

Special Issue on **Dynamics and Vibration Analysis of Oil and Gas Equipment**

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Dynamics and vibration affect the performance and service life of oil and gas equipment, including oil rigs, vibrating screens, wellhead blowout preventers, oil and gas pipelines, drill bits, offshore platforms, and submarine pipelines. Vibration can cause fatigue failure and excessive noise in structures. In this context, equipment failure can lead to the leakage of oil and natural gas and cause fires, explosions, or other accidents. Drilling efficiency can be improved by optimizing the correct tools, such as increasing the frequencies in vibrating screens and using drilling tools. Dynamic characterization analysis of drill pipes, derricks, and offshore platforms will help improve equipment performance. Eliminating the shortcomings of vibration, while exploiting its advantages, has always been an important priority for the oil and gas industry. As a result, research concerning the dynamics and vibration analysis of oil and gas equipment is of crucial importance for academics and industry professionals alike in order to enhance and develop the performance and applications of oil and gas equipment.

The aim of this Special Issue is to explore dynamics and vibration in relation to oil and gas equipment in order to provide a theoretical basis for improved design and manufacture. Original research studies and review articles related to the applications of oil and gas equipment from a shock and vibration perspective are encouraged.

Potential topics include but are not limited to the following:

- ▶ Drill rod dynamics analysis
- ▶ Vibration analysis of drill bits and drilling tools
- ▶ Pipe vibration characteristics and noise analysis
- ▶ Vibration mechanism and control strategies of drilling rigs
- ▶ Dynamic equipment vibration and maintenance strategies
- ▶ Impact failure analysis of equipment
- ▶ Vibration analysis methods based on fluid-solid coupling

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/sv/mogeq/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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