Maintenance procedures and modeling of gas pipeline components

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Abstract

Since 1998 regular diagnostic inspections on bridgings and other important gas pipeline components (compressor stations, road and rail underpasses, anchoring blocks) have been performed by the Department of Steel and Timber Structures to ensure uninterrupted supply of natural gas to Western Europe.

Paper is focused on these components (model cases):

Bridging Sikenica and interaction bridging- 1st and 2nd transit line according to planned rectification works.

Friction clamp ring on the newly built anchoring block near Sikenica bridging on the 1st transit line.

Modeling of the landslide in real dimensions and its influence on buried pipeline.

In presented article are shown various ways how to evaluate critical details by FEM modeling and verification of theoretical results by in-situ experimental measurements.

With regular maintenance the life of steel structures can be extended, and operational capability and safety can be ensured. All presented models are proving, that relatively difficult problems form engineering praxis can be solved.

References

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