



Special Issue Reprint

Subsea Pipelines

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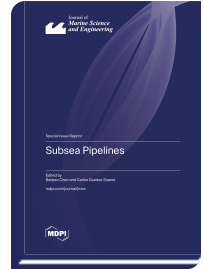
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A subsea pipeline (also known as an offshore pipeline or submarine pipeline) is a pipeline that is laid on the seabed or inside a specially constructed trench. The use of pipelines represents a reliable mode of transport of oil and gas. The prevention of failure scenarios, such as improper pressurization, localized buckling, fatigue failure and instability, the limit strength, internal/external pressure, corrosion-resistant material selection, and stability management, is the main concern in the design, installation, and operation of submarine pipelines.

Fifteen recent research studies broadly covering the structural design and analysis of subsea pipelines or risers are featured in this reprint. The applications of the digital twin in subsea pipelines are highlighted. Classic structural topics including collapse strength, burst strength, tensile performance, buckling, fatigue, and bending are investigated in this reprint using numerical and experimental methods. Computational fluid dynamics (CFD) simulations and proportional integral derivative (PID) control of the pipelines and risers are also included.



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