

Dust Hazards for Authorities Having Jurisdiction- Why Require a DHA?

Overview:

Companies that store, handle or producing combustible dusts (including wood, plastic, food, pharmaceutical, metals, chemical feedstocks, etc.) have a responsibility – and are required by applicable fire codes - to ensure safe operations. This program provides a high-level overview of combustible dust hazards, the fundamentals of hazard analysis, and specifically the requirements of the adopted fire codes and NFPA standards that can be enforced by the Authorities Having Jurisdiction.

The 2015 (and subsequent) editions of the International Building Code (IBC), International Fire Code (IFC), and NFPA 1 all require compliance with NFPA 652 and execution of a Dust Hazard Analysis (DHA) for all combustible dust producing operations and outlines the minimum requirements and methodology for conducting a DHA.

The Building and Fire Code required compliance with NFPA 652 necessitates design of fire and explosion safety provisions based on a DHA specific to the facility, as well as employee training programs specific to exposures to combustible dust hazards and potential risks. The DHA identifies fire, flash fire, and explosion hazards pertaining to combustible dust and establishes recommendations for hazard management based on the applicable prescriptive requirements in NFPA 652.

Learning Objective:

Understanding: Understand Combustible Dust Regulatory Context

- Requirements of IBC, IFC and NFPA 1 requiring compliance with the NFPA dust standards (NFPA 652, 61, 69, 484, 654, and NFPA 664)
- IFC required operational permits
- Hazards associated with combustible dusts and fundamental of a dust hazard analysis

Enforcement: Enforce Combustible Dust Safety

- New and existing facilities to perform NFPA 652 compliant DHA
- Independent / third party review of DHA's

Review: A Facility-Specific Written DHA

- Dust combustibility and explosibility data and hazards.
- Building and process system evaluation to identify and address fire, deflagration, and explosion hazards.

Instructor: Mohammed Alam, Process Safety Consultant

Mohammed is an experienced Industrial Process Safety Consultant with Harrington Group. His focus with Harrington Group is on fire/explosion hazards associated with combustible dusts, flammable liquids/vapors, and gases. He also specializes in conducting onsite analysis such as identifying/mitigating hazardous risks, Dust Hazard Analysis (DHA), Process Safety Management (PSM) audits, Hazardous Area Classification (HAC), develop and train plant personnel on relevant risks, and identifying electrostatic hazards. He has conducted onsite analysis within a variety of industries including aerospace, chemical, food, and paper/wood. Mohammed is well versed with the requirements of regulatory codes and standards, including all applicable National Fire Protection Association (NFPA) publications. He earned his BS in Chemical Engineering from Stevens Institute of Technology.

Instructor: Rob McFeaters, PE

Mr. McFeaters is an AVP/Associate Project Manager with Harrington Group and began working in the fire protection engineering industry in 2011, in the areas of fire and explosion engineering and process safety. His focus at Harrington Group is primarily on dust explosions and hazard analysis, with an emphasis on providing clients with technical solutions that provide the most efficient process design while keeping employees and property protected. He is a registered Fire Protection Engineer in the state of Georgia, and earned his MS in Fire Protection from Worcester Polytechnic Institute, as well as his BS in Chemical and Biomolecular Engineering from Georgia Tech.