

Number 153

July 14, 2009

Editor – Russell P. Fleming, P.E.

Foam Concentration Tolerances Error in NFPA 11

In conjunction with its “Expert of the Day” member assistance program, the NFSA Engineering staff recently uncovered a long-standing error within the text of NFPA 11 – *Standard for Low-, Medium-, and High-Expansion Foam*.

A member referred to Section 10.6.3 of the current (2005) edition of the standard, dealing with discharge acceptance testing:

“10.6.3. Foam concentrations shall have one of the following proportions:

- (1) Not less than the rated concentration
- (2) No more than 30 percent above the rated concentrate, or 1 percentage point above the rated concentration (whichever is less).”

It was pointed out that a system designed for a 3% foam solution but found to be proportioning at 5% would meet the first criterion and thereby satisfy the provisions of the standard by meeting “one of the following proportions”, even though not qualifying per the second criterion. The obvious question is this: Why doesn’t the standard require both criteria?

The simple answer is that the intent is for both criteria to be met, but that the wording has been substandard since the publication of the 1994 edition. Wording in that edition of NFPA 11 called for the concentration to be “not less” than the minimum “or no more” than the maximum. The wording, not good from the start, editorially morphed over the years into what is now clearly an error.

The first criterion is intended as a lower bound and the second as an upper bound. This has been checked with representatives of Underwriters Laboratories and others, and there is universal agreement that the language should be inclusive of both items to properly limit the proportioning tolerances. In a discharge test for a 3% foam solution, the concentration must be found to be no less than 3% and no more than 3.9%. For a 6% concentration, the allowable range would be between 6% and 7%. It’s simply a mystery as to why the language hasn’t been corrected previously.

Even though NFPA 11 has already passed the comment closing date for its next (2010) edition, and although the wording has still not been corrected, NFSA has suggested an editorial revision to clarify the intent. Failing that, a Tentative Interim Amendment might be in order.

New 50% “Business Thursday” Discounts Encourage ITM Training

As previously announced, the NFSA is coordinating its “Technical Tuesday” and “Business Thursday” seminars for the second half of 2009 to promote comprehensive training in the area of Inspection, Testing and Maintenance, helping individuals train for the work elements in the NICET Inspection and Testing certification program. Ten “Technical Tuesday” online training programs will be offered along with six “Business Thursday” online seminars. The seminars start at 10:30 am Eastern time (7:30 am Pacific time) and run from 60 minutes to 90 minutes in length, allowing participants to ask questions via e-mail. The seminars are priced at \$125 each for NFSA members. While the usual 30 percent discount will be available for the package of ten “Technical Tuesday” seminars, and a similar 30 percent discount will be available for the package of six “Business Thursday seminars”, the NFSA is also offering an unprecedented 50 percent discount for the six Business Thursday seminars to any anyone who signs up for the ten Technical Tuesday seminars. That’s a total of only \$1250 for members for all 16 seminars, or about \$78 each. Fees are per connection, so it doesn’t matter how many students are actually sitting in at a location. The two seminar series dovetail to allow a comprehensive review of both technical and nontechnical topics in the same overall subject area, aimed at NICET Inspection and Testing certification.

NOTE: Although field personnel that might benefit from the training might not be available during hours of the original presentations, NFSA members are reminded that the seminars are accessible online for at least 24 hours following their original broadcast. Perhaps you should consider scheduling Wednesday/Friday training sessions for your personnel at your own company’s convenience.

Upcoming “Technical Tuesday” Online Seminar – July 21st

Topic: System Terminology

Instructor: Victoria Valentine, P.E., NFSA Director of Product Standards

Date: July 21, 2009

One of the struggles to beginning in any industry is learning the terminology. This is no different for the sprinkler industry and those responsible for inspecting fire sprinkler systems. This program will review the components that make up the water-based fire protection systems. It will include basic definitions that are applied in inspections of systems as well as necessary forms and checklists. (Great study guide for NICET Work Elements 41001, 41002, 41003, and 41008)

Upcoming “Business Thursday” Online Seminar – July 30th

Topic: Business and Professional Communications

Instructor: Russell P. Fleming, P.E., NFSA Executive Vice President

Date: July 30, 2009

The ability to write clear sentences and paragraphs is considered essential to everyone working in the business world today. Use of proper punctuation, vocabulary, spelling and sentence structure is

Sprinklers for Dwellings	Brighton, MI	Aug 21
NFPA 13 Update 2007	Aurora, IL	Aug 26
NFPA 13 Overview	Aurora, IL	Aug 27-28
NFPA 13 2007 Update	Boardman, OR	Sept 1
Hydraulics for Fire Protection	Boardman, OR	Sept 2
Inspection, Testing & Maintenance	Boardman, OR	Sept 3
Introduction to Sprinkler Systems (1/2 Day AM)	Alexandria, MN	Sept 8
NFPA 13 2002 Update (1/2 Day PM)	Alexandria, MN	Sept 8
Plan Review Policies & Procedures	Alexandria, MN	Sept 9
Inspection, Testing & Maintenance	Alexandria, MN	Sept 10
Commissioning & Acceptance Testing (1/2 Day)	Seattle, WA	Sept 15
CPVC Piping (1/2 Day)	Seattle, WA	Sept 15
Hydraulics for Fire Protection	Seattle, WA	Sept 16
Standpipe Systems for Fire Protection (1/2 Day)	Seattle, WA	Sept 17
Fire Pump Layout & Sizing (1/2 Day)	Seattle, WA	Sept 17
NFPA 13 2007 Update	Dayton, OH	Sept 16
Sprinkles for Dwellings	Dayton, OH	Sept 17
CPVC Piping Installation Requirements (1/2 Day)	Dayton, OH	Sept 18
Commissioning and Acceptance Testing (1/2 Day)	Dayton, OH	Sept 18
NFPA 13, 13R, 13D 2007 Update	Anaheim, CA	Sept 22
Hydraulics for Fire Protection	Anaheim, CA	Sept 23
Underground Piping (1/2 Day)	Anaheim, CA	Sept 24
Basic Seismic (1/2 Day)	Anaheim, CA	Sept 24
Plan Review Policies & Procedures	Berlin, VT	Sept 22
Sprinkler Protection for Rack Storage	Berlin, VT	Sept 23
CPVC Piping (1/2 Day)	Berlin, VT	Sept 24
Basic Seismic (1/2 Day)	Berlin, VT	Sept 24
Inspection, Testing & Maintenance	Concord, NH	Oct 13
Residential Sprinklers: Homes to High Rise	Concord, NH	Oct 14
Sprinklers for Dwellings	Concord, NH	Oct 15
Underground Piping (1/2 Day)	Woodland, CA	Oct 20
Commissioning & Acceptance Testing (1/2 Day)	Woodland, CA	Oct 20
Sprinkler Protection for General Storage	Woodland, CA	Oct 21
Sprinkler Protection for Special Storage	Woodland, CA	Oct. 22
Pumps for Fire Protection	Edwardsville, IL	Oct 27
Sprinkler Protection for General Storage	Edwardsville, IL	Oct 28
Sprinkler Protection for Rack Storage	Edwardsville, IL	Oct 29
NFPA 13 Overview	Pembroke, MA	Oct 27-28
Plan Review Policies & Procedures	Pembroke, MA	Oct 29
Inspection, Testing & Maintenance	Irving, TX	Oct 27
Hydraulics for Fire Protection	Irving, TX	Oct 28
NFPA 13, 13R, 13D 2007 Update	Irving, TX	Oct 29

These seminars qualify for continuing education as required by NICET.

To register or for more information, contact Dawn Fitzmaurice at (845) 878-4207 or send an e-mail to seminars@nfsa.org

NFSA Tuesday eTechAlert is c. 2009 National Fire Sprinkler Association, and is distributed to NFSA members on Tuesdays for which no NFSA Technical Tuesday Online Seminar is scheduled. Statements and conclusions are based on the best judgment of the NFSA Engineering staff, and are not the official position of the NFPA or its technical committees or those of other organizations except as noted.

Opinions expressed herein are not intended, and should not be relied upon, to provide professional consultation or services. Please send comments to Russell P. Fleming, P.E. (fleming@nfsa.org).

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About the National Fire Sprinkler Association

Established in 1905, the National Fire Sprinkler Association (NFSA) is the voice of the fire sprinkler industry. NFSA leads the drive to get life-saving and property protecting fire sprinklers into all buildings; provides support and resources for its members – fire sprinkler contractors, manufacturers and suppliers; and educates authorities having jurisdiction on fire protection issues. Headquartered in Patterson, N.Y., NFSA has regional operations offices throughout the country. www.nfsa.org.

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