

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

N586636731

FACILITY: METAL TECHNOLOGIES, INC., RAVENNA DUCTILE IRON		SRN / ID: N5866
LOCATION: 3800 Adams Road, RAVENNA		DISTRICT: Grand Rapids
CITY: RAVENNA		COUNTY: MUSKEGON
CONTACT: Dan Plant, Corporate Environmental Manager		ACTIVITY DATE: 09/22/2016
STAFF: Eric Grinstern	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Compliance Inspection		
RESOLVED COMPLAINTS:		

METAL TECHNOLOGIES, INC. - RAVENNA DUCTILE IRON (N5866)**FACILITY DESCRIPTION**

The facility is a ductile iron foundry that primarily casts automotive and small engine parts. Melting is performed in three electric induction furnaces with charge material that has been preheated. The molten metal is poured into green sand molds. The facility uses shell sand cores that are purchased.

Emissions from the melting, pouring, cooling, finishing and sand handling operations are controlled by baghouses.

REGULATORY ANALYSIS

The facility is a Title V subject source (ROP No. MI-ROP-N5866-2014b) because it is a major source of CO emissions and because of its PTE for HAPs. The facility is subject to the Iron and Steel Foundry NESHAP, Subpart EEEEE. NESHAP subject emission units are EU-PREHEATERS, EU-MELTING, and EU-POURING. The facility is also subject to PSD based on CO emissions. The emission units EU-CLEAN, EU-MELTING, EU-POURING, EU-COOLING, EU-SHAKEOUT and EU-SANDSYSTEM are subject to CAM requirements.

COMPLIANCE EVALUATION

Prior to entering the facility a survey of the parameter was performed. No visible emissions or odors were noted prior to entering the facility.

At the facility, staff consisting of Eric Grinstern (EG) met with Dan Plant, Corporate Environmental Manager, and Ken Carrier, Maintenance Planner.

Below is a summary of compliance based upon ROP emission units.

EU-CLEAN

Emission units includes cast finishing operations, including (4) shotblasters, (1) tumblaster, (16) grinders and miscellaneous inspection/cleaning stations. All processes are captured and ducted to the West Blast Baghouse (SV-CLEAN-03).

This unit is subject to CAM for particulate matter.

Emission/Material Limits

Compliance with the emission limits for particulate and opacity are demonstrated through baghouse monitoring and compliance testing. Compliance is also demonstrated via monthly emission records that are calculated utilizing emission factors from testing and material usage/production rates. Based on this inspection, baghouse monitoring, compliance testing and emission records demonstrate compliance with the emissions limits. (Emission Records Attached)

The last compliance test was conducted in February 2015, at which time compliance with the particulate limits was demonstrated.

Baghouse monitoring is accomplished via the following permit requirements: daily VE observations, semi-annual Method 9 readings, operation of the baghouse within PM plan specified pressure drop range, operating in accordance with a PM plan for the baghouse. Review of facility records showed compliance with the above requirements.

Process/Operational Restrictions/Design Parameters/Records

The permit requires instrumentation to continuously measure the pressure drop across the baghouse and to record the reading once per day. The facility is in compliance with this condition.

The baghouse (West Blast) has a pressure drop operating range of 2 to 10 inches specified in the PM plan. Review of the daily records of pressure drop showed them to be within the 2 to 10 inch range with no VE noted. Observation of the magnehelic gauge during the inspection showed 5.6 inches. (Dust Collector Readings and Observations Attached)

Testing/Sampling

Testing required within 180 days of ROP issuance (June 5, 2014). The facility requested an extension to conduct testing required by the ROP (not Subpart EEEEE). An extension was granted to allow the facility to submit a complete test report within 90 days of the issuance of the PTI issued on April 29, 2015. Testing was approved to be conducted prior to the issuance of the permit in February 2015, for particulate matter. Test results showed compliance with the ROP emission limits.

Monitoring/Recordkeeping

Records of the hours of operation and calculated particulate emission rates were supplied by the facility (attached) Review of the previous 12-months of records shows compliance with the pound per hour and ton per year emission limits.

Reporting

Review of the most recent annual and semiannual ROP certification reports as well as CAM certification, showed that they were submitted by the deadline and that no deviations were reported.

Stack/Vent Restrictions

The stack associated with the West Blast is required to be a maximum of 60 inches in diameter and have a minimum height of 65 feet. Visual evaluation of the stack showed that it appeared to meet the required dimensions.

FG-MELTING

Flexible group that consists of metal processing operations that have combined emission limits. Includes: EU-PREHEATERS, EU-METING and EU-INOCULATION.

Emission/Material Limits

Compliance with the emission limits are demonstrated through baghouse monitoring and compliance testing. Compliance is also demonstrated via monthly emission records that are calculated utilizing emission factors from testing and material usage/production rates. Based on this inspection, baghouse monitoring, compliance testing and emission records demonstrate compliance with the emissions limits.

The last compliance test was conducted in February 2015, at which time compliance was demonstrated for all pollutants, except for the pound per hour formaldehyde limit. A Violation Notice was issued on May 5, 2015 for the exceedance, which was subsequently resolved via a permit modification.

Review of the previous 12-months of records showed compliance with the lb. /hr. and ton per year limit for the eleven pollutants with emission limits for the flexible group.

Baghouse monitoring is accomplished via the following permit requirements: daily VE observations, semi-annual Method 9 readings, operation of the baghouse within PM plan specified pressure drop range, operation of a bag leak detection system, operating in accordance with a PM plan for the baghouse. Review of facility records showed compliance with the above requirements.

Records of the hours of operation, material charge rates to the furnace were supplied by the facility

(attached). Review of the facility records shows compliance with the charge limits. The previous 12-months of data showed compliance with the 27 ton per hour and 132,000 ton per year furnace charge limit.

Process/Operational Restrictions/Design Parameters/Records

As part of demonstrating proper operation of the baghouse, the O&M plan requires monitoring and recording of the pressure drop. The pressure drops observed during the inspection for the baghouse controlling EU-MELTING and EU-PREHEATER was: East Side: 5.0 inches, West Side: 4.9 inches, EU-INOCULATION (E.MELT): 3.0 inches. These readings are within the established operating ranges.

Testing/Sampling

Testing required within 180 days of ROP issuance (June 5, 2014). The facility requested an extension to conduct testing required by the ROP (not Subpart EEEEE). An extension was granted to allow the facility to submit a complete test report within 90 days of the issuance of the PTI issued on April 29, 2015. Testing was approved to be conducted prior to the issuance of the permit in February 2015.

Reporting

Review of the most recent annual and semiannual ROP certification reports as well as CAM certification, showed that they were submitted by the deadline and that no deviations were reported.

Stack/Vent Restrictions

Visual evaluation of the stacks (SV-MELT-01 and SV-INOCULATION-05) showed that they appeared to meet the required dimensions.

FG-SAND

Flexible group that consists of sand related processes, including EU-COOLING, EU-SHAKEOUT, EU-POURING and EU-SANDSYSTEM.

Emission/Material Limits/Records

Compliance with the emission limits are demonstrated through baghouse monitoring and compliance testing. Compliance is also demonstrated via monthly emission records that are calculated utilizing emission factors from testing and material usage/production rates. Based on this inspection, baghouse monitoring, compliance testing and emission records demonstrate compliance with the emissions limits.

The last compliance test was conducted on November 19-21, at which time compliance with the emission limits was demonstrated for all pollutants, except for PM(lb/hr), arsenic, cadmium and manganese. A Violation Notice was issued on February 20, 2015 for the exceedance, which was subsequently resolved via retesting and a permit modification.

Review of the previous 12-months of records showed compliance with the lb./hr. and ton per year limit for the eight pollutants with emission limits for the flexible group.

Baghouse monitoring is accomplished via the following permit requirements: daily VE observations, semi-annual Method 9 readings, operation of the baghouse within PM plan specified pressure drop range, operating in accordance with a PM plan for the baghouse. Review of facility records showed compliance with the above requirements.

Review of the previous 12-months of data showed compliance with the 500,000 ton per year sand limit.

Process/Operational Restrictions/Design Parameters/Records

As part of demonstrating proper operation of the baghouse, the O&M plan requires monitoring and recording of the pressure drop. The pressure drops observed through the computer system during the inspection for the baghouse controlling EU-POURING, EU-COOLING, EU-SHAKEOUT and EU-SANDSYSTEM was: East Side: 4.12 inches, West Side: 5.80 inches. These readings are within the

established operating ranges.

Testing/Sampling

The last compliance test was conducted on November 19-21, 2014 and retesting on February 10-13, 2015.

Reporting

Review of the most recent annual and semiannual ROP certification reports as well as CAM certification, showed that they were submitted by the deadline and that no deviations were reported.

Stack/Vent Restrictions

Visual evaluation of the stack (SV-SAND-02) showed that they appeared to meet the required dimensions.

FG-CAMUNITS

Flexible group consisting of the emission units subject to CAM requirements. Emission units include: EU-CLEAN, EU-MELTING, EU-POURING, EU-COOLING, EU-SHAKEOUT and EU-SANDSYSTEM are subject to CAM requirements.

Process/Operational Restrictions/Design Parameters/Records

For EU-CLEAN, requires instrumentation to continuously measure the pressure drop across the baghouse and to record the reading once per day. The facility is in compliance with this condition.

For EU-MELTING, EU-POURING, EU-COOLING, EU-SHAKEOUT and EU-SANDSYSTEM, requires the operation and maintenance of bag leak detection systems. The facility has installed and is operating bag leak detection systems.

Testing/Sampling

For all CAM subject emission units, requires semi-annual Method 9 readings to demonstrate compliance with the opacity limit. Review of the Method 9 readings for the past year showed no exceedances of the opacity limit.

Monitoring/Recordkeeping

For all CAM subject emission units, requires daily non-certified visual inspections for opacity. Review of the daily records for visual opacity inspection showed that no opacity issues were noted.

NESHAP REQUIREMENTS – SUBPART EEEEE

FG-MACT EEEEE

Flex group covers the iron and Steel Foundry NESHAP requirements.

EU-PREHEATER - Scrap Preheater
EU-MELTING – Melting Furnaces
EU-POURING – Metal Pouring

Emission/Material Limits

Compliance with the particulate matter limit is primarily demonstrated through compliance testing every 5 years and proper operation of the capture and control systems. Testing was performed in 2014, at which time compliance with the emission limits was demonstrated.

Design/Equipment Parameters

The NESHAP requires the capture and control system to be installed, operated and maintained in accordance with an approved O&M plan. The facility has an approved O&M plan that addresses capture and control O&M.

Testing/Sampling

Testing was performed in 2014. In 2013, testing was conducted for under Subpart EEEEE for the new scrap preheater. Test results showed compliance for the applicable limits.

Monitoring/Recordkeeping

The facility is using a bag leak detection system to monitor the relative change in PM loading.

Reporting

Review of the most recent NESHAP certification report showed that it was submitted by the deadline and that no deviations were reported.

FG-IC RICE MACT EXEMPT

This flex group was added as part of the last renewal of the ROP, however it was determined during a previous inspection that they do not have an emergency generator at the facility.

Conclusion

Based on this inspection, the facility is in compliance with applicable air quality rules and regulations at this time.

NAME 

DATE 9/30/16

SUPERVISOR 