

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

N552542952

FACILITY: ELM PLATING CO		SRN / ID: N5525
LOCATION: 2395 E HIGH ST, JACKSON		DISTRICT: Jackson
CITY: JACKSON		COUNTY: JACKSON
CONTACT: Ben Holland , Plant Supervisor		ACTIVITY DATE: 01/04/2018
STAFF: Mike Kovalchick	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Scheduled Inspection of Elm Plating-Plant 2.		
RESOLVED COMPLAINTS:		

Minor Source-**Facility Contacts**

Ben Holland-Plant Manager

Tom Breton-Soon to be new Plant Manager

ph 517-783-5536

tom.breton@elmplating.comwww.elmplating.com**Purpose**

On January 4, 2018, I conducted an unannounced compliance inspection of Elm Plating (Company) located at 2395 E. High Street in Jackson. The purpose of the inspection was to determine the facility's compliance status with the applicable federal and state air pollution regulations, particularly Michigan Act 451, Part 55, Air Pollution Control Act and administrative rules.

Facility Location

The facility is located in a commercial area of Jackson. See attached aerial photo of facility.

Facility Background

This facility was last inspected on 10/23/2015 and was found to be in compliance. The Company operates a hard coat anodizing aluminum process and mainly process parts for the auto industry, e.g. transmission valves. Aluminum alloy parts, which are machined offsite, are anodized to create a corrosion resistant and hardened "surface coating". After being processed, the parts are shipped back to their customers. The "surface coating" is produced by an anodization process, which is done by passing a direct current through an electrolytic solution. The current causes impurities within the aluminum to be drawn to the surface of the metal part.

Regulatory Applicability

Rule 290 permit exemption applies to the hard coat anodizing aluminum process.

40 CFR Part 63, Subpart W - National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Plating and Polishing Operations is **not applicable** as it doesn't met the following criteria: "Your plating and polishing facility uses or has emissions of compounds of one or more plating and polishing metal HAP, which means any compound of any of the following metals: cadmium, chromium, lead, manganese, and nickel, as defined in § 63.11511,"

Arrival & Facility Contact

Visible emissions or odors were not observed upon my approach to the Company's facility. I arrived at 9:00 am, proceeded to the facility office to request access for an inspection, provided my identification and spoke with Ben Holland (BH)-Plant Manager. I informed him of my intent to conduct a facility inspection and to review the various records as necessary.

BH extended his full cooperation and fully addressed my questions.

Emission Unit Details

The anodizing process consisted of eleven 4x6x4-feet, 720-gallon tanks. The tanks were organized in-line to each other according to the anodizing process. Prior to Tank number 1, there are 2 tanks that aren't currently being used. Tank number 1 contained a parts cleaner [Oakite 33, which contains phosphoric acid (CAS Number 7664-39-2; Initial Toxic Screening Level / ITSL 10 micrograms/meters cubed and 2-butoxy ethanol (Cas Number 111-76-2; Initial Toxic Screening Level/ITSL 1600 micrograms/meters cubed). Tank 2 contained rinse water. Tanks 3 through 6 were considered the "hard coating" / anodizing tanks and contained up to 20% sulfuric acid (CAS Number 7664939; Initial Toxic Screening Level / ITSL 1 microgram/meters cubed annual and 120 hourly). Tank 6 was added as an exempt process unit in September 2015. Tanks 7 through 11 follows and contained rinse water. A natural gas dryer followed the process line. Air emissions from the process were captured by a duct system that drew air from above the process line tanks and discharged emissions to the atmosphere via a stack. The duct system predated the existing tanks and isn't well correlated with these tanks. The 4 sulfuric acid tanks are not exhausted while the rinse water/natural gas dryer is connected. The exhaust ducts exit the building into a stand alone vertical stack that appeared to be about 40 feet tall.

Note: Per-and polyfluoroalkyl (PFAS) substances are currently not used at this facility.

Pre-Inspection Meeting

BH outlined that there are 55 employees who work 3 shifts 5 to 6 days a week. BH indicated that Tom Breton is taking over in about a month. Business was good in 2017 and they were most busy in the October/November time frame. There have been no changes since the last inspection in 2015 except that the Aluminum Cleanser NST has been replaced by Oakite 33. The compound arrives in 275 gallon totes and BH estimated they use 2 to 3 of them per year. BH indicated they are using about 1100 gallons of sulfuric acid (calculated as a concentrate) per month.

Onsite Inspection

BH gave me a brief tour of the facility. BH pointed out the area where parts were received and then sorted and placed on racks for anodization. The parts were cast and machined offsite and arrived in a relatively clean condition. BH walked me through the process, beginning with tank 1, where the parts were cleaned. The entire hard coating process takes about 45 minutes, with the actual anodizing step (tanks 3 through 6 or referred to as Hardcoat Tanks 1-4) taking the most time. The parts were then taken through the rinse tanks (tanks 7 through 11). During the process, the parts are air-agitated to ensure a thorough clean or rinse. After the rinse step, the parts were taken to a rather small natural gas dryer. Chillers located outside the building were keeping the sulfuric acid tanks cool and emissions from the tanks were not noticeable despite being no dedicated exhaust system above them. (Temps ranged from 22 to 48 degrees F.) Some odors were noted in the vicinity of the cleaning tank which does have a dedicated exhaust system. During the inspection, Hardcoat Tank 1 was active, Hardcoat Tank 2 was inactive, Hardcoat Tank 3 was just finishing and Hardcoat Tank 4 was inactive. The parts only go through one of four hardcoat tanks.

Records Review

Attachment (1) includes the MSDS for Oakite 33. Attachment (2) are Rule 290 records submitted by Allen Kinsler of Elm Plating who is responsible for environmental compliance at three Elm Plating facilities in Jackson.

The records reviewed for the requested timeframe for the 2-Butoxy ethanol indicate that the monthly emission in October was 40 pounds and appears to be in compliance with Rule 290 (2) (a)(ii) monthly emission limits of 1,000 pounds (uncontrolled).

The records reviewed for the requested timeframe for sulfuric acid indicate that in October, the monthly emission was 0.89 pounds which is in compliance with Rule 290 (2) (a)(ii)(A)'s monthly emission limits of 20 pounds (uncontrolled).

Phosphoric acid is also subject to the 1000 pounds per month limitation. Emissions were similar to that of the sulfuric acid and also in compliance with the applicable Rule 290 limit.

Post-Inspection Meeting

I held a brief post-inspection meeting with BH. I indicated to him that I did not observe any compliance issues but would be following up with Allen Kinsler to request records to show compliance with Rule 290.

I thanked BH for his time and cooperation, and I departed the facility at approximately 9:45 am.

Compliance Summary

The Company is in compliance.

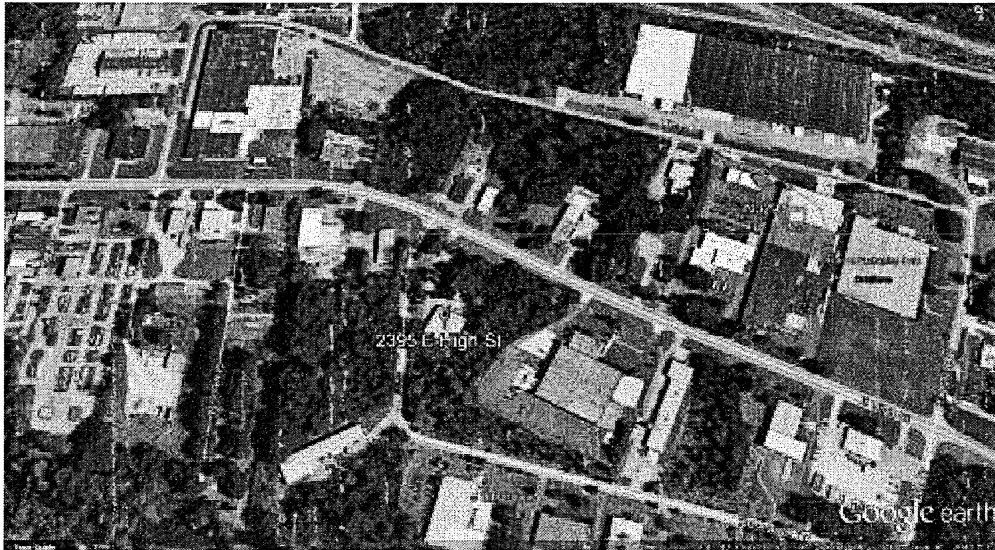


Image 1(Aerial Photo Elm) : Aerial Photo Elm Plating



Image 2(Stack) : Stack

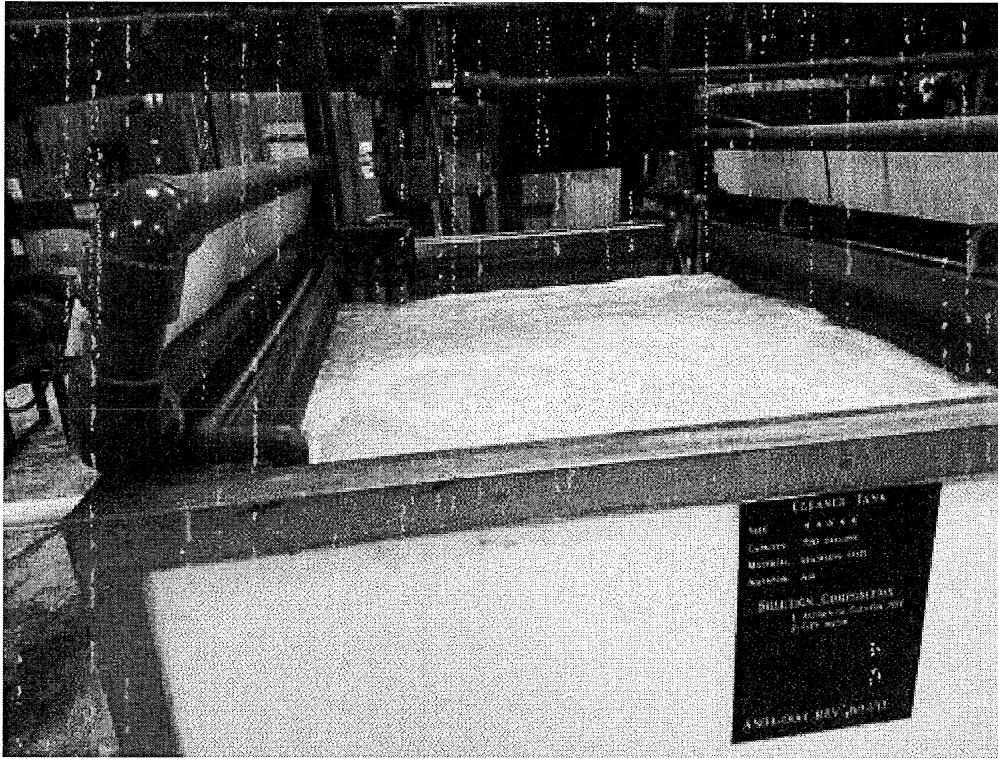


Image 3(Cleaning Tank) : Cleaning Tank containing Oakite 33

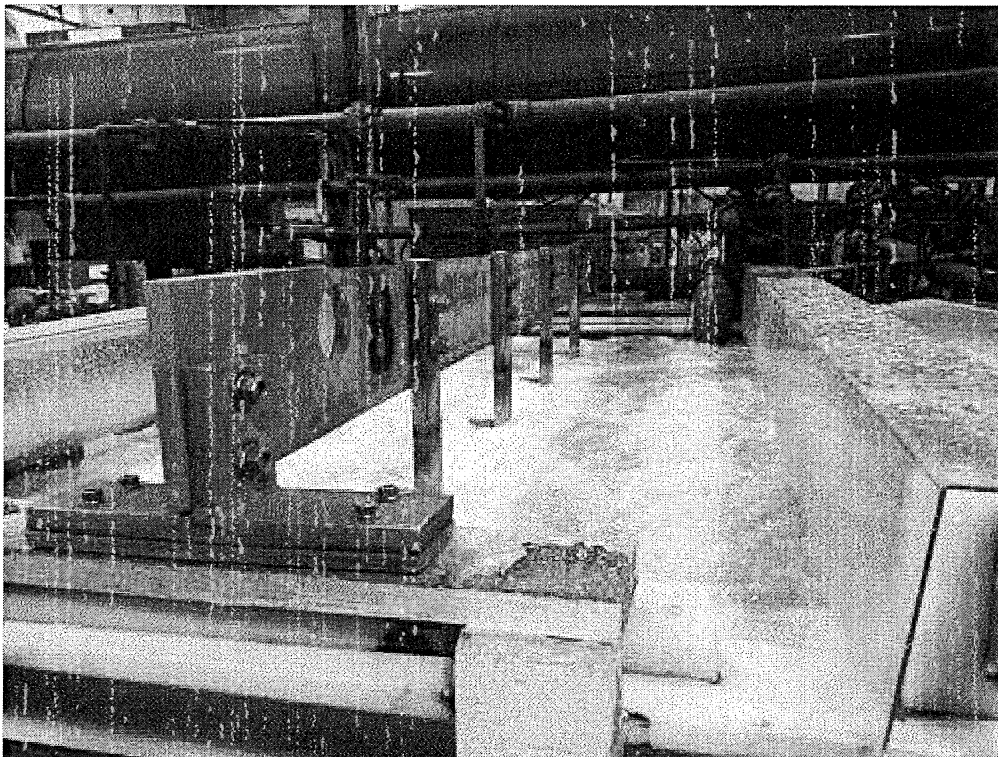


Image 4(Hard coating tank) : Hard coating tank with sulfuric acid

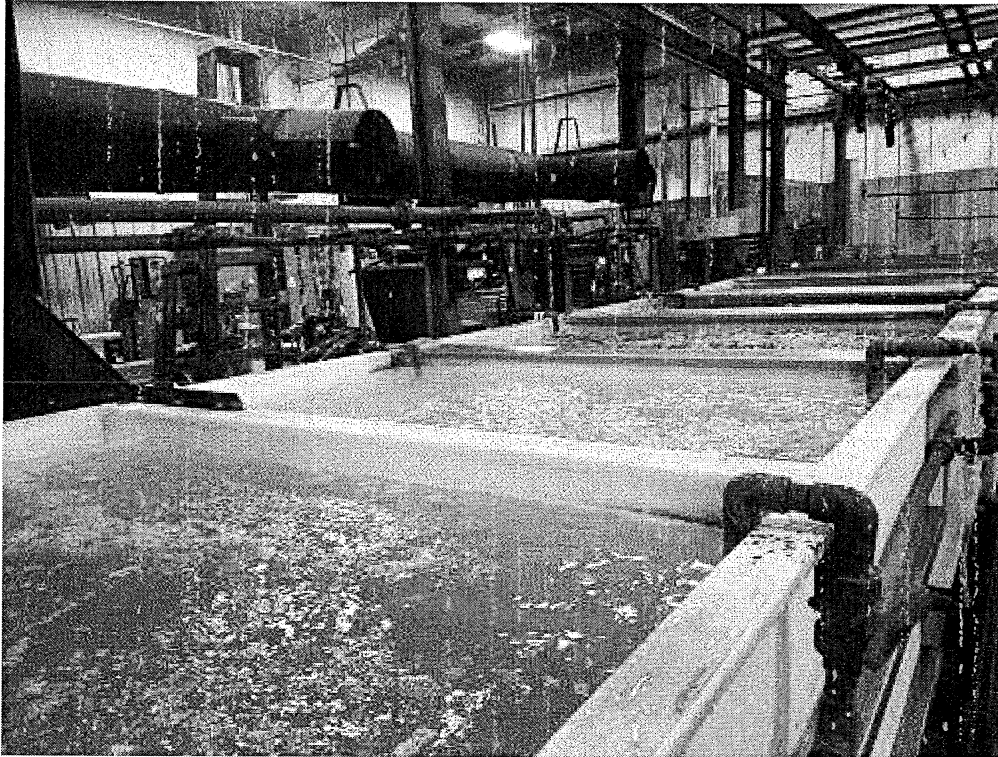


Image 5(Rinse tanks) : Rinse tanks

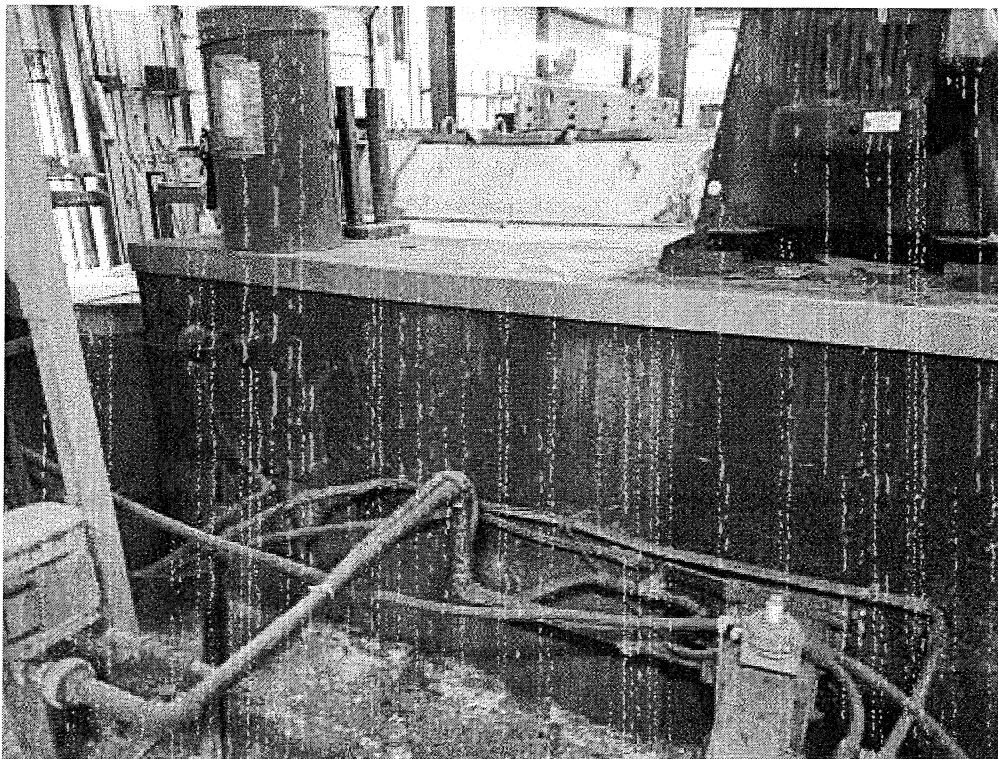


Image 6(Dryer) : Dryer

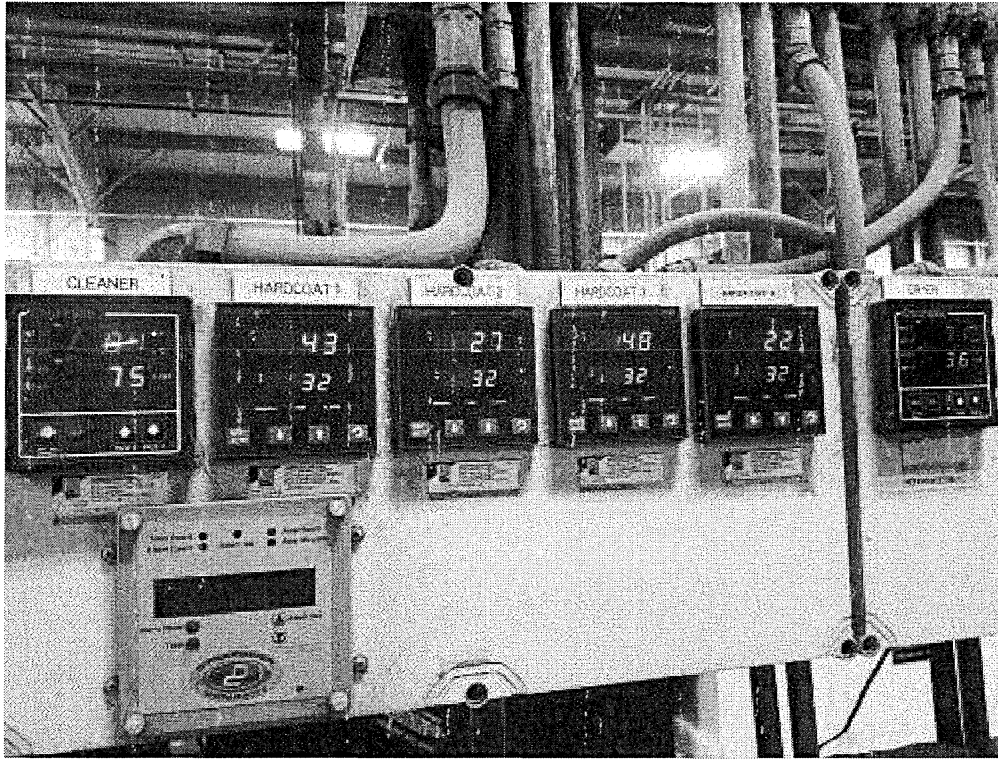


Image 7(Temperature control) : Temperature controllers.

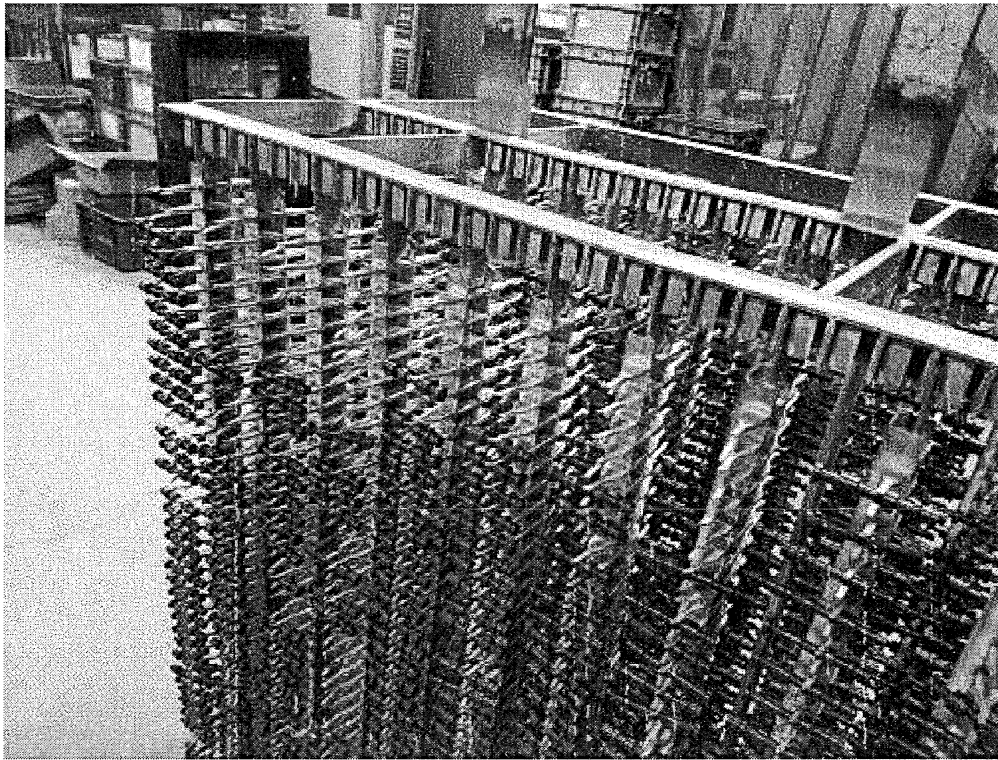


Image 8(Parts rack) : Parts rack. These racks are lowered into each tank.

NAME M. Koralchuk

DATE 1/8/2018

SUPERVISOR [Signature]