

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

B283325905

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| FACILITY: MICHIGAN WHEEL CORP | | SRN / ID: B2833 |
| LOCATION: 1501 BUCHANAN SW, GRAND RAPIDS | | DISTRICT: Grand Rapids |
| CITY: GRAND RAPIDS | | COUNTY: KENT |
| CONTACT: Janet Englerth, Safety/HR Manager | | ACTIVITY DATE: 07/11/2014 |
| STAFF: Eric Grinstern | COMPLIANCE STATUS: Compliance | SOURCE CLASS: MINOR |
| SUBJECT: Unannounced Inspection | | |
| RESOLVED COMPLAINTS: | | |

Facility Description

Michigan Wheel manufactures bronze and Ni-bral marine propellers. The facility's primary operations consist of a foundry, machining and finishing processes.

Regulatory Overview

The facility holds the following active NSR permits.

PTI No. 414-91 – (2) 2,000 lb (capacity) electric induction furnaces
PTI No. 415-91 – (1) 2,00 lb (capacity) electric induction furnace
PTI No. 412-91 – Sand Reclaim System
PTI No. 17-14 - (1) 3,000 lb (capacity) electric induction furnace

The facility stated that they are well below the melt rate threshold (600 tons/yr.) for applicability to the nonferrous foundry NESHAP, Subpart ZZZZZZ.

Compliance Evaluation

Prior to entering the facility, observations from the perimeter showed no odors or visible emissions.

At the facility staff met with Janet Englerth, HR Director and Paul VandenBranden, Director of Foundry Operations. Additionally, two representatives of the facility unions participated in the pre-inspection meeting.

Sand Systems

The facility uses two types of sand binders, sodium silicate and green sand. The facility also purchases cores. A majority of molds are made from the sodium silicate system. The sodium silicate sand conveyor is controlled by the large baghouse that controls melting.

The green sand is processed through a reclaim system, which is permitted under PTI No. 412-91. Sand is reclaimed as follows: conveyor - rotary screen – silo – batch hopper – muller. The binder (clay) addition process is controlled by the Torit baghouse located next to the large melting baghouse. The Torit baghouse is only operated when clay is added to the sand system. Observation of the exhaust from the large baghouse showed no visible emissions. The pressure drop across the baghouse was 3.4" at the time of the inspection. The Torit baghouse was not operating at the time of the inspection.

Melting

The facility operates three (3) 2,000 lb. electric induction furnaces that are permitted under PTI Nos. 414-91 and 415-91. These furnaces are located in adjacent to each other and are operated by two control panels. The facility melts bronze and Ni-bral in these three furnaces. The NSR permits require the furnaces to be controlled by a baghouse. The furnaces, along with the ladle preheaters, are vented to the large melt baghouse. The furnaces were actively melting at the time of inspection.

The facility is in the process of installing a 3,000 lb. electric induction furnace that is permitted under PTI No. 17-14. The furnace will be used to melt Ni-bral.

The facility has numerous finishing operations (buffing, machining, etc.) that are exempt from NSR permitting under Rule 285(I)(vi). All of the operating processes vent internally, except for the large shot blast unit located near the ladle preheaters on the south side of the building, which is vented to the large baghouse.

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

NAME 

DATE 7/11/14

SUPERVISOR 