

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

A191643335

FACILITY: Classic Metal Finishing		SRN / ID: A1916
LOCATION: 2500 W. ARGYLE STREET, JACKSON		DISTRICT: Jackson
CITY: JACKSON		COUNTY: JACKSON
CONTACT: Sam Absher , Plant Manager		ACTIVITY DATE: 02/15/2018
STAFF: Mike Kovalchick	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MINOR
SUBJECT: Unannounced inspection.		
RESOLVED COMPLAINTS:		

## Minor Source

### Facility Contact

Sam Absher (SA) -Plant Manager

phone: 517-990-0011 x-204

[sabsher@cmfpro.com](mailto:sabsher@cmfpro.com)

Company website: <http://www.cmfpro.com/>

### Purpose

On February 15, 2018, I conducted an unannounced inspection of Classic Metal Finishes (Company) located at 2500 West Argyle 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, PTI 658-92, PTI 744-92, PTI 657-92 and PTI 175-17.

### Facility Location

The facility is located in the city of Jackson. It is surrounded by commercial and residential areas on the West, South and East sides within about 400 feet. See attached aerial image. The new building expansion does not appear in this aerial photo.

### Facility Background

The facility was last inspected on October 24, 2016 with no violations found. Since that time, the Company has undergone a major expansion with a new automated aluminum anodizing and chemical conversion coating line and a manual titanium anodizing and chemical conversion coating line. These 2 lines are permitted under PTI 175-17. (Attachment (1) is the PTI Evaluation document for this process.) The Company does machining, assembly and metal finishing mostly of aluminum aviation and automotive parts.

### Regulatory Applicability

Active Permits: PTI 658-92 for an anodizing process, PTI 774-92 for a dry blast metal cleaning process and PTI 657-92 for a passivation process. The permits were originally issued to Aeroquip in 1993. PTI 175-17 for new aluminum anodizing line and new titanium anodizing line was issued on December 15, 2017.

The company has 7 chrome conversion tanks. These tanks are subject to 40 CFR Part 63, Subpart A and Subpart WWWWWWW, National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Plating and Polishing Operations. (MACT 6W).

PFAS (Per- and polyfluoroalkyl) chemicals are not used at this facility.

### Arrival & Facility Contact

Visible emissions or odors were not observed upon my approach to the facility. I arrived at approximately 10:50 am, proceeded to the Company's visitor's office to request access for an inspection, provided my identification, and met with Sam Absher (SA) who is the plant manager. I informed SA of my intent to conduct a facility

inspection and to review the various records as necessary. SA extended his full cooperation during the inspection, accompanied me during the full duration of the inspection, and fully addressed my questions.

### Pre-Inspection Meeting

SA outlined that the Company is currently operating 2 shifts (1<sup>st</sup> and 3<sup>rd</sup>) per day, 5 days a week and they have 106 employees. We discussed the 2 new process lines and the conditions associated with PTI 175-17. I outlined to him what I wanted to see on this inspection. I noted that Company would need to file initial notification form to meet the requirements for MACT 6W. SA indicated that construction had completed on the new lines in January, 2018 and they were in the process of starting trial operations. Only a few small parts had been processed to date.

### Onsite Inspection

SA escorted me as I conducted the onsite tour portion of the inspection.

He first showed me a small conveyerized paint booth that coated metal parts. The booth was not operating but SA indicated that it operates on a daily basis. He estimated paint usage at 2 gallons per week. (Likely exempt from permitting per Rule 287(2)(c).) See attached photo.

Next, he showed me 2 small manual paint booths and 2 small robotic paint booths coating metals parts and small manual curing oven. Amounts of paint used are small.

SA then showed me the old passivation process.

Passivation Process: (See Attachment (2) in previous inspection report dated October 24, 2016 which contains technical details of this and the anodize process.)

The third permit **657-92** was issued to Aeroquip Corporation and approved on February 11, 1993 and has seven special conditions:

15. The nitric acid emission from the passivation process shall not exceed 58.7 milligrams per cubic meter, corrected to 70°F and 29.92 inches of Hg.

This condition can only be evaluated based upon stack testing of the exhaust gases. To date, no testing has been required.

16. The phosphoric acid emission from the passivation process shall not exceed 11.7 milligrams per cubic meter, corrected to 70°F and 29.92 inches of Hg.

This condition can only be evaluated based upon stack testing of the exhaust gases. To date, no testing has been required.

17. There shall be no visible emissions from the anodizing process.

Based upon observations of the stacks during the inspection, there were no visible emissions.

18. Rules 1001, 1003 and 1004 – Verification of nitric acid and/or phosphoric acid emission rates from the anodizing process by testing, at owner's expense, in accordance with Commission requirements, may be required for operating approval. Verification of emission rates includes the submittal of a complete report of the test results. If a test is required, stack testing procedures and the location of stack testing ports must have prior approval by the District Supervisor, Air Quality Division, and results shall be submitted within 120 days of the written requirement for such verification.

No testing has been required to date.

19. Applicant shall not operate the passivation process unless the packed bed scrubber is installed and operating properly.

The scrubber is installed and appears to be operating based upon the liquid flow indicator, the pH being digitally monitored, a sight glass to ensure the sprays are working and a magnehelic to monitor the pressure drop across the scrubber, which is observed periodically while the process is in operation. There was a 1.5" H<sub>2</sub>O water drop across the scrubber with a pH of 4.09. Because the pH was lower than expected, we looked for the possible

cause. Directly adjacent to the scrubber were 2 barrels of sodium hydroxide. On one of the barrels, a small pump was attached to the opening of the barrel to pump sodium hydroxide out of the barrel into the scrubber water to neutralize the acid gases. The pump was not operating. This resulted in the scrubber not operating properly. See attached photos.

20. Applicant shall equip and maintain the packed bed scrubber with a liquid flow indicator.

A liquid flow indicator is installed and appeared to be operating properly.

21. The exhaust gases from the passivation process shall be discharged unobstructed vertically upwards to the ambient air from a stack with a maximum diameter of 16 inches at an exit point of not less than 24 feet above ground level.

The height above ground level appears to be met since the height of the interior ceiling of the building is 17 feet.

The scrubber and the passivation process are connected so that one will not operate without the other referred to as a system lockout.

This line has an automated transfer of parts to and off the line.

#### Anodizing Process

**658-92** was issued to Aeroquip Corporation and approved on February 11, 1993 and has the following seven special conditions:

15. The nitric acid emission from the anodizing process shall not exceed 10.3 milligrams per cubic meter, corrected to 70°F and 29.92 inches of Hg.

This condition can only be evaluated based upon stack testing of the exhaust gases. To date, no testing has been required.

16. The phosphoric acid emission from the anodizing process shall not exceed 2.1 milligrams per cubic meter, corrected to 70°F and 29.92 inches of Hg.

This condition can only be evaluated based upon stack testing of the exhaust gases. To date, no testing has been required.

17. There shall be no visible emissions from the anodizing process.

Based upon observations of the stacks during the inspection, there were no visible emissions.

18. Rules 1001, 1003 and 1004 – Verification of nitric acid and/or phosphoric acid emission rates from the anodizing process by testing, at owner's expense, in accordance with Commission requirements, may be required for operating approval. Verification of emission rates includes the submittal of a complete report of the test results. If a test is required, stack testing procedures and the location of stack testing ports must have prior approval by the District Supervisor, Air Quality Division, and results shall be submitted within 120 days of the written requirement for such verification.

No testing has been required to date.

19. Applicant shall not operate the anodizing process unless the packed bed scrubber is installed and operating properly.

The scrubber is installed and appears to be operating based upon the liquid flow indicator, the pH being digitally monitored, a sight glass to ensure the sprays are working and a magnehelic to monitor the pressure drop across the scrubber, which are observed periodically while the process is in operation. At the time of the inspection, the magnehelics showed 2.0" water inlet, 3.7" outlet for a drop of 1.7" across the scrubber. The pH was 7.53. The scrubber water contains a caustic solution to neutralize the acidic emissions. See attached photos.

20. Applicant shall equip and maintain the packed bed scrubber with a liquid flow indicator.

A liquid flow indicator is installed and appeared to be operating properly.

21. The exhaust gases from the anodizing process shall be discharged unobstructed vertically upwards to the ambient air from a stack with a maximum diameter of 26 inches at an exit point of not less than 23 feet above ground level.

The height above ground level appears to be met since the height of the interior ceiling of the building is 17 feet. A roof inspection was not conducted due to icy conditions.

The scrubber and the anodizing line are connected so that one will not operate without the other referred to as a system lockout.

This line has a manual transfer of parts to and off the line.

#### Dry blast metal cleaning process

Permit **774-92** was approved on September 14, 1992 :

The small particulate source was not evaluated, and it was not obvious which process equipment applied to this permit. It may have been the paint booth room

Next, SA brought me to the new facility expansion building which is located on the West side of the existing building.

He first showed me a natural gas fired boiler. (See attached photos.) This boiler is exempt from permitting as only 500K BTU/hour in size.

#### EU-TIANODIZE

Then he showed me EU-TIANODIZE associated with PTI 175-17. It is a manual titanium anodizing and chemical conversion coating line consisting of multiple tanks used to clean titanium parts in preparation for anodizing (sulfuric acid or ammonium sulfate) or chemical conversion coating. All tanks containing chemical baths are controlled. Tanks 1, 4, 7, 10, and 11 are controlled by a wet scrubber.

Neither the titanium line or associated wet scrubber were turned on. The tanks appeared to be just filled with water. See attached photos. SA indicated that to date, they had only coated a few metal pieces. Since the process was not fully operational yet, I was unable to verify compliance with all permit conditions. NOTE: The Company still has about a month per the PTI to submit a malfunction abatement plan for this process for approval.

#### EU-ALANODIZE

SA then showed me EU-ALANODIZE associated with PTI 175-17. It is an automated aluminum anodizing and chemical conversion coating line consisting of multiple tanks used to clean aluminum parts in preparation for sulfuric acid anodizing or chemical conversion coating (hexavalent or trivalent chromium). All tanks containing chemical baths are controlled. Tanks 5, 7, 9, 11, 13, 15, 18, 20, 22, 24, 28, 29, 32, 33, 40, 44, 45, 47, 72, 73, 75, and 76 are controlled by a two stage mist eliminator. In addition, Tanks 20, 22, 44, 72, 73, 75 and 76 are each equipped with in-line composite mesh pad mist eliminators. Tanks 49, 51, 52, 54, 55, 57, 58, 60, 62, 64, 65, 67, 68, 78, and 79 are controlled by a single stage mist eliminator.

We first observed the in-line composite mesh pad eliminators. See attached photos. I observed 7 of them. All but one of the magnehelics pressure gauges were showing zero. One of them showed a pressure drop of 0.25". SA explained that when the pressure drop increases, the mesh pads have an automatic rinse cycle to clean the pads. Since the process had not really been used yet, the mesh pads had not accumulated anything. The tanks that are controlled have a similar exhaust system. Air is introduced on the side of the tank next to the walk ways or where an operator would be standing. It pushes across the surface of the tanks towards a side vertical hood with openings to capture the vapors. The vapors go through the in-line composite mesh pad eliminators first. Then the vapors are pulled towards a large 2 stage mist eliminator located outside on the side of the building which contains the fan the draw the vapors through the whole process. About half the total tanks and not including the tanks with the in-line mist eliminators are controlled by another single stage mist eliminator that was located on the roof. (Not inspected.)

Next, we looked at the process line. See attached photos. These tanks did contain chemicals but the line was not active yet. The control systems were operating and fumes from the tanks could be seen being drawn into the

vertical hoods.

We then went outside to look at the 2 stage mist eliminator. See attached photo. SA indicated that a pressure drop gauge had yet to be installed. He says they are planning to be put the pressure drop gauge at ground level so that it can be observed easily. They are planning on doing the same for the mist eliminator that was located on the rough as well.

Since the process was not fully operational yet, I was unable to verify compliance with all permit conditions. NOTE: The Company still has about a month per the PTI to submit a malfunction abatement plan for this process for approval.

### **Post-Inspection Meeting**

I held a brief post-inspection meeting with SA. I reviewed my findings that it appeared that the Company appeared to be generally in compliance with their 4 permits and other processes at the facility appeared to be exempt from air permitting. The exception to this was the wet scrubber that was not operating properly that controlled the old passivation line. I also noted that Company needed to submit an initial notification form for the 7 chrome conversion tanks that were located in the old/new process lines. I promised to send SA an example filled notification form. I thanked SA for his time and cooperation, and departed the facility at approximately 11:50 am.

### **Recordkeeping Review**

Records for new lines were not reviewed since the Company has only just begun trial operations. The Company did submit paint records for the last 2 months for the conveyORIZED paint line. See Attachment (2). Records shows minimal paint usage so that paint line is exempt.

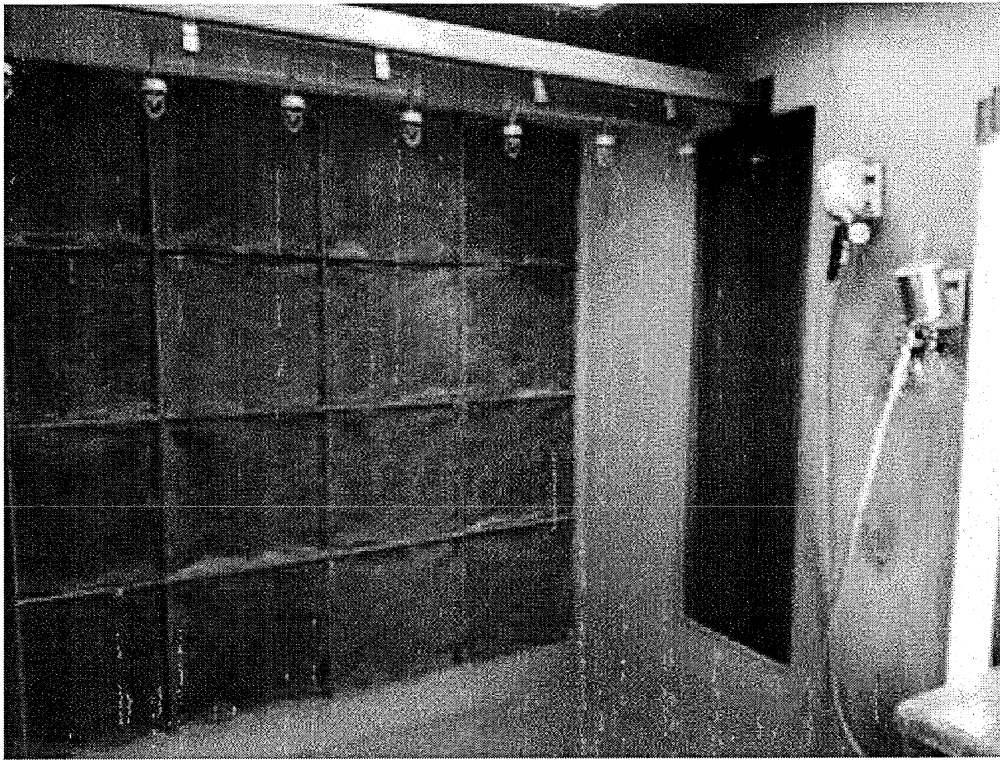
Company has submitted a draft MAP. It contains requirements only for the EU-ALANODIZE. SA indicated that vendors are still working on the MAP for the other equipment. See Attachment (3).

### **Compliance Summary**

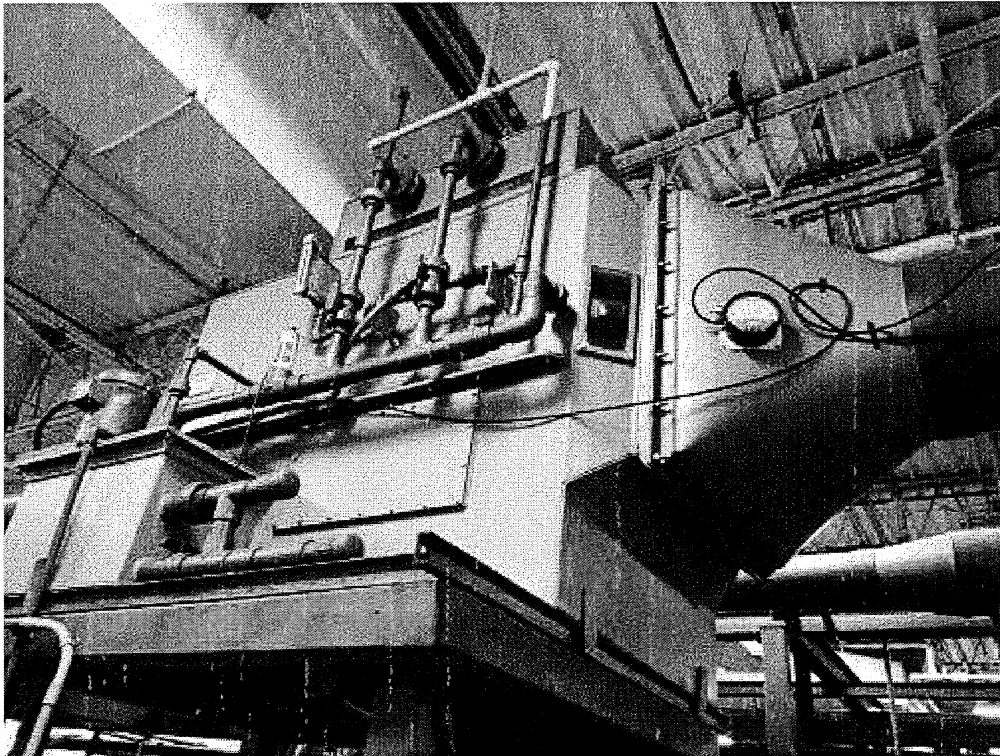
Based upon the facility inspection, review of the records, and review of applicable requirements, the Company appears to be in compliance except for the improper operation of the wet scrubber for the old passivation line. A Violation Notice (VN) will be sent to the Company and they will have 21 days to respond. Regarding MACT 6W, the Company indicated that they would submit an initial notification form to EPA with a copy to the AQD shortly. Note: AQD does not have a delegation to enforce this federal regulation.



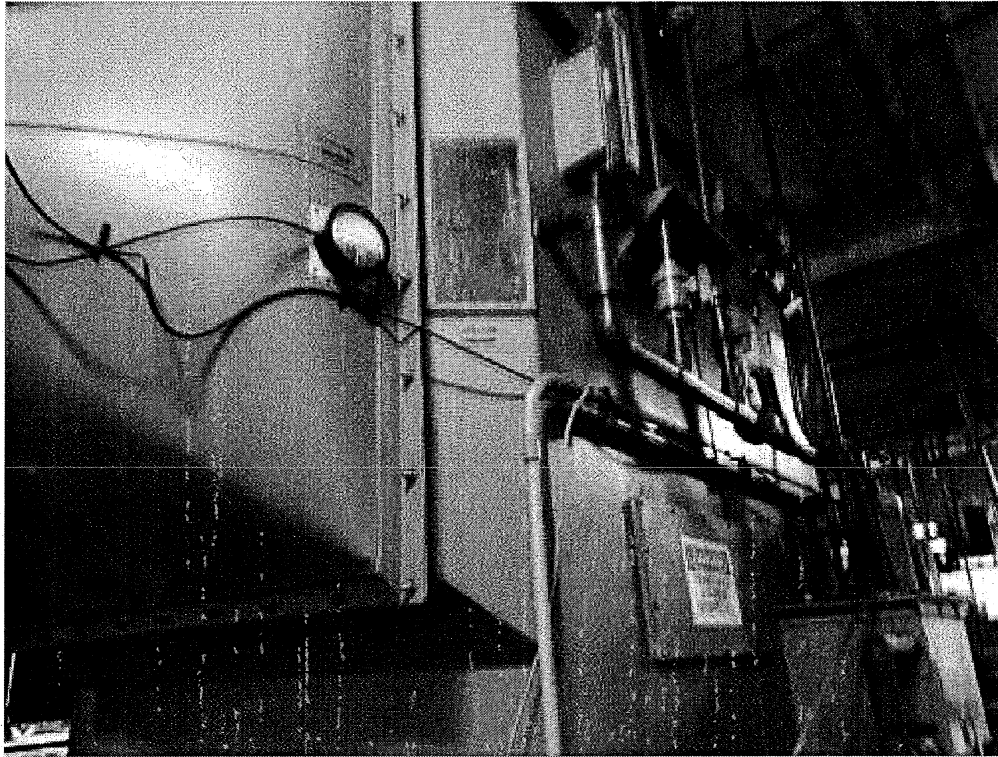
**Image 1(Aerial photo)** : Aerial photo. (It doesn't show the new expansion.)



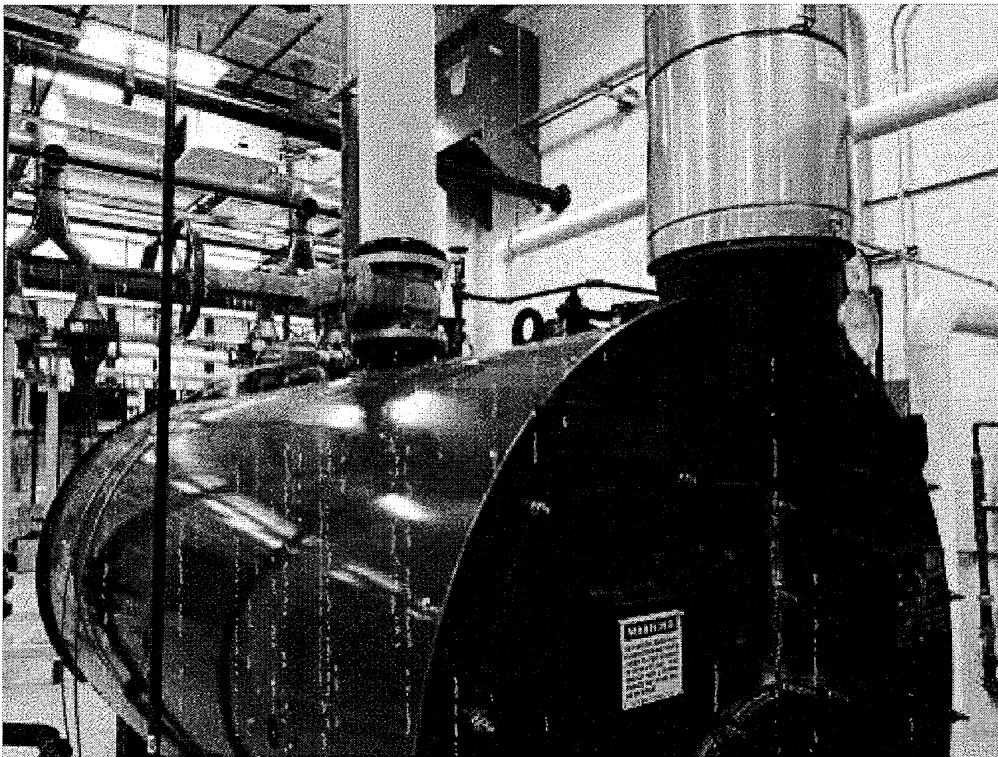
**Image 2(Paint booth)** : Paint booth with conveyor and 2 paint guns



**Image 3(Passivation Scrubber)** : Old Passivation line Scrubber

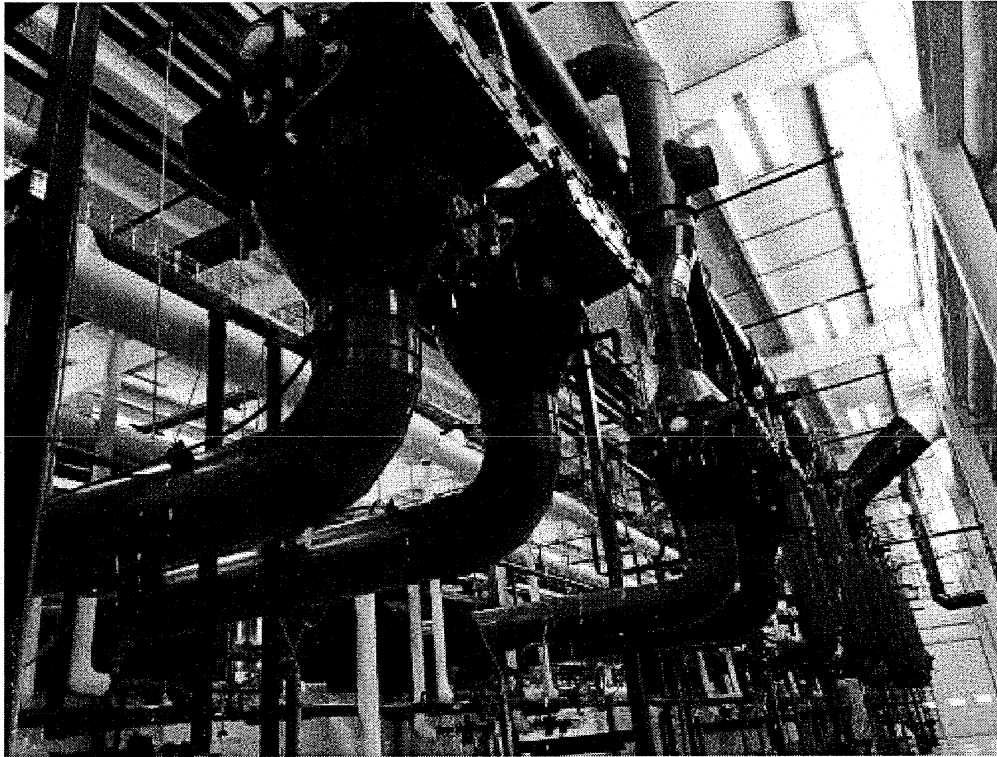


**Image 4(Aluminum Anodize Scr)** : Old Aluminum Anodize Scrubber

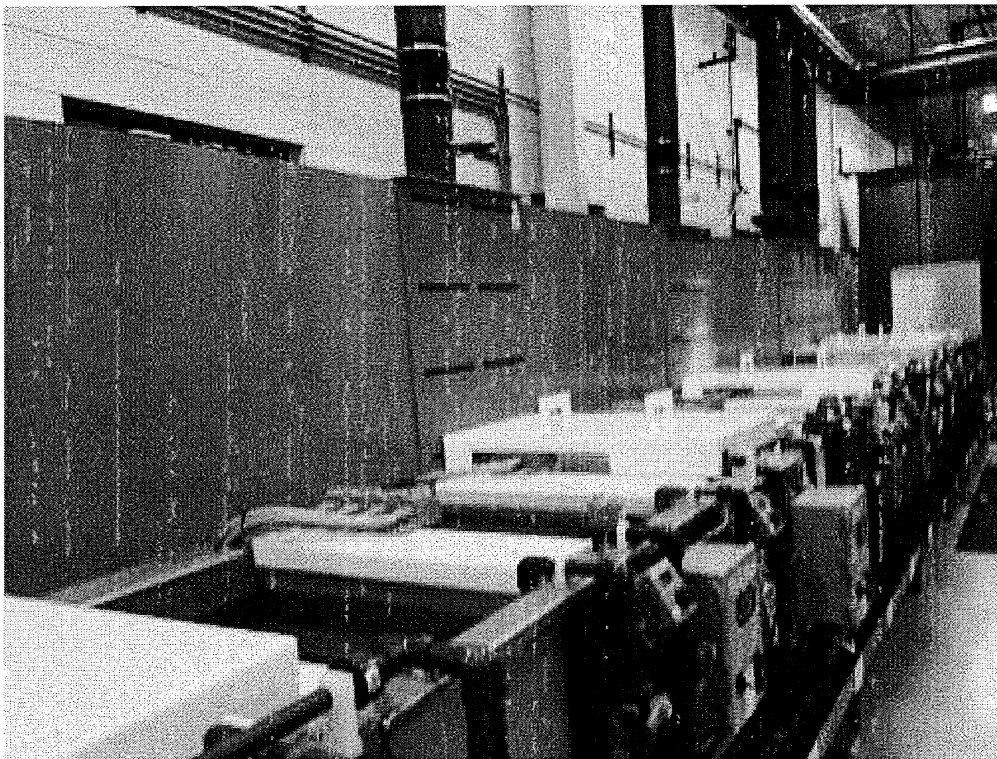


**Image 5(New Boiler)** : New Boiler

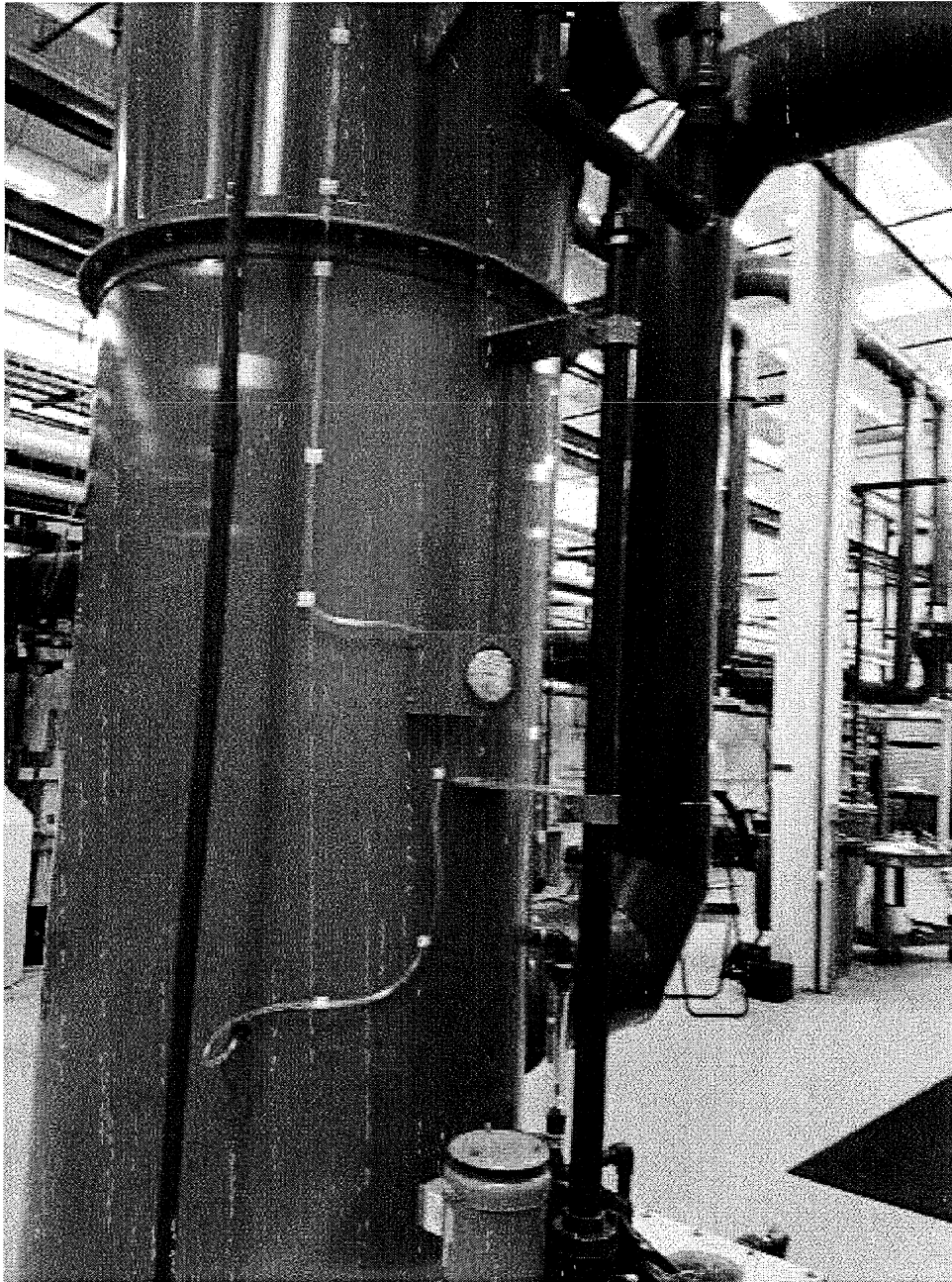




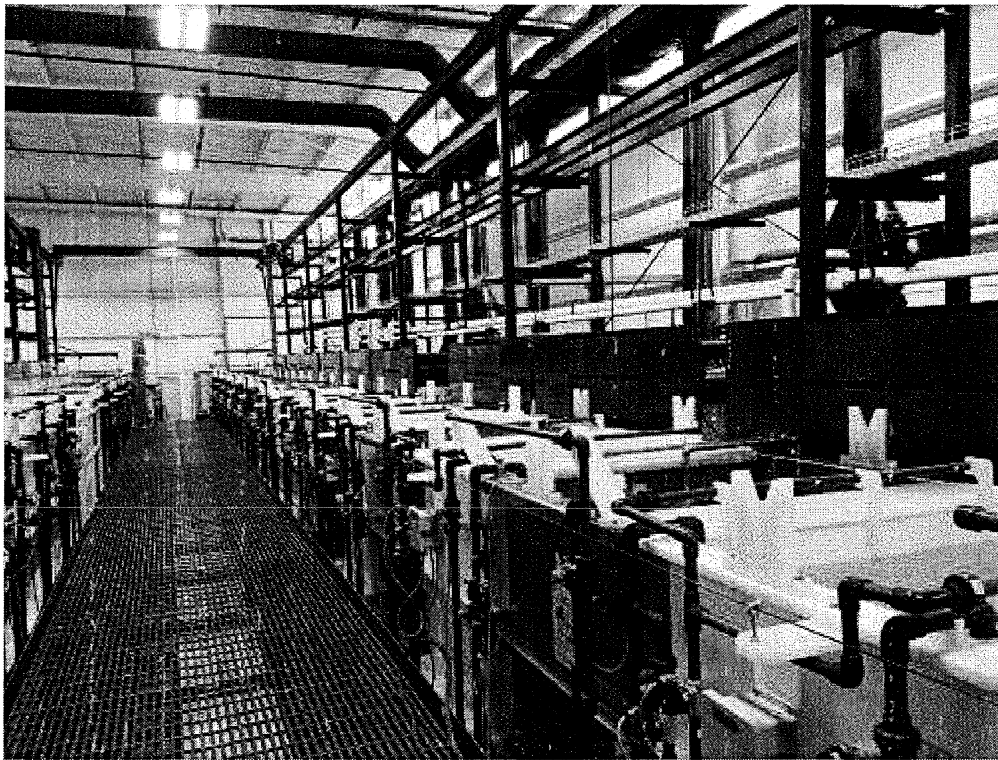
**Image 6(Mist eliminators)** : Mist eliminators on new aluminum anodize line



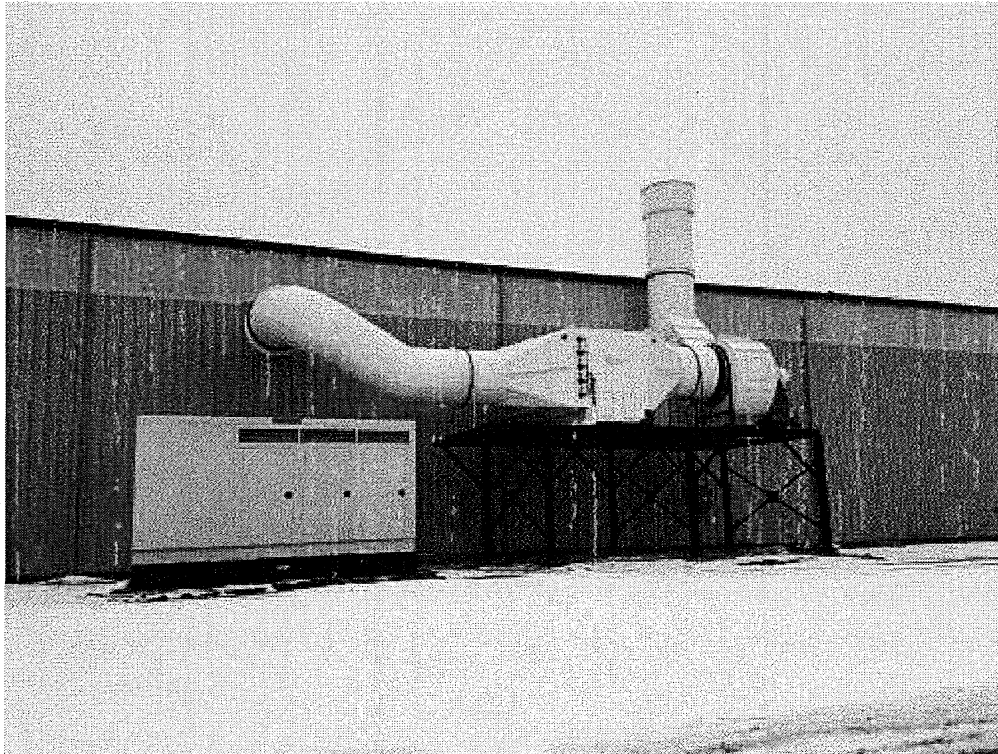
**Image 7(New Titanium line)** : New Titanium anodize line



**Image 8(Wet Scrubber)** : Wet scrubber for titanium anodize.



**Image 9(New Aluminum Anodize)** : New aluminum anodize line



**Image 10(Mist eliminator)** : 2 stage mist eliminator for new aluminum anodize.

NAME M. Kovalchuk

DATE 2/21/2018

SUPERVISOR 