



PROJECT PROFILE

Preventing fires by capturing flammable wood dust

The Challenge

A Midwest lumber company was faced with needing to make multiple changes to control the dust created from processing wood products. The facility was running two-shifts a day, including Saturdays to keep up with demand.

What they found was a lot of time was spent cleaning the facility of potentially flammable wood dust that was also negatively impacting production and efficiency. Recently, a union negotiation had the company faced with employees not wanting to perform dust collector maintenance.

Company leadership takes safety seriously and called their local dust collector representative for help.

PROJECT IN BRIEF:

EQUIPMENT & SERVICE

- Dust Collectors
- Turnkey Installation
- Preventive Maintenance Plan

INDUSTRY

- Wood

APPLICATION

- Emission Control

REGULATIONS

- NFPA 664, Standard for the Prevention of Fires and Explosions in Wood Processing and Woodworking Facilities

AIR VOLUME

- 16,000 CFM

The Solution

The dust collector representative reached out to Schust because of the required custom hooding and ductwork that would be needed in order to address the facility's NFPA 664 compliance concerns.

Customized hooding and duct routing was included as part of a turnkey design build engineered solution. Some of the hood work required it to travel with the machinery as it processed wood. It hoods needed to be designed around employees working so not to block their vision to prevent potential accidents.

The turnkey dust collection system included a complete spark detection system. If a spark or hot material is detected, it will douse it quickly with water to prevent the spark or hot material from moving downstream to the dust collector. As a secondary precaution, isolation and dump valves were also designed into the system to prevent a fire from occurring in the dust collector.

Schust installed the dust collector manufacturer provided clamp-together duct. In the past, the facility had problems with material clogs in the ductwork. The clamp-together duct allows employees to spot check the duct for any potential clog formation. The employees can simply pull on a handle to quickly open the duct for ease of maintenance.

As it turned out, Schust was not the low bidder for this project. It was later learned that the contract was awarded to Schust after the other bids could not speak to the needed NFPA requirements, nor provide a turnkey system.

After the installation, another Schust customer went to tour this facility and see the system in action because they were needing a similar solution.



Schust wasn't the low bid, but they did a good job and did what they said they would do."

- Engineer at the lumber company

Follow-up

During the first week of operation, the system designed and installed by Schust prevented multiple fires.

Another unrelated piece of processing equipment malfunctioned and generated sparks that were being sucked into the dust collection system. Because Schust is knowledgeable in NFPA requirements, a spark and explosion detection system was included within the design. The spark detection system signals the fire distinguishing system, in this case water, to isolate the fire before reaching the dust collector. Schust came in to help reset the system after determining what was going on.

Schust continues to perform quarterly inspection services for the facility since the installation of the dust collection system.

Contact Schust to learn more about this project.

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