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1126

Standard for the Use of Pyrotechnics Before a Proximate Audience

2021

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NFPA® 1126

Standard for the

Use of Pyrotechnics Before a Proximate Audience

2021 Edition

This edition of NFPA 1126, *Standard for the Use of Pyrotechnics Before a Proximate Audience,* was prepared by the Technical Committee on Special Effects. It was issued by the Standards Council on December 9, 2019, with an effective date of December 24, 2019, and supersedes all previous editions.

This edition of NFPA 1126 was approved as an American National Standard on December 24, 2019.

Origin and Development of NFPA 1126

The first edition of NFPA 1126, *Standard for the Use of Pyrotechnics Before a Proximate Audience,* was published in 1992. It was developed by the Pyrotechnics Committee in response to a recognized need for a document to provide guidance to public safety officials for the safe use of pyrotechnic special effects at both indoor and outdoor locations. The purpose of this standard is to provide requirements for reasonable protection for pyrotechnic operators, performers, support personnel, and proximate audiences where pyrotechnic special effects are used indoors and outdoors.

For the 1996 edition, several new definitions were added, including producer and venue manager, that related to requirements in Chapter 4 of the document. In Chapter 5, the requirements relating to labeling of pyrotechnic preloads were revised for clarity and conformance with the *NFPA Manual of Style*. Revisions to Chapter 6 regarding use of pyrotechnics incorporated the tentative interim amendment addressing measures to safeguard the safety of performers.

The 2001 edition represented the first edition completed by the Committee on Special Effects, which now has responsibility for both flame and pyrotechnic special effects before a proximate audience. The previous editions of NFPA 1126 were the responsibility of the Committee on Pyrotechnics, but when the flame special effects activity was initiated (NFPA 160, *Standard for Flame Effects Before an Audience*), NFPA 1126 was assigned to this new committee. The primary revision in the 2001 edition was making the requirements consistent with NFPA's other proximate audience document, NFPA 160, since many users are involved in both types of special effects.

The 2006 edition included a complete revision of the standard, with editorial changes in accordance with the *Manual of Style for NFPA Technical Committee Documents* and several key technical changes. The committee added new definitions and revised existing definitions for consistency with the NFPA Glossary of Terms and with the other pyrotechnics documents. The standard was also revised to include new requirements on operator licensing that makes the document consistent with requirements for flame effect operators.

The 2011 edition incorporated amendments to the Application section to clarify two aspects. First, reference to NFPA 140, *Standard on Motion Picture and Television Production Studio Soundstages, Approved Production Facilities,* and Production Locations, was added to clarify that NFPA 140 applies when pyrotechnics are used in proximate situations where no audience is present. Second, the committee clarified that the use of firearms in motion pictures, television, or other entertainment is not covered by NFPA 1126. The committee modified definitions used by all NFPA pyrotechnics documents for consistency and amended the requirements pertaining to power sources used as part of the firing systems to protect against ground faults in the firing circuitry.

The 2016 edition of NFPA 1126 defined a hybrid flame effect and added requirements for their use. It also indicated which portions of hybrid flame effects are covered by NFPA 1126 and which are covered by NFPA 160, because both documents apply. Annex material was added to provide further guidance on the simultaneous application of the two documents to hybrid flame effects. This edition also clarified when and how special effects are covered in air shows and provided a reference for the use of such effects.

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The 2021 edition of NFPA 1126 has added pyrotechnic effect simulation equipment to the definition of pyrotechnic device to clarify that pyrotechnic effect simulation equipment is a pyrotechnic device and subject to the same requirements as the pyrotechnic devices it simulates. In conjunction with this change, the portable fire extinguisher requirements have also been revised to require compatibility with the fuel source being used for the effect. Concussion mortar separation requirements have been revised to specify more accurately the separation of the audience from fallout debris from the effect.

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Committee Scope: This Committee shall have primary responsibility for documents on the controlled use of flame, pyrotechnics, or other means of special effects for entertainment, exhibition, demonstration, or simulation before a proximate audience; and the design, fabrication, installation, testing, control, operation, and maintenance of user equipment, fuel storage, and sources for special effects before a proximate audience.

This Committee does not have responsibility for documents on hazards other than those involving a proximate audience and the life safety considerations of the audience.

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Information on referenced and extracted publications can be found in Chapter 2 and Annex E.

Chapter 1 Administration

1.1 Scope. This standard shall provide requirements for the protection of property, operators, performers, support personnel, and the viewing audiences where pyrotechnic effects are used indoors or outdoors with a proximate audience.

1.2 Purpose.

1.2.1 The purpose of this standard shall be to provide minimum requirements to the operators and manufacturers for the safe operation of pyrotechnic effects.

1.2.2* The purpose of this standard shall be to provide requirements for the reasonable protection of pyrotechnic operators, performers, support personnel, proximate audiences, property, and buildings where pyrotechnics are used indoors or outdoors from safety and fire hazards.

1.2.2.1 The purpose of this standard shall be to provide guidelines to the authority having jurisdiction for approval of the use of pyrotechnics as specified in 1.2.2.

1.2.2.2 The purpose of this standard shall be to provide requirements for local permits.

1.3 Application.

1.3.1* This standard shall apply to the use of pyrotechnics in the performing arts in conjunction with theatrical, musical, or similar productions before a proximate audience, performers, or support personnel.

1.3.2 This standard shall apply to the performance specifications, instructions, notifications, and labeling by the manufacturer of pyrotechnics materials, devices, equipment, and supplies.

1.3.3 This standard shall apply to any indoor use of pyrotechnics.

1.3.4 This standard shall apply to any hybrid flame effect used before a proximate audience.

1.3.5 Application of NFPA 1123.

1.3.5.1 This standard shall apply to any outdoor use of pyrotechnics at distances less than those required by NFPA 1123.

1.3.5.2 The use of pyrotechnics before a proximate audience shall not be construed as a display of fireworks as regulated by NFPA 1123, except that any use of aerial shells as regulated by NFPA 1123 shall comply with the provisions of that code.

1.3.6 Application to Air Show Environments.

1.3.6.1 This standard shall apply to the installation and use of pyrotechnic devices on aircraft in a static display or as part of ground support acts during an air show when such devices are used at distances less than those specified in NFPA 1123.

1.3.6.2 Devices mounted to aircraft shall be mounted in a secure manner to maintain their proper position and orientation and to prevent the unintentional separation of the device from the aircraft.

1.3.6.3* This standard shall not apply to the use of pyrotechnic devices that have been mounted on aircraft once the aircraft is airborne and operating under the terms of a Federal Aviation Administration (FAA) waiver.

1.3.6.4* This standard shall not apply to the use of ground-based effects utilizing explosives, liquid fuels, or other combustibles in air show environments.

1.3.7 Application to the Entertainment Industry.

1.3.7.1 This standard shall apply to the video recording, audio recording, or filming of any television, radio, or movie production only where such production takes place before a proximate audience and includes the use of pyrotechnics.

1.3.7.2 Where there is no audience present, NFPA 140 shall be used to regulate any pyrotechnic use.

1.3.8 This standard shall apply to the rehearsal of any production in which pyrotechnics are used.

1.3.9 This standard shall not apply to the manufacture, transportation, or storage of fireworks at a manufacturing facility.

1.3.10 This standard shall not apply to the use of consumer fireworks by the general public.

1.3.11* This standard shall not apply to the manufacture, transportation, storage, and use of explosives.

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