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Nonlinear Analysis of Offshore Structures

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Civil and Structural Engineering Series

Series Editor: Professor S. Krenk
Technical University of Denmark

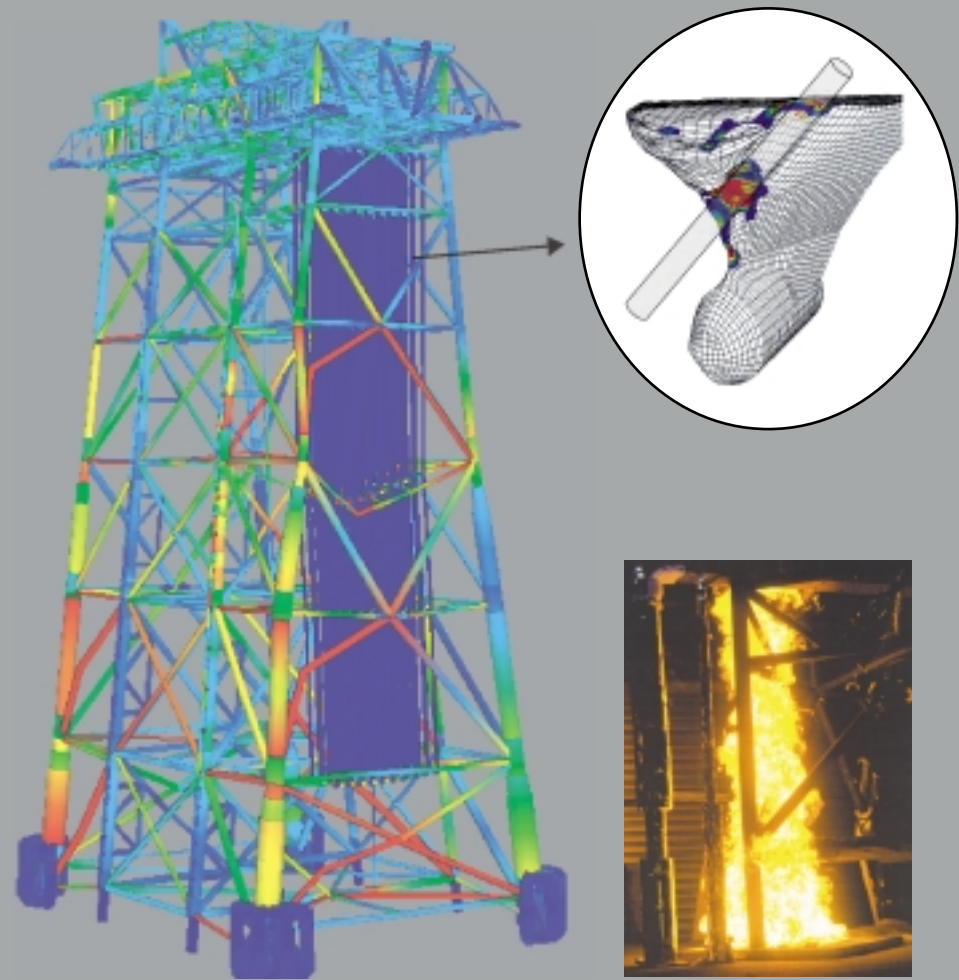
Nonlinear Analysis of Offshore Structures B. Skallerud and J. Amdahl

Advanced methods for analysis of offshore structures subjected to extreme loads, such as abnormal waves, ship collision and fires are addressed in this book.

The basic principles of continuum mechanics and finite element methods are presented. The main focus is placed on the behaviour of typical offshore components, for example: tubular beams/beam-columns and joints, stiffened plates and systems, jacket, jack-ups and semi-submersibles.

The authors have gained extensive experience through research and development in the areas of ultimate strength and progressive collapse analysis of offshore structures. Over the past two decades they have carried out laboratory testing of structural components and sub-systems, developed software for numerical analysis and been involved with the practical design of structures against accidental events.

Both authors have contributed significantly to the development of rules and guidelines, notably the NORSOK Standard N-004.



RESEARCH STUDIES PRESS LTD.
Baldock, Hertfordshire, England



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