

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

A936457888

FACILITY: Hutchinson Antivibration Systems, Inc		SRN / ID: A9364
LOCATION: 600 Seventh St., CADILLAC		DISTRICT: Cadillac
CITY: CADILLAC		COUNTY: WEXFORD
CONTACT: Al Gatt , HSE Coordinator		ACTIVITY DATE: 05/18/2021
STAFF: Rob Dickman	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Inspection of this major source.		
RESOLVED COMPLAINTS:		

Hutchinson Antivibration Systems is automotive industry supplier located within an industrial park inside the Cadillac city limits. It is located on the middle of the industrial park with several industries around it including an iron foundry and an automotive hose manufacturer. There are some residences to the south and east of the facility with the closest being approximately three city blocks away.

Hutchinson Antivibration Systems produces a variety of automotive parts that consist of rubber and metal components. The rubber components are manufactured on site while the metal parts are manufactured elsewhere and shipped to the facility. Various adhesives are used to bond rubber and metal together. The facility includes processes for cleaning the various metal components, molding of rubber components, and applying various adhesives to each.

On May 18, 2021, this facility was inspected per Renewable Operating Permit (ROP) Number MI-ROP-A9364-2014c. Records review associated with this ROP were reviewed and documented separately by AQD staff and are addressed in a separate activity report. Following are the findings of this inspection.

SOURCE-WIDE CONDITIONS

Emission Limits

There are no source wide emission limits.

Material Limits

There are no source wide material limits.

Process or Operational Restrictions

There are no source wide process or operational restrictions.

Design or Equipment Parameters

There are no source wide design or equipment parameters.

Testing and Sampling Requirements

There are no source wide testing or sampling requirements.

Monitoring and/or Recordkeeping Requirements

Applicable required monitoring and recordkeeping for this section have been reviewed and documented separately.

Reporting

All semi-annual and annual deviation reporting has been completed in a timely manner. This reporting has been received and reviewed by AQD staff.

Stack/Vent Restrictions

There is no source wide stack or vent restrictions.

Other Requirements

The facility is required to comply with Consent Order 7-2012. The order requires that the facility obtains and complies with an ROP and that they install the Roll Coat Line as a supplemental environmental project. Both of these tasks have been completed and this consent order was voided in October of 2018.

The facility is required to have an approved site-specific Malfunction Abatement Plan. A Work Practice Plan (WPP); Startup, Shutdown, Malfunction Plan (SSMP), and Malfunction Abatement Plan (MAP) are integrated in to one document that was last approved in October of 2016.

EUROLLCOAT

This unit consists of a roll coat process with primer and adhesive application stations connected by a conveyor system. VOC emissions from the system are controlled by a regenerative thermal oxidizer (RTO).

Emission Limits

There are no emission limits associated with this emission unit.

Material Limits

There are no material limits associated with this emission unit.

Process or Operational Restrictions

The facility is required to store any waste coatings and solvents in closed containers. There is little to no waste coatings from this process. Cleanup solvents and collected waste material are handled in a way to minimize emissions.

Design or Equipment Parameters

The facility is required to only use non-atomizing applicators in the unit. This unit uses only rolling applicators.

Testing and Sampling Requirements

There are no testing or sampling requirements associated with this emission unit.

Monitoring and/or Recordkeeping Requirements

Applicable required monitoring and recordkeeping for this section have been reviewed and documented separately.

Reporting

All semi-annual and annual deviation reporting has been completed in a timely manner. This reporting has been received and reviewed by AQD staff.

Stack/Vent Restrictions

There is no stack or vent restrictions associated with this emission unit.

Other Requirements

There are no other requirements associated with this emission unit.

EURBRMOLDING

Rubber injection and compression presses; and post bond cure oven. Emissions from presses and oven are controlled by fabric filters. The total number of presses able to operate at the time of the inspection was 81.

Emission Limits

Volatile Organic Compound (VOC) emissions from EURBRMOLDING are limited to 7.8 tons per year based on a 12-month rolling time period as determined at the end of each calendar month. Compliance with this limit is through usage records and emission factor calculations. A review of records over the last 12 months demonstrated a peak of VOC emissions at 2.25 tons per year based on a 12-month rolling time period in April of 2020.

Particulate matter, particulate matter less than 10 microns (PM-10) and particulate matter less than 2.5 microns (PM 2.5) emissions are limited to 1.35 tons per year based on a 12-month rolling time period as determined at the end of each calendar month. Compliance with this limit is through usage records and emission factor calculations. A review of records over the last 12 months demonstrated a peak of particulate emissions at 0.68 tons per year based on a 12-month rolling time period in April of 2020.

Material Limits

The mold release agents used in EURBRMOLDING shall not contain any VOCs as defined by the supplier's MSDS information. A review of the MSDS information on site indicated a VOC (ethyl alcohol) was present in the mold release agent. Follow up to this indicated that the wrong material SDS was selected for review. The SDS reviewed on site was for an agent used to clean the molds. The correct SDS was provided. The name of the mold release agent is DiamondKote DKW-4200. A review of this SDS does not indicate any VOC in its formulation.

The permittee shall not process more than 18,000,000 pounds of rubber in EURBRMOLDING per year based upon a 12-month rolling time period as determined at the end of each calendar month. Compliance with this limit is through usage records. A review of these records was performed by AQD staff and demonstrated compliance.

Process or Operational Restrictions

The facility is required to have an approved site-specific Malfunction Abatement Plan. A Work Practice Plan (WPP); Startup, Shutdown, Malfunction Plan (SSMP), and Malfunction Abatement Plan (MAP) are integrated in to one document that was last approved in October of 2016. Updates to these plans were submitted recently with the facility's ROP renewal application and will be reviewed as part of the renewal process.

The facility is required to maintain their dry fabric filter system. Upon inspection, all filters appeared to be installed properly and maintained.

Design or Equipment Parameters

The permittee shall equip and maintain EURBRMOLDING with fabric filters. Upon inspection, all filters appeared to be installed properly and maintained.

Testing and Sampling Requirements

There are no testing or sampling requirements associated with this emission unit.

Monitoring and/or Recordkeeping Requirements

Applicable required monitoring and recordkeeping for this section have been reviewed and documented separately.

A current record of the chemical composition of each rubber molding material and mold release agent, including the weight percent of each component is required. This information is being kept electronically and was submitted as part of the review of records.

Reporting

All semi-annual and annual deviation reporting has been completed in a timely manner. This reporting has been received and reviewed by AQD staff.

Stack/Vent Restrictions

There is no stack or vent restrictions associated with this emission unit.

Other Requirements

There are no additional requirements associated with this emission unit.

EURBRCUREOVEN

This emission unit is a post-bond cure oven. Dry, cured rubber parts from the cementing lines are pushed into metal cans to form an assembly. An oil is used for lubrication to form the assembly and the parts are placed into the cure oven. Control is through dry fabric filters. This unit began operation in February of 2021.

Emission Limits

VOC emissions from this process are limited to 1.89 tons per year based on a 12-month rolling time period as determined at the end of each calendar month. Records provided by the facility indicated the highest emissions were in May of 2021 at 0.6 tons per year.

Material Limits

Post bond oil usage in the process is not to exceed 3.44 pounds per 8-hour period. Records provided by the facility indicate the maximum used in an 8-hour period was in March of 2021 at 2.33 pounds.

Process or Operational Restrictions

The facility is required to store any waste coatings and solvents in closed containers. There is little to no waste coatings from this process. Cleanup solvents and collected waste material are handled in a way to minimize emissions.

Design or Equipment Parameters

Dry fabric filters are to be installed where the process is in operation. At the time of the inspection, these filters were installed.

Testing and Sampling Requirements

There are no specific testing requirements for this emission unit.

Monitoring and/or Recordkeeping Requirements

Applicable required monitoring and recordkeeping for this section have been reviewed and documented separately.

Reporting

There are no specific reporting requirements for this emission unit.

Stack/Vent Restrictions

The stack for this unit is required to have a maximum diameter of 10 inches and a minimum height of 38 feet. The stack appears to meet these parameters and it does not appear to have been recently modified.

Other Requirements

There are no additional requirements for this emission unit.

FGAUTODIP

Two automatic dip systems for applying cement to metal and plastic parts. Processes also include conveyor systems for drying the dipped parts. The cements are dried by an electric dryer. VOC emissions from both lines are controlled by a regenerative thermal oxidizer (RTO).

Emission Limits

There are no emission limits associated with this flexible group.

Material Limits

There are no material limits associated with this flexible group.

Process or Operational Restrictions

The facility is required to store any waste coatings and solvents in closed containers. There is little to no waste coatings from this process. Cleanup solvents and collected waste material are handled in a way to minimize emissions.

Design or Equipment Parameters

There are no design or equipment parameters associated with this flexible group.

Testing and Sampling Requirements

There are no testing or sampling requirements associated with this flexible group.

Monitoring and/or Recordkeeping Requirements

Applicable required monitoring and recordkeeping for this section have been reviewed and documented separately.

Reporting

All semi-annual and annual deviation reporting has been completed in a timely manner. This reporting has been received and reviewed by AQD staff.

Stack/Vent Restrictions

Emissions from this group are routed to the RTO. The RTO stack is to have a maximum exhaust diameter of 30 inches and a minimum height of 42 feet. These parameters appear correct and do not appear to have been recently modified.

Other Requirements

There are no additional requirements associated with this flexible group.

FGSPRAYMACHINES

Chain-on-edge numbers 1 and 2 are two automated booths each for applying cement to parts. Prior to entering the booths, the parts first pass through a pre-heat oven. The chain-on-edge rotates the parts through spray guns. Chain-on-edge number 3 is also an automated booth for applying cement to parts. Parts do not pass through a pre-heat oven. Cement is applied to the parts by spray guns and then the cement is dried in an oven. Chain-on-edge number 4 is two automated booths for applying cement to parts. Prior to entering the booths, the parts first pass through a pre-heat oven. EUROTSTRAY1 is a rotary spray adhesive line used to apply adhesive to. VOC emissions are controlled by the RTO.

Emission Limits

There are no emission limits associated with this flexible group.

Material Limits

There are no material limits associated with this flexible group.

Process or Operational Restrictions

The facility is required to store any waste coatings and solvents in closed containers. There is little to no waste coatings from this process. Cleanup solvents and collected waste material are handled in a way to minimize emissions.

The facility disposes of spent filters by storing them in closed containers and having them transported to a Class II landfill.

Design or Equipment Parameters

The facility is required to operate only if all filters are in place. At the time of this inspection, these filters appeared in good condition. Primary filters are changed once per shift, secondary filters are changed once per week.

The facility only uses high volume, low pressure (HVLP) or equivalent applicators in these booths as required.

Testing and Sampling Requirements

There are no testing or sampling requirements associated with this flexible group.

Monitoring and/or Recordkeeping Requirements

Applicable required monitoring and recordkeeping for this section have been reviewed and documented separately.

Reporting

All semi-annual and annual deviation reporting has been completed in a timely manner. This reporting has been received and reviewed by AQD staff.

Stack/Vent Restrictions

Emissions from this group are routed to the RTO. The RTO stack is to have a maximum exhaust diameter of 30 inches and a minimum height of 42 feet. These parameters appear correct and do not appear to have been recently modified.

Other Requirements

There are no additional requirements associated with this flexible group.

FGRTO

This group consists of two automatic dip spin lines, four automated chain-on-edge lines, a rotary spray adhesive line, and a roll coater all used to coat metal and plastic parts. VOC emissions from this group are all controlled by a common RTO.

Emission Limits

VOC emissions from FGRTO are limited to 56.4 tons per year based on a 12-month rolling time period as determined at the end of each calendar month. Compliance with this limit is through usage records, stack testing, and emission factor calculations. A review of these records was performed by AQD staff and demonstrated compliance.

VOC emissions from EUROTSPRAY1 are limited to 4.8 tons per year based on a 12-month rolling time period as determined at the end of each calendar month. Compliance with this limit is through usage records and emission factor calculations. A review of these records was performed by AQD staff and demonstrated compliance.

Ethylbenzene emissions from FGRTO are limited to 10 tons per year based on a 12-month rolling time period as determined at the end of each calendar month. Compliance with this limit is through usage records and emission factor calculations. A review of these records was performed by AQD staff and demonstrated compliance.

Material Limits

There are no material limits associated with this flexible group.

Process or Operational Restrictions

The facility is required to have an approved site-specific Malfunction Abatement Plan. A Work Practice Plan (WPP); Startup, Shutdown, Malfunction Plan (SSMP), and Malfunction Abatement Plan (MAP) are integrated in to one document that was last approved in October of 2016. Updates to these plans were submitted recently with the facility's ROP renewal application and will be reviewed as part of the renewal process.

A minimum of 0.007 inches of water (H₂O) pressure differential between the Permanent Total Enclosure (PTE) and the adjacent area must be maintained to demonstrate that each PTE is under negative pressure. Compliance with this limit is through continuous monitoring of the pressure drop in each booth. Following are instant readings taken during the inspection:

Chain on Edge 1 – a) 0.04, b) 0.11

Chain on Edge 2 – a) 0.12, b) 0.05

Chain on Edge 3 – a) 0.05, b) 0.11

Chain on Edge 4 - a) 0.05, b) 0.03

Rollcoat – a) 0.02, b) 0.03

Dip 1 – Not in operation

Dip 2 – 0.35

Rotary spray– Not in operation

All readings above are in inches of water, gauge. a) and b) represent the two booths that make up the emission unit.

Design or Equipment Parameters

To operate FGRTO the RTO must be installed, maintained and operated in a satisfactory manner. Satisfactory operation of the RTO includes a minimum VOC destruction efficiency (DE) of 95% (by weight), maintaining a minimum temperature of 1,500°F or the minimum temperature may be adjusted based on the most recent acceptable stack test which achieved a minimum overall DE of 95%, and a minimum retention time of 0.5 seconds. DE testing was last performed in May of 2018 and demonstrated a DE of 97%. Temperature of the RTO is monitored and recorded continuously. Records regarding this were reviewed by AQD staff and demonstrated compliance. The minimum retention time to the RTO is designed into the RTO.

Each booth is required to be a permanent total enclosure (PTE). Compliance with this is through pressure drop monitoring. If the pressure drops below the requirement of 0.007 inches of water, gauge, an alarm is sounded, and operation of that booth cannot continue until staff resolve the issue and return flow out of the booth to a compliant level.

The facility is required to continuously monitor and record the combustion temperature of the RTO. Records regarding this have been reviewed and found to be in compliance. At the time of the inspection, readings of each chamber of the RTO were 1574 and 1573 degrees F.

Differential pressure measurement devices are required to be installed on each unit in this group. Each unit is so equipped. These devices monitor continuously and record an average reading every 15 minutes.

Testing and Sampling Requirements

VOC content of materials used at the facility are determined through manufacturers formulation data. This information is used to calculate VOC emissions.

Testing for destruction efficiency is required. Destruction efficiency testing was last performed in May of 2018 and demonstrated a DE of 97%.

Monitoring and/or Recordkeeping Requirements

Applicable required monitoring and recordkeeping for this section have been reviewed and documented separately.

Reporting

All semi-annual and annual deviation reporting has been completed in a timely manner. This reporting has been received and reviewed by AQD staff.

Stack/Vent Restrictions

Emissions from this group are routed to the RTO. The RTO stack is to have a maximum exhaust diameter of 30 inches and a minimum height of 42 feet. These parameters appear correct and do not appear to have been recently modified.

Other Requirements

The facility is required to comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR 63, Subpart A and M MMM. By complying with the conditions listed in this section, the facility is in compliance with this subpart.

FGMACT MMMM

This group consists of the same units as FGRT0 (two automatic dip spin lines, four automated chain-on-edge lines, a rotary spray adhesive line, and a roll coater).

Emission Limits

Organic HAP emissions from FGMACT MMMM are limited to 2.6 lb per gal of coating solids used based on a 12-month rolling time period as determined at the end of each calendar month for general use coatings. Organic HAP emissions from FGMACT MMMM are limited to 37.7 lb per gal of coating solids used based on a 12-month rolling time period as determined at the end of each calendar month for Rubber-to-Metal Coating. Compliance with this is through usage and material content records and corresponding calculations. These records have been reviewed and documented separately.

The facility coats metal parts under 40 CFR 63 Subpart M MMM, but also coats some plastic parts. This activity is subject to 40 CFR 63 Subpart P PPP. Each subpart allows for calculation of a facility specific limit based on proration of the number of each type of part coated. Calculation of this limit must be documented by the facility. These records have been reviewed and documented separately.

Material Limits

There are no material limits associated with this flexible group.

Process or Operational Restrictions

The average combustion temperature in any 3-hour period for the RTO must not fall below the combustion temperature limit of 1500°F. Records of continuous monitoring of the RTO temperature have been reviewed by AQD staff and found to be in compliance.

Each booth must maintain the direction of air into the enclosure of an emission capture system that is a permanent total enclosure (PTE) per Method 204. Compliance with this is by continuous monitoring of pressure drops in each affected booth and maintaining a pressure drop of 0.007 inches of water, gauge, pursuant to the method. Inspection on site and review of records of these readings demonstrated compliance.

The facility must operate the RTO temperature monitor and PTE pressure drop monitor and collect emission capture system and add-on control device parameter data at all times that a controlled coating operation is operating. Monitoring for these parameters at the facility is continuous. Any deviations from this are reported semi-annually as required. These reports are reviewed and documented by AQD staff.

The facility must maintain the RTO temperature monitor and PTE pressure drop monitor at all times and have available necessary parts for routine repairs of the monitoring equipment. Inspection at the facility indicates the facility maintains the monitoring systems.

The facility must implement a work practice plan to minimize organic HAP emissions from the storage, mixing, and conveying of coatings, thinners and/or other additives, and cleaning materials used in, and waste materials generated by the emission units in FGMACT MMMM. A Work Practice Plan (WPP); Startup, Shutdown, Malfunction Plan (SSMP), and Malfunction Abatement Plan (MAP) are integrated in to one document that was last approved in October of 2016.

The facility may choose to comply with an alternative to the work practice standard, after receiving prior approval from the USEPA. The facility has not sought an alternative to the work practice standards.

All emission units in FGMACTMMMM shall be in compliance with the emissions limits at all times except during periods of startup and shutdown. Any deviations from this are reported semi-annually as required. These reports are reviewed and documented by AQD staff.

Design or Equipment Parameters

The facility must install, calibrate, and maintain devices to measure air flow direction, static or differential pressure, as appropriate for each emission unit under FGMACT MMMM. These devices are installed, maintained, and monitored.

Each pressure sensor must be located in or as close to a position that provides a representative measurement of the pressure drop across each opening that is monitored. The pressure sensor must have an accuracy of at least 0.5 inches of H₂O or 5 percent of the measured value, whichever is larger. Each booth is so equipped. The accuracy of each gauge is 0.01 inches of water.

The gas temperature monitor must be installed in the firebox of the RTO or in the duct immediately downstream of the firebox before any substantial heat exchange occurs. The placement of these monitors is integral in to the design of the RTO.

The RTO gas temperature sensor must be located in a position that provides a representative temperature and has a measurement sensitivity of 5°F or 1.0 percent of the temperature value, whichever is larger. The temperature sensor is accurate to one degree.

Testing and Sampling Requirements

For the RTO temperature sensor, an accuracy audit, including a visual inspection, of the sensor shall be performed quarterly and after every deviation. Records of accuracy audits were reviewed on site. These are performed monthly. In the records reviewed, an error of less than 2% was noted for each. It should also be noted that the RTO has redundant thermocouples. These records were also reviewed for pressure drop sensors. These audits are also performed monthly with an error noted of less than 2%.

Monitoring and/or Recordkeeping Requirements

Applicable required monitoring and recordkeeping for this section have been reviewed and documented separately.

Reporting

All semi-annual and annual deviation reporting has been completed in a timely manner. This reporting has been received and reviewed by AQD staff.

Stack/Vent Restrictions

There is no stack or vent restrictions associated with this flexible group.

Other Requirements

The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart MMMM for Surface Coating of Miscellaneous Metal Parts and Products. By complying with the conditions listed in this section, the facility is in compliance with this subpart.

The permittee shall develop and implement a work practice plan. A Work Practice Plan (WPP); Startup, Shutdown, Malfunction Plan (SSMP), and Malfunction Abatement Plan (MAP) are integrated in to one document that was last approved in October of 2016.

The permittee shall develop a written startup, shutdown, and malfunction plan. A Work Practice Plan (WPP); Startup, Shutdown, Malfunction Plan (SSMP), and Malfunction Abatement Plan (MAP) are integrated in to one document that was last approved in October of 2016.

FG-RULE 287(c)

Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278 and 287(c).

Equipment in this group consists of one rarely used service booth. An inspection of this booth indicated that it is controlled by dry fabric filters that appeared to be in good condition and installed properly. A review of the usage records for the booth indicate the facility is well under 200 gallons per month usage as required by the exemption.

FG-COLDCLEANERS

Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278 and Rule 281(h) or Rule 285 (r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.

A total of two cold cleaners are installed on site and are both in the maintenance department. These appeared properly signed and used. One was in use at the time of the inspection, the other was closed. Service of these in terms of the solvent change out is by an outside contractor.

At the time of the inspection, this facility appeared in compliance with their ROP.

NAME 

DATE _____

SUPERVISOR _____