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e and temperature transient analysis for light water reactor containments

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American National Standard
Pressure and Temperature Transient Analysis for Light Water Reactor Containments

Secretariat
American Nuclear Society

Prepared by the
American Nuclear Society
Standards Committee
Working Group ANS-56.4

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American National Standard

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Foreword

(This Foreword is not a part of American National Standard Pressure and Temperature Transient Analysis for Light Water Reactor Containments, ANSI/ANS-56.4-1983.)

The ANS-56.4 Working Group held its first meeting in September 1982, working with a well-developed draft. This draft did not reflect the lessons learned from the TMI-2 accident. The American Nuclear Society's Nuclear Power Plant Standards Committee (NUPPSCO) suggested that degraded core scenarios be considered by the working group.

The concept of degraded core includes many items, such as core melt, steam explosions, containment melt-through, hydrogen burn, or explosions. It was agreed that the degraded core issues were generally beyond the scope of this document. However, the working group believes that the containment design analysis should address some of these events for completeness. Current models could include these items with little additional sophistication once they are defined. Therefore, no special treatment was warranted.

The working group assumed that the analyst using this standard has computer codes available and therefore, the governing equations would not add significantly to the usefulness of the document.

This standard is intended to aid the analyst in performing an acceptable analysis for determining the pressure and temperature histories in reactor containment during design basis and other events.

During the preparation of this standard, the ANS-56.4 membership was as follows:

N. Weber, Chairman, *Sargent & Lundy*
W. Krotiuk, *Ebasco Services, Inc.*
J. Kudrick, *U.S. Nuclear Regulatory Commission*
P. Linn, *Westinghouse Electric Corporation*
D. Mitchell, *Duke Power Company*
C. Nakayama, *NUTECH Engineers*
K. Shieh, *Babcock & Wilcox Company*
R. Strong, *Echo Energy Services*

The American Nuclear Society's Nuclear Power Plant Standards Committee (NUPPSCO) had the following membership at the time of its approval of this standard.

L. J. Cooper, Chairman
M. D. Weber, Secretary

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