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Editorial

A Special Issue on Pipelines in Civil Engineering

The *The Open Civil Engineering Journal*, which is one of the most relevant international journals in civil engineering area, wishes to promote the latest researches in engineering structures. This special issue contains 5 invited outstanding articles. It is expected that the special issue will benefit researchers and engineers who are interested in the pipeline engineering. A brief overview of each article published in this special issue is provided here

In “Study on Security Angle of Gas Pipeline Elbow Based on Stress Analysis Method”, Jieying Liu *et al.*, based on stress theory, stress analysis on gas pipeline has been done. By comparing the maximum stress of different bend angles, the safe bend angle range has finally been determined.

In “Numerical Study of Being Forced Leather Cap Type Pig in Straight Gas Pipeline”, Liqiong Chen *et al.* establish forced calculating model and the corresponding numerical methods of leather cap type pig in straight gas pipeline, and combine pigging data with finite element software ANSYS to verify the model. The result shows that the cup is damaged because of forces instead of other reasons. The mathematical model can quickly calculate cup pigging force conditions and determine the cause of damage to the cup, which can improve the efficiency of pigging.

In “Simulation of Well Wall Stress Distribution Model and Well stability”, Lixi Liang *et al.* study several different well wall stress distribution models using finite element method simulation. The comparison of simulation results suggests the most accurate model is the model with Biot coefficient and percolation additive. What's more, with the increase of well wall stability, the differences between different models decrease. For predicting well wall stress, the classic model is suitable for qualitative analysis.

In “Stress Analysis of Suspended Pipe Partially Buried in Linear Elastic Soil”, Kun Huang *et al.* present the mechanical model and deflection equation with axial tension of suspended pipeline, which is partially buried in linear elastic soil, based on the small deflection beam theory. A case study is carried out and the results are consistent with the actual situation. Besides, it is been proved that the fixed-fixed supported beam model is applicative only for the pipe buried in rigid soil.

In “Stress Analysis of a Bend in an Oil Pipe in a Hilly Region under Pigging Conditions”, Enbin Liu *et al.* used CAESAR II to build an oil pipeline model and analyze the stress in the bend of an oil pipe under pigging conditions in a hilly region, they obtained the safe range angle of the pipe bend under pigging conditions.

I am grateful to all the authors and reviewers for the contribution and support during the course of editing this special issue. Their prompt responses have made it possible for us to publish this special issue on time.

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