AN AMERICAN NATIONAL STANDARD

Hydrants for Utility and Maintenance Use

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THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS

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This Standard will be revised when the Society approves the issuance of a new edition. There will be no addenda or written interpretations of the requirements of this Standard issued to this Edition.

FOREWORD

(This Foreword is not part of ANSI/ASME A112.21.3-1985.)

In the broadest definition, a hydrant, as covered by this Standard, is a device with a water supply shut-off valve and with a means to connect a hose in a safe and sanitary manner. Hydrants covered herein serve as utility hose terminals for general building and grounds maintenance. This Standard does not cover fire hydrants (plugs).

As the building industry became more sophisticated, it was apparent that convenient water supply was necessary at various locations in the building walls and in the grounds surrounding the buildings. This requirement spurred the development of hydrants for both wall and ground installations.

Two general categories were established:

(1) nonfreeze (frost proof) hydrants designed to be installed in areas which are subject to freezing temperatures;

(2) hydrants for wall and ground installations in areas where freezing temperatures are not encountered.

Hydrants are equipped with removable operating keys or handles to discourage misuse and vandalism.

Many hydrants installed directly in the walls of buildings are equipped with attractive functional boxes to enclose the hydrant head, thereby concealing the nozzle so that it presents neither a displeasing appearance nor an obstruction on the wall. Ground or yard hydrants are similarly equipped to conceal and protect the nozzles. Post hydrants were developed to provide easy access to water supply where concealment is not a factor.

The American National Standards Committee A112 was organized July 27, 1955 for the standardization of plumbing materials and equipment. The first organizational meeting was held on July 22, 1958. At the meeting on May 1, 1964, Panel No. 21 was created to establish standards on roof drains, floor drains, backwater valves, and other drainage specialties. Its scope was as follows: the recommendation of suitable existing standards, in cooperation with interested sponsors, or the development of adequate new standards as are needed for roof drains, floor drains, and other drains as used or installed in plumbing systems. The Committee has since been reorganized as an ASME Standards Committee.

This Standard was revised and approved by Panel 21, the ASME A112 Standards Committee, and ASME. Subsequently this modified version was adopted by the American National Standards Institute on January 25, 1985.

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Standardization of Plumbing Materials and Equipment

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AN AMERICAN NATIONAL STANDARD

HYDRANTS FOR UTILITY AND MAINTENANCE USE

1 SCOPE AND PURPOSE

1.1 Scope

The scope of this Standard is the development of standards for hydrants including nonfreeze wall, ground, post, and floor types and moderate climate wall and floor types, which are used in buildings and grounds as water supply terminals, employed principally for lawn and flower bed watering hoses and normal building maintenance functions.

This Standard covers definitions, connections, materials, variations, testing and operation, and general requirements for the hydrant types included in the scope.

1.2 Purpose

The purpose of this Standard is to supply plumbing code authorities and others with full knowledge of the minimum design and quality criteria for hydrants necessary for sound performance and safe and sanitary installations. It is not intended as a specification guide.

NOTES:
(1) Figures used in this Standard are intended only to describe and portray typical hydrants and are not intended to restrict design or be used for specification purposes.
(2) All hydrant installations shall be in conformance with local codes, with protection against backflow and contamination provided. See para. 5.2 for information on vacuum breakers.

2 DEFINITIONS

2.1 Hydrants – General

The term *hydrant* as used in this Standard refers to a manufactured device that conveys water from supply pipe to a hose thread outlet, incorporating valve(s) with opening and closing means at the point of use, with all working parts accessible for maintenance. Opening and closing means shall be a removable (loose set) operating key engaging a recessed operating stem. (See Fig. 1.)

2.2 Hydrant Types

nonfreeze wall hydrant, exposed outlet – a hydrant for installation in building walls with outlet exposed, in which the valve is operable at temperatures below 32°F (0°C). (See Fig. 2A.)

nonfreeze wall hydrant, concealed outlet – a hydrant for installation in building walls with the outlet concealed, in which the valve is operable at temperatures below 32°F (0°C). (See Fig. 2B.)

wall hydrant for moderate climate, concealed outlet – a hydrant for installation in building walls with the outlet concealed, in which the valve is not operable at valve body temperatures below 32°F (0°C). (See Fig. 2C.)

hot and cold nonfreeze wall hydrant, concealed outlet – a hydrant with hot and cold water inlet connections for installation in building walls with the outlet concealed, in which the valves are operable at temperatures below 32°F (0°C). (See Fig. 2D.)

hot and cold wall hydrant for moderate climate, concealed outlet – a hydrant with hot and cold water inlet connections for installation in building walls with the outlet concealed, in which the valves are not operable at valve body temperatures below 32°F (0°C). (See Fig. 2E.)

nonfreeze ground (yard) hydrant, concealed outlet – a hydrant for installation in the ground with the outlet concealed at grade and the inlet below the frost line, in which the valve is operable at temperatures below 32°F (0°C). (See Fig. 2F.)

nonfreeze ground (yard) post hydrant, exposed outlet – a hydrant for installation in the ground with the outlet extended above grade and the inlet below the frost line, in which the valve is operable at temperatures below 32°F (0°C). (See Fig. 2G.)