

Technical Support Document

Cylinders cleaning

One of the most common questions asked of Cylinders is, "How do we clean aluminum cylinders which have been in service?" Sinocleansky Cylinders has found the following cleaning practices to be effective in the cleaning of aluminum cylinders. The cleaning practices have been broken down into two groups, external and internal, with different types of conditions requiring cleaning listed under each group.

External

General In-service Soiling

Wash with a dish washing soap and rinse. Dry the cylinder after rinsing.

Chipping Paint or Minor Corrosion

Removal of loose paint and minor corrosion by-products by scrapping with a scrapper or putty knife is acceptable.

If complete paint removal from a cylinder is desired, Cylinders recommends that paint be removed from aluminum cylinders by the use of paint strippers. Cylinders has found that gel-type strippers work well in removing old paint and do not remove metal from the cylinder when properly used. Use gel strippers that are compatible with aluminum. Take great care to ensure that the gel-type stripper does not enter the cylinder.

Cylinders does not recommend cleaning of cylinders by means of sanding or abrasive blasting. Removal of paint or minor corrosion from a cylinder by sanding or abrasive blasting can also remove metal thus reducing the wall thickness of the cylinder and reducing the integrity of the cylinder. If sanding or abrasive blasting is used to clean a cylinder, the remaining wall thickness after sanding or abrasive blasting is complete must be checked by suitable means (i.e. a U.T. gauge) to guarantee the minimum remaining wall thickness is greater than the minimum design wall thickness.

Cylinders strongly recommends against the use of any method of exposure to high heat (i.e. flame, oven, etc.), in excess of 265 °F, for any amount of time in the removal of paint from aluminum cylinders.

Internal

Moisture and Light Soils

Steam clean with soft water and blow dry with forced air if possible. If not possible, fill cylinder with hot soft water and tumble the cylinder for a few minutes. The hotter the temperature of the water introduced into the cylinder increases the capability of the hot cylinder to aid in the drying of the cylinder by evaporation. Follow the tumbling with hot soft water by 1 minute of forced air blow-drying. Always make sure the air used in blow drying a cylinder is dry and free of contaminants (filtered). Drying the cylinder completely after cleaning is necessary to reduce the chance of corrosion from occurring.

Grease, Oil and Lubricants

Tumble the cylinder for 5 minutes with a solution of a small amount of dish washing soap and hot soft water. Make sure the amount of solution is sufficient to wet the entire inside surface of the cylinder. Rinse the cylinder with hot soft water. Several rinses may be required to remove all the soapy solution. Repeat this sequence as often as needed. Drying the cylinder completely after cleaning is necessary to reduce the chance of corrosion from occurring.

Odors

For a few minutes wet the entire inside of the cylinder with a solution of baking soda and soft water, approximately 1 cup of baking soda to 1 gallon of water. Make sure the entire inside surface is wetted by the solution. Next, rinse the cylinder with soft water. Follow this with a few minutes of wetting the entire inside surface of the cylinder with a solution of vinegar and water, approximately 1/2 cup of household vinegar to 1 gallon of water. Then rinse the cylinder completely with water until all odor of vinegar is gone. If original odor persists repeat this operation as many times as necessary. Drying the cylinder completely after cleaning is necessary to reduce the chance of corrosion from occurring.

Corrosion and Heavy Soils

Tumble the cylinder with a slurry of aluminum oxide pellets, water and dish washing soap. The ratio of aluminum oxide pellets to water should be about 3 to 2. To thoroughly treat the entire surface when tumbling, a cylinder should be approximately half full of slurry prior to tumbling. For a standard 3000psi 80 cu ft cylinder, a slurry of 17 cups aluminum oxide pellets, 12 cups of water and a small amount of dish washing soap rotated for 15 to 30 minutes, works well at removing mild corrosion by-products or heavy soils in most cases. Always thoroughly rinse and dry the cylinder after tumbling is complete. Drying the cylinder completely after cleaning is necessary to reduce the chance of corrosion from occurring.

Please note that after all cleaning operations it is recommended that the cylinder be dried completely to reduce the chance of corrosion from occurring.