

## ***ArmaKleen Technical Service Report Summary***

**Cleaning Trial Type:** Aqueous

**Industry:** Pipe and Tube Manufacturing

**Segment:** Fabricated Metal Products

**Soil:** Shop dirt, oil, grime, cutting fluids, grease

**Substrate:** Steel, stainless steel

**Description of Part(s):** Piping

**Customer objective:** Improve cleaning performance, automate cleaning process, eliminate hazardous chemicals/waste, reduce VOCs

**Cleaner used:** 5% by volume solution of ArmaKleen™ BIO-24

**Machine used:** Spray Under Immersion Washer (Graymills T12, Graymills T24, SK Model 81.8 w/ SUI)

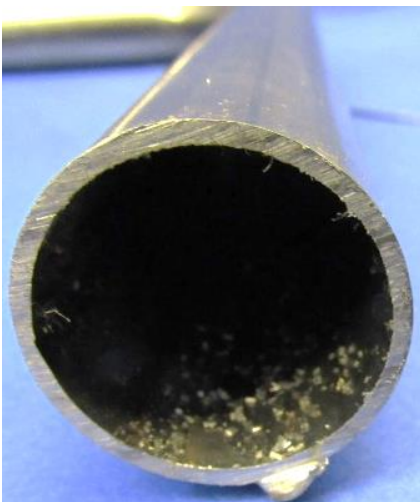
**Temperature used:** 150°F

**Time required:** 30 minutes-1 hour

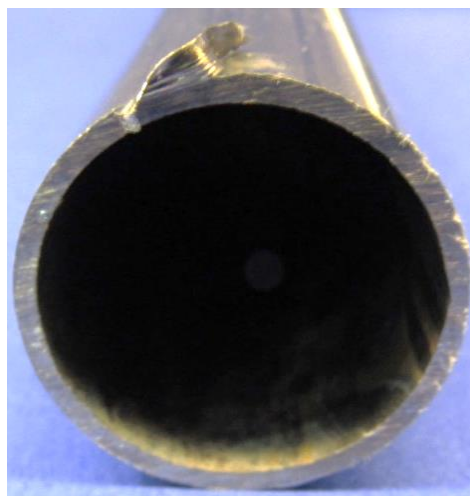
**Post Cleaning:** Exterior of pipes were wiped with a clean cotton cloth during the fresh water rinse and air pressure dried

**Recommendation to Customer:** The ArmaKleen Technical Center recommends using a 5% by volume solution of ArmaKleen Bio 24 at 150°F in a Spray-Under Immersion Washer for a minimum of 30 minutes to 1 hour

**Before Picture**



**After Picture**



**Source:** TSR #18-A-160