

AMERICAN NATIONAL STANDARD
REACTOR PLANTS AND THEIR MAINTENANCE

Supplementary Quality Assurance Requirements for
Installation, Inspection, and Testing of Structural
Concrete and Structural Steel During the
Construction Phase of Nuclear Power Plants

ANSI N45.2.5 - 1974

SECRETARIAT

THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS

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FOREWORD

(This Foreword is not a part of American National Standard Supplementary Quality Assurance Requirements for Installation, Inspection, and Testing of Structural Concrete and Structural Steel During the Construction Phase of Nuclear Power Plants, N45.2.5.)

This standard delineates the requirements for the installation, inspection, and testing of structural concrete and structural steel in a nuclear power plant during its construction phase. The standard was developed by the American National Standards Committee N45 on Reactor Plants and Their Maintenance. This committee has been chartered to promote the development of standards for the location, design, construction, and maintenance of nuclear reactors and plants embodying nuclear reactors, including equipment, methods, and components specifically for this purpose.

In April of 1970, the N45 Committee established a subcommittee N45-3, to guide the preparation of nuclear quality assurance standards. The subcommittee is responsible for establishing guidelines and policy to govern the scope and content of the various standards; monitoring the status of standards in process; recommending preparation of additional standards; and final approval of standards prior to their submittal to the N45 Committee for balloting.

In November of 1970, the N45-3 Subcommittee established an Ad Hoc Committee N45-3.5 on Quality Assurance Requirements for Civil and Structural Work. The purpose of this committee was to prepare a standard for general industry use that would define the installation, inspection, and testing requirements for structural concrete and structural steel items that would result in or assure attainment of quality construction. The Ad Hoc Committee was composed of representatives of key segments of the nuclear industry including utilities, reactor suppliers, architect-engineers, reactor constructors, consultants, and national laboratories. The standard contained herein was developed from this activity.

The initial draft of this standard was prepared in September of 1971.

Working with the N45-3 Subcommittee and concurrently with the development of this standard, other ad hoc committees of N45 are developing a series of standards that set forth more detailed technical requirements for certain activities to assure quality during the construction phase of nuclear power plants. These requirements will be coordinated with the requirements of this standard as they are developed.

In September 1971, these ad hoc committees were changed to work groups. In October 1972, the N45-3 Subcommittee was renumbered N45-2, and the work groups were renamed accordingly. As of August 1973, the following associated standards were in preparation or issued:

Working Group	Standard in Preparation or Issued	
	N45.2	Quality Assurance Program Requirements for Nuclear Power Plants
N45-2.1	N45.2.1	Cleaning of Fluid Systems and Associated Components During the Construction Phase of Nuclear Power Plants
N45-2.2	N45.2.2	Packaging, Shipping, Receiving, Storage and Handling of Items for Nuclear Power Plants (During the Construction Phase)
N45-2.3	N45.2.3	Housekeeping During the Construction Phase of Nuclear Power Plants
N45-2.4	N45.2.4	Supplementary Quality Assurance Requirements for Installation, Inspection and Testing of Instrumentation and Electric Equipment During the Construction of Nuclear Power Generating Stations
N45-2.6	N45.2.6	Qualifications of Inspection, Examination and Testing Personnel for the Construction Phase of Nuclear Power Plants
N45-2.9	N45.2.9	Requirements for Collection, Storage and Maintenance of Quality Assurance Records for Nuclear Power Plants

Working Group	Standard in Preparation or Issued	
N45-2.10	N45.2.10	Quality Assurance Terms and Definitions
N45-2.11	N45.2.11	Quality Assurance Requirements for the Design of Nuclear Power Plants
N45-2.12	N45.2.12	Requirements for Auditing of Quality Assurance Programs for Nuclear Power Plants
N45-2.13	N45.2.13	Quality Assurance Requirements for Control of Procurement of Equipment, Materials and Services for Nuclear Power Plants
N45-2.4	N45.14	Quality Assurance Requirements for the Design and Manufacture of Class 1E Instrumentation and Electric Equipment for Nuclear Power Generating Stations
N45-2.2	N45.2.15	Requirements for the Control of Hoisting, Rigging, and Transporting of Items at Nuclear Power Plant Sites
N45-2.4	N45.2.16	Supplementary Quality Assurance Requirements for the Calibration and Control of Measuring and Test Equipment Used in the Construction and Maintenance of Nuclear Facilities
N45-2.17	N45.2.17	Quality Assurance Requirements for Control of the Welding Process for Nuclear Power Plants

Suggestions for improvement gained in the use of this standard will be welcomed. They should be sent to the Secretary, American National Standards Committee N45, The American Society of Mechanical Engineers, 345 East 47th Street, New York, N.Y. 10017.

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*Effective August 14, 1973.

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