Price Industries Limited
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April 10, 2017

Director
Environmental Approvals Branch
Manitoba Conservation and Water Stewardship
Suite 160, 123 Main Street, Box 80
Winnipeg, Manitoba R3C 1A5

RE: Notice of Alteration – Licence No 3169 – Anodizing Upgrade

Dear Tracey Braun,

This letter is to provide notification, per the Notice of Alteration requirements, that Price Industries would like to upgrade their current existing Anodizing Line. Currently this line has two caustic etch tanks and one anodizing tank. We would like to replace one of the caustic etch tanks with an acid etch tank and add one additional anodizing tank.

The acid etch tank is less harmful than the caustic etch tank as it produces about 60% less solids. Further, this solid waste is aluminum fluoride which is an inert substance, which will be collected in our waste water treatment system via a filter press. Finally, the emission from the acid etch will be hydrogen gas and will go through a scrubber system.

The second anodizing tank will increase the amount of emissions; however our scrubber system was initially designed to handle two anodizing tanks. The emission testing that was conducted by Winnipeg Air Testing in July of 2015 along with a brief explanation of the anodizing process has also been included with this letter.

Please do not hesitate to contact me if you would like more information regarding this application. I can be reached at 204-654-8560 or by e-mail at MauriceA@priceindustries.com.

Yours truly,

Maurice Arnaud,

Environmental Coordinator

WINNIPEG Air Testing

Practical Health and Safety Solutions

121 Keedian Drive, East St. Paul, MB R2E 0K3
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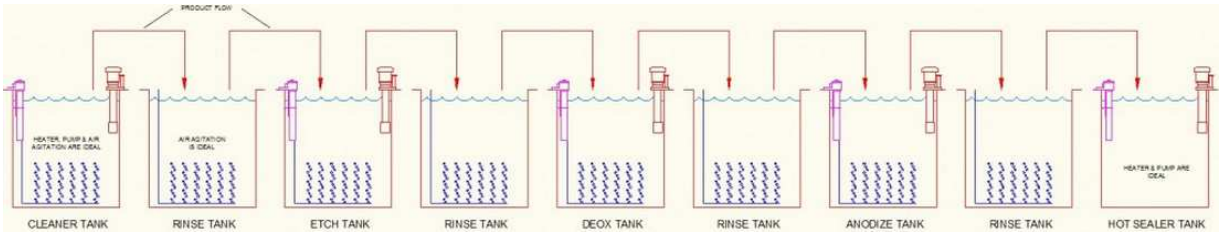
Anodizing line

By definition, anodizing is "a process to electrolytically coat a metallic surface with a protective or decorative oxide." The anodic coating consists of hydrated aluminum oxide and is considered resistant to corrosion and abrasion.

The Anodizing process begins by immersing the work in a series of solutions where various operations are performed. The solutions are held in open top tanks and the work passes through each unit. The work usually consists of distinct items that are placed on special racks and carried through the process in batches.

Material is moved from one tank to the next via an overhead crane. The work is rinsed thoroughly after each operation to avoid contamination and interference in the next solution.

Steps of an Anodizing Process



The most significant chemcials in the process are the etch stage which uses a sodium hydroxide solution and the anodizing line that uses a sulphuric acid solution. The air coming off the tanks is collected, and passed through a scrubber system prior to being discharged from roof top vents on the Golspie building.

Existing Data of Discharges

Air testing

Air monitoring was performed to assess air discharges to the environment. The monitoring performed consists of 2 types: a) stack or point of emission samples, and b) downwind area samples.

Point of Emission Testing

Individual processes that have the potential to have significant emission to the environment were measured. To assess emitted source concentrations, air testing was performed in the exhaust ventilation itself so as to measure the concentration prior to mixing and dilution with the ambient environment.

Processes included in source concentration testing include the following:

- The anodizing line at the Golspie plant has a local exhaust ventilation system to capture emissions coming off of the dip tank that contains a solution of sulphuric acid (15-20% H_2SO_4). Sampling was performed to measure the concentration exhausted. It should be noted that the system has scrubbers and that the test location was downstream of the scrubbers so as to provide a true measurement of source concentration.
- The anodizing line also has a tank that contains a mild sodium hydroxide solution (6.5% NaOH). This tank also has a local exhaust system and a scrubber system. Sampling was performed downstream of the scrubber so as to provide a true measurement of source concentration.

Stack Emissions Concentrations

Location	Compound	Concentration
Anodizing Line - Golspie	Sulphuric Acid	<0.134 mg/m3 (<0.03ppm)
Anodizing Line - Golspie	Sodium Hydroxide	0.13 mg/m3

Comparison of Data to Relevant Exposure Guidelines

The sampling data, both source and downwind results, are compared to allowable airborne exposure limits. The table includes 2 types of exposure limits. The first is the ACGIH TLV. This is an airborne exposure limit that is believed a normal healthy worker can be exposed, 8 hours per day, 40 hours per week without adverse effect. The second criteria is an ambient air quality criteria set or adopted by the Province of Manitoba. These are guidelines for acceptable airborne concentrations to which the general public can be exposed. The units have been harmonized to allow for an easier comparison with the different guidelines.

Comparison Sampling Data to Air Criteria

Substance	TLV	MB Ambient	Stack Source	Downwind	Units
Sulphuric Acid	200	100	<134	N/AV	ug/m3
Sodium Hydroxide	2000 ceiling	No criteria	130	N/AV	ug/m3

Point of Emission Sampling

Sodium Hydroxide

Date Analyzed : 17-JUN-15
Report ID : 887634

Alkaline Dust as NaOH

Sample ID	Lab ID	Air Vol liter	Total ug	Conc mg/m3
PRICE ANODIZE	L348682-1	1000	130	0.13

Sampled Using NIOSH Method 7401
4 hour sample collected in discharge stack

Sulphuric Acid

East St. Paul MB R2E 0K3

DATE REPORTED: 6/19/2015

F.H Price
2469

MEDIA TYPE: SILICA GEL

Sample Location	Sample Volume (L)	Total Sulfuric acid (mg)*	Actual Exp (mg/m^3)*	Actual Exp (PPM)
H2SO4	74.40	< 0.010	< 0.134	< 0.034

NIOSH Method 7903
4 hour Sample collected in discharge stack.

03-May-17

Price Industries Ltd. Anodize Line - Current State

Tank #1 Cleaner	Tank #2 Rinse	Tank #3A Caustic Etch	Tank #3 Spare	Tank #4 Caustic Etch	Tank #5 Double Cascade	Tank #6 Deox	Tank #7 Rinse	Tank #8 Anodizing	BLANK	Tank #9 Double Cascade	Tank #10 2-Step Electrolytic

Tank #14 Hot Water	Tank #13 Rinse	Tank #12 Seal	Tank #11 Rinse

Price Industries Ltd. Anodize Line - Future State

Tank #1 Cleaner	Tank #2 Rinse	Tank #3A Acid Etch	Tank #3 Rinse	Tank #4 Caustic Etch	Tank #5 Double Cascade	Tank #6 Deox	Tank #7 Rinse	Tank #8 Anodizing	Tank #8A Anodizing	Tank #9 Double Cascade	Tank #10 2-Step Electrolytic

Tank #14 Hot Water	Tank #13 Rinse	Tank #12 Seal	Tank #11 Rinse