



You Really Need to be Keeping Up With Developments With the NFPA Combustible Dust Standards

Insights

8.12.15

My friend and outstanding combustible dust (and more) expert [Tim Myers](#) of Exponent shared the following:

NFPA 652: The Latest on the New Combustible Dust Standard

The National Fire Protection Association (NFPA) is set to publish the first edition of NFPA 652 Standard on Fundamentals of Combustible Dust.

Background

NFPA 652 was developed to place the fundamental requirements for combustible dust fire and explosion safety in one standard. Historically, somewhat different requirements have been contained in several different commodity-specific combustible dust standards. One debated issue during the development of NFPA 652 was how it would interact with existing commodity-specific combustible dust standards. In the short term, both NFPA 652 and one or more commodity-specific standards may apply to a facility handling combustible dust, and the standards may contain differing requirements. NFPA 652 contains a conflict section that provides guidance on which standards take precedence when requirements in the standards differ. The NFPA correlating committee has also recently provided guidance as to when the commodity-specific codes should take precedence. Exponent's engineers are active on technical committees currently revising existing commodity-specific standards, including improving the correlation to the new NFPA 652 standard.

What to Expect

The new standard, set to publish in the next month, provides a set of general requirements for the mitigation of fire and explosion hazards associated with combustible dusts and particulate solids across all industries and processes. The standard also directs the user to other commodity-specific NFPA combustible dust standards for additional requirements. Dr. Timothy Myers, a Principal Engineer in Exponent's Thermal Practice, participated in the code development process as a member of the NFPA "Fundamentals of Combustible Dusts" Technical Committee and Combustible Dust Correlating Committee.

A number of new requirements will be introduced by NFPA 652 that have not previously been included in all commodity-specific standards. One of the major changes is that NFPA 652 retroactively requires that a dust hazard analysis (DHA) be performed for all operations that generate, process, handle or store combustible dusts or particulate solids. For existing facilities, a DHA will be permitted to be phased in not later than three years from the effective date of the standard. The standard will specify that the facility owner or operator is responsible for determining whether the materials being handled are combustible or explosible, and if so, characterizing their properties as required to support the dust hazard assessment.

Our consultants have significant experience with evaluating combustible dust hazards, and a number of them are members of the NFPA committees responsible for standards preventing and mitigating dust explosions. This experience allows them to assist facilities in understanding and complying with applicable combustible standards, including the new NFPA 652 Standard. Exponent engineers are members of NFPA technical committees associated with the following standards.

I strongly recommend Tim Myers, having worked with him on a variety of issues in many industries. Check Tim out at: http://www.exponent.com/timothy_myers/

While speaking about combustible dust experts, I'd like to also recommend Brian Edwards of Conversion Technology , another outstanding and creative combustible dust expert, who shared this great article:

NFPA 664 (Wood Products) Revision Update

Posted on [August 6, 2015](#) by [Brian Edwards](#)

Earlier this week, NFPA published the Second Draft Meeting Minutes for the next edition of NFPA 664 – Standard for the Prevention of Fires and Explosions in Wood Processing and Wood Working Facilities. This meeting was held in Atlanta on July 14-15, and I was in attendance both days. For those of you in the wood products industry in North America, this is the go-to guide to fire protection. This meeting was to discuss the 2017 Edition of 664, which, contrary to its name, is scheduled to be released in Fall of 2016.

The major areas of discussion centered on public comments and on comments from NFPA's Combustible Dusts Correlating Committee, which is the group assigned to keep the various industry specific standards as consistent as possible. I can't detail all of the comments here, but I will mention some of the key points of discussion:

- The basic layout of NFPA 664 was discussed, including whether or not to modify it to align with 652. As stated in the Meeting Minutes, this will not be done during this revision cycle, but instead, a task group has been established to address this during the next revision cycle.
- The definition of wood dust, including deflagrable wood dust and dry, non-deflagrable wood dust was discussed. During the first revision draft, the particle size for a material to be considered

- deflagrable wood dust was increased significantly. This was reconsidered for the second draft.
- The concept of using the depth and area of dust accumulation in a building to determine whether or not an explosion hazard exists was discussed. In the current version of the standard, it states a dust explosion hazard is deemed to exist where the layer of accumulated deflagrable wood dust exceeds 1/8 inch over 5% of the area of the building. As is detailed in the Second Draft Meeting Agenda, multiple public comments recommended removing the 5% qualifier, and instead, changing the standard to read as the average layer over the entire building. Similar comments were also made on the next revision to NFPA 654. Pending review by the Correlating Committee, it is possible we will be seeing a change in how the dust layer depth criteria is handled in the future.

If you are interested in staying updated on NFPA, as well as OSHA, EPA, and ISO standards, please email cti@conversiontechnology.com and request to be added to our newsletter list.

Check some of Brian's other work at <http://conversiontechnology.com/blog/author/bedwards/>

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