electronic measurement system covering 100% of the pipeline circumference. This way the contours of deformations are captured with utmost precision – a prerequisite for a high-end FFS assessment. Through stress concentrations factors (SCF) the features are prioritized for subsequent conduction of remaining life analysis taking into account pipeline material properties and operating pressure cycles.

KEY ADVANTAGES
• Stress based assessment reflecting the actual severity of deformations.
• Based on ROSEN high-resolution ILI tool data – the highest accuracy in the market.
• Fast pre-assessment and prioritization through calculation of stress concentration factors (SCF).
• Detailed remaining life analyses for high priority features (e.g. according to API 579 Level 3).
• Fast delivery – streamlined process through close co-operation of ILI and integrity assessment provider.

SERVICE OPTIONS
• Multi-diameter – available for pipelines with varying diameters
• Speed Control – available for pipelines with high gas flow rates
• Offshore – available for long distance and high pressure pipelines
• ILI Report – detailed geometry analysis results
• ROSOFT – digital ILI report and data analysis software
• Integrity – FFP, strain, stress and / or remaining life analysis

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