

A4401
FY2018 InspDEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Self Initiated Inspection

A440145740

FACILITY: SHERWOOD PATTERN CO		SRN / ID: A4401
LOCATION: 4231 MARTIN RD, WALLED LAKE		DISTRICT: Southeast Michigan
CITY: WALLED LAKE		COUNTY: OAKLAND
CONTACT:		ACTIVITY DATE: 07/09/2018
STAFF: Iranna Konanahalli	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: FY 2018 inspection of Sherwood Pattern Company		
RESOLVED COMPLAINTS:		

Sherwood Pattern Company (A4401)
4231 Martin Road
Commerce Township, Michigan 48390-4119

Phone: (248) 363-7133

On July 09, 2018, I conducted a level-2 self-initiated **FY 2018 inspection** of Sherwood Pattern Company ("the company" or "Sherwood") located at 4231 Martin Road, Commerce Township, Michigan 48390-4119. The inspection was conducted to determine compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451 and Michigan Department of Environmental Quality, Air Quality Division (MDEQ-AQD) rules.

During the FY 2018 inspection, Mr. Stephen Button (Phone: 248-363-7133; Fax: 248-363-7198; E-mail: sPattern@aol.com), assisted me.

Mr. Richard R. Button (Phone: 248-363-7133; Fax: 248-363-7198; E-mail: rButton@SherwoodPattern.com or sPattern@aol.com; AOL is a preferred e-mail address), President, retired about July 2017. Buttons are brothers.

Sherwood makes wood fixtures, checking fixtures for automotive industry. The wooden patterns are used in automotive industry for hoses, tubes, etc. Sherwood is in business for 40 years (since 1978). Paint booth is not present. However, small quantity brush-on solvents are used.

One (1) table saw, two (2) wood drilling machines, ten (10) wood-cutting (saw) and one (1) grinding machines are present.

All wood cutting, grinding, sanding machines are hooked up, using one common downdraft central vacuum system, to an air pollution control system consisting of large bags. All ductwork carrying particle laden exhaust air is below ground level. The system consists of a blower, which spins dust laden air. There is a particle size separation mechanism, similar to a cyclone that is located in a separate room, where large particles settled and the bags are protected from their impact by particles of high momentum. The dust laden air is split into three streams:

1. A large-size particle stream, where dust is collected in a hopper (no bag, located in adjacent room);

2. A medium-size particle stream, which is ducted to one large filter bag (only one bag: 4 ft. Diameter * 4 ft. Height); where dust is collected in a hopper;
3. A small-size (fine) particle stream, which is ducted to one bag system consisting of three large bags (each bag: 4 ft. Diameter * 4 ft. Height); where dust is collected in a hopper;

There is only one central vacuum system that collects dust from all saw dust generating processes using a downdraft suction mechanism, taking advantage of gravitational forces acting on the particles, unlike most dust capture systems which work against gravity. In order to protect bags, dust laden air is split into three streams upon particle size separation. The bags and the hoppers are emptied once per week (1/week).

After filtration of saw dust, clean air is recycled into the plant in both heating season (winter) and cooling season (summer).

The wood cutting, drilling, sanding machines are exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 336.1285(2)(I); emissions are released only into the general in-plant environment, after filtration, during both heating season (winter) and cooling season (summer). I did not observe saw dust fall-out inside and outside the building indicating proper operation of the control systems.

Welding

One MIG (Metal Inert Gas with consumable wire electrode) welding machine is located in separate room, where saw dust and wood are not present, for fire and safety reasons. The machine is used for making carts for customers. About four (4) carts were produced in in CY 2018. The carts are produced upon customers request.

The machine is exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 336.1285(2)(i) (welding).

Conclusion

The wood-cutting, drilling, sanding machines are exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 336.1285(2)(I). One centralized three-branch downdraft particulate emissions control system for all saw dust in the plant. Sherwood is in compliance with the exemption conditions.

NAME J. J. Mahanahall DATE 08/23/2018 SUPERVISOR Joyle B.