

Regulations PS 54.0 – For Facilities with Dust producing Processes

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Regulation PS-54.0: For Facilities with Dust producing Processes

Scope:

This regulation is applicable to a building or part of building where combustible dusts are produced in the process and concentrations may lead to fire hazards or even explosion.

Objective:

This regulation will provide the EHS related aspects concerning design & construction of any building or facility that produces combustible dusts through the industrial process.

Building or part of building:

1. Dust collection system shall be provided to prevent the accumulation of dust and keep suspended dusts at a safe concentration inside the building;
2. A dust collection system shall be designed in conformance with NFPA 91.
3. Exhaust system for air-conveying of materials shall be made of non-combustible material.
4. All parts of building in which dust is liberated shall be designed so that the surface on which dust can accumulate are reduced to a minimum and easily cleanable.
5. Any equipment that produces open flames, sparks or heat shall not be installed in the area where combustible dusts may be present.



Dust Collector:

1. Dust collector having a capacity of more than 0.5m³/s shall;
 - a. be located outside of a building, and
 - b. be equipped with explosion venting to the outdoor of vent area.
2. A Dust collector described in sentence (1), is permitted to be located inside the building if it is;
 - a. provided with explosion venting to the outdoor as specified in clause (1)(b).
 - b. equipped with an automatic explosion prevention system.

Grounding:

1. Electrically conducting parts of conveying system, dust collector and any equipment capable of accumulating static electricity shall be electrically bonded and grounded.

Explosion Venting:

1. Activity containing significant concentration of combustible dusts shall be located in building provided with explosion venting to the outdoor.
2. Explosion venting shall be designed in conformance with NFPA 68.

Electrical Interlocks:

1. Equipment required to have dust-collecting system shall be interlocked to prevent it from operating if the dust-collecting system is not in operation.

Separator:

1. Separator shall be provided to prevent the entrance of foreign materials that may cause sparks in conveying equipment, dust collector, dust producing machine and any equipment located in the atmosphere containing combustible dusts.