

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection

A158831176

FACILITY: SUPERIOR BRASS & ALUMINUM		SRN / ID: A1588
LOCATION: 4893 DAWN AVE, EAST LANSING		DISTRICT: Lansing
CITY: EAST LANSING		COUNTY: INGHAM
CONTACT: David Fedo, Compliance Manager		ACTIVITY DATE: 09/15/2015
STAFF: Eric Grinstern	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Unannounced inspection		
RESOLVED COMPLAINTS:		

Unannounced inspection of Superior Brass and Aluminum Casting Co.

Prior to entering the facility staff observed no visible emissions or odors.

At the facility staff consisting Eric Grinstern met with David Fedo, Compliance Manager.

The primary purpose of this inspection was to evaluate the facility's compliance with Subpart ZZZZZZ, the Aluminum, Copper, and Other Nonferrous Foundries Area Sources NESHAP.

FACILITY DESCRIPTION

The facility is a nonferrous foundry. The facility primarily casts manganese brass, silicone bronze, NDZS (copper based alloy), and a small amount of leaded red brass (approximately 1.5% of total pours in 2014). The facility no longer casts aluminum. The facility currently operates five days a week, 9 hours a day, and six days a week every other week with around 26 employees on the floor. The facility casts parts primarily for plumbing/fire hydrants.

REGULATORY ANALYSIS

The facility is currently classified as a minor source. The facility holds two permits to install: PTI No. 642-78 and PTI No. 72-06. PTI No. 642-78 covers some metal saws, grinders and sanders. These processes and any other additional finishing equipment would qualify for exemption under Rule 285(I) (vi). PTI No. 72-06 covers four melt furnaces, pouring station and shakeout.

The facility is subject to the Aluminum, Copper, and Other Nonferrous Foundries Area Sources NESHAP, Subpart ZZZZZZ. The facility poured 3,547 tons in 2014, which is below the 6,000 ton per year threshold under the NESHAP that would classify the facility as a large foundry subjecting them to additional requirements. The facility is aware of the 6,000 ton threshold contained in the NESHAP.

Mold/Core

The facility utilizes green sand for molds and shell sand for cores. The facility estimates that approximately 30-40 % of molds are cored. The facility has a green sand reclamation system onsite. Molds are made on two Hunter units, while cores are made with three Redford core machines.

Melting

The facility has four electric pot furnaces, each with a capacity of 400 pounds. Each of the furnaces has a rim-vent capture system that ducts to a dust collector. The furnaces are permitted under PTI No. 72-06. The furnaces have an emission limit for PM, for which compliance is based upon proper operation of the dust collector. In addition to the furnaces, the facility has a dressing station that also has capture and control by the same collector. Proper operation is in part based upon compliance with an opacity limit of 5%, the installation and operation of a bag leak detector with an alarm. During the inspection no opacity was observed and Mr. Fedo showed staff the bag leak detection system. Observation of the area around the dust collector showed good housekeeping practices.

Pouring/cooling/shakeout

Molds are poured/cooled on a turntable equipped with ventilation that ducts to the same dust collector as the furnaces. Shakeout occurs via a vibradrum that has capture and control. Shakeout is permitted under PTI No. 72-06. Shakeout has an emission limit for PM, for which compliance is based upon proper operation of the dust collector. Proper operation is in part based upon compliance with an opacity limit of 5%, the installation and operation of a bag leak detector equipped with an alarm. During the inspection no opacity was observed and Mr. Fedo showed staff the bag leak detection system. Observation of the area around the dust collector showed good housekeeping practices.

Finishing

The facility has cut-off saws, grinding stations, robotic grinders and a wheelabrator. These finishing processes are controlled by four dust collectors. The finishing processes are either covered under PTI No. 642-78 or are exempt from permitting under Rule 285(I)(vi). Observation of the collectors showed no visible emissions and good housekeeping practices.

Subpart ZZZZZZ - Aluminum, Copper, and Other Nonferrous Foundries Area Sources NESHAP

The facility submitted an initial notification for Subpart ZZZZZZ on January 10, 2012. Staff reviewed the follow requirements applicable to nonferrous foundries with an annual melt rate less than 6,000 tons.

- Cover or enclose each melting furnace that is equipped with a cover or enclosure during the melting operations to the extent practicable.

The facility has rim vent collection.

- Purchase only metal scrap that has been depleted to the extent practicable of the specified foundry HAPs.

The facility stated that they only melt spec. ingot and internal runaround.

- Prepare and operate according to a written management practices plan to minimize emissions from melting furnaces.
- Must include management practices for Number 1. and Number 2. above.

Staff discussed with the facility the documentation of their current management practices.

Records documenting conformance with management practices:

- Records identifying each furnace equipped with a cover.
- Document that management practices were followed during monthly inspections.

Staff discussed with the facility the need to document the weekly inspections that they are currently performing.

- Records that the facility purchased only metal scrap that has been depleted of HAP metals.

The facility does not purchase metal scrap.

- If metal scrap is purchased for the HAP metal content for alloying, records must be kept to document the HAP metal is included in the material specifications for the cast metal product.

The facility does not purchase metal scrap.

- Records that melt is less than 6,000 tons

Facility maintains melt records.

- Compliance report if a deviation occurred during semiannual period

There is was no indication during the inspection that any deviations have occurred.

Conclusion

Based on the information and observations made during this inspection, the facility is in compliance with applicable air quality rules and regulations.

NAME 

DATE 10/20/15

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