

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

N577956110

FACILITY: Acument Global Technologies, Ring Screw LLC		SRN / ID: N5779
LOCATION: 6125 18 MILE ROAD, STERLING HTS		DISTRICT: Warren
CITY: STERLING HTS		COUNTY: MACOMB
CONTACT: Russ St. Onge , EHS Manager		ACTIVITY DATE: 11/17/2020
STAFF: Sebastian Kallumkal	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Scheduled inspection		
RESOLVED COMPLAINTS:		

On Tuesday, November 17, 2020, I, Sebastian Kallumkal, Michigan Department of Environment, Great Lakes & Energy - Air Quality Division staff inspected Acument Global Technologies (formerly Ring Screw Works, LLC.) (SRN: N5779) located at 6125 18 Mile Road, Sterling Heights, Michigan. The purpose of this inspection was to determine the facility's compliance with the requirements of the Federal Clean Air Act; Article II, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); the administrative rules; and the conditions of Air Use Permit to Install (PTI) No. 60-96 and 85-17A.

I arrived at the facility at about 10:00 AM. Due to the COVID-19 Pandemic the inspection was announced earlier. At the facility, I met with Mr. Ross St. Onge (Ross), EHS Manager/Repair Leader. I introduced myself, provided my credentials and explained the purpose of my inspection. We both wore face masks and followed pandemic protocol. He assisted me for an inspection of the facility.

During the pre-inspection meeting, he explained that the heat-treating furnace covered by PTI No.60-96 is currently down and happened the previous day. No process changes occurred at the facility.

Acument Global Technologies manufactures fasteners for the auto industry. The facility operates 24 hours a day, and 7 days per week. First, the coils are staged using settle headers & rollers. The header will stage the metal rods into fasteners; whereas the rollers will make threads on the metal rods to form screws.

To heat-treat the fasteners in the old heat-treating system (permitted under PTI No. 60-96, capacity = 6500 lb/hr), the fasteners are fed to furnace by means of a computerized loading system, pre-washed, conveyed through the furnace (where they are heated to maximum temperature of 1750°F. The fasteners are then quenched in a multipurpose fluid (quench oil), rinsed, tempered, and post-washed in a rust preventative solution. The quench rinse tank is equipped with an oil separator.

This heat treat system was down during the time of the inspection. Therefore, I was not able to verify opacity. Previously the company had indicated that the oil/water separator will separate the oil and water on a continuous basis; therefore, no cleaning records are necessary. I did not verify the stack dimensions.

PTI No. 85-17A

Under PTI No. 85-17, the facility installed (in August 2017) a new 4,000 lb/hr metal heat treat line (EU-F2), to heat-treat metal fasteners, that consists of loading station, an alkaline pre-wash tank, a hardening furnace, an oil quench tank, a post-wash tank, a tempering furnace, and a soluble oil station (application of rust prohibitive), unloading station. The heat-treating furnace #2 (EU-F2) for metal fasteners, rated at 4,000 pounds per hour. The line consists of a loading station, pre-wash station, hardening furnace, oil quench, post-wash station,

tempering furnace, soluble oil tank, and unloading station. The heat-treating line uses flame curtain to control emissions from the quenching process.

PTI 85-17 used a generic VOC emission factor of 0.374 lb VOC emitted per ton of metal processed. This PTI also required the facility to conduct VOC emission testing to verify the VOC emissions and establish a VOC emission factor (lb VOC/ton of metal processed). The testing was conducted on May 29, 2018 and report received on July 31, 2018. The tests showed that VOC emission factor was 0.89 lb VOC per ton of metal processed. Facility submitted another permit application to re-evaluate the quenching portion of the new line using the higher emission factor. PTI No. 85-17A was issued which included higher VOC emission limit and lb/hr production (heat treat) limit.

Submitted records show that the VOC emissions calculated based on a 12-month rolling period, as of October 2020 was 2.71 tons per year (based on calculations made by AQD staff). The highest emissions were as of June 2019 (4.12 TPY).

Submitted records show that the total metal processed calculated based on a 12-month rolling period, as of October 2020 was 6,084 tons per year (based on calculations made by AQD staff). The highest metal processed were as of June 2019 (9,231 TPY).

The facility's 12-month calculations were based on a calendar year basis, but permit requires TPY based on a 12-month rolling time period. Permittee was informed about how to correctly calculate the 12-month rolling period emissions. The total emissions were below the allowed emission limit (7.8 TPY), and metal processed was below the usage limit (17,520 TPY), so the permittee was not requested to recalculate the emissions or the usage.

I observed that the heat-treating line is equipped with a properly operating flame curtain. The permittee conducted VOC emissions testing on May 29, 2018. Facility appears to be calculating the emissions and throughput data timely. Ross provided me the SDS for the quench oil. The facility appears to be keeping the necessary records (tons of metal processed per month & 12-month, VOC emission factor, VOC mass emission calculations monthly and 12-month). The permittee appears to be electronically monitoring hourly records of metal processed, but I did not verify this record.

The facility has a natural gas fired, (SIEMEN) emergency generator (installed in 2012) and it is used as a backup power supply for the data system. This engine is subject to 40 CFR 60, Subpart JJJJ- Standards of Performance for Stationary Spark Ignition Internal Combustion Engines. The facility is required to comply with the applicable requirements of this subpart.

Discussion:

The permit (No.85-17A) requires that the permittee calculate the VOC emissions and metal processed in tons per year based on a 12-month rolling time period, as determined at the end of each calendar month.

Tons per year based on a 12-month rolling period is calculated by summing up emissions or throughput from previous 11 months plus (adding) the emissions/throughput from the current month. This does not start, or end based on a calendar year.

For example, 12-month rolling period VOC emissions for October 2020 is calculated by summing up VOC emissions for November 2019 through September 2020 plus adding October 2020 emissions.

In the company's calculations, it seems like the calculations were made on a calendar year basis (starting in January of the year).

Also, the permittee is required to monitor and keep records of the pounds of metal processed in EU-F2 for each hour on file.

Conclusion: The facility appears to be in compliance with applicable air quality regulations and permit requirements.

NAME Substantiykallendal

DATE 01/15/2021

SUPERVISOR

Joyce JK