CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 1998

DateRun: 06/09/1998

Experimenters: Jason Marshall

ClientType: Tool Manufacturer

ProjectNumber: Project #1

Substrates: Steel

PartType: Part

Contaminants: Buffing/Polishing Compounds, Greases, Dirt, Metal fines

Cleaning Methods: Immersion/Soak

Analytical Methods: Visual

Purpose: Compare current cleaner w/ other aqueous cleaners

Experimental Procedure: Six aqueous cleaners were selected using two laboratory databases. The chemistries were selected based on vendor information as well as past laboratory use. Five percent solutions were made into 600 mL beakers. These cleaners, as well as the client's current cleaner, were heated to 150 F on a hot plate. Two parts were cleaned in each solution for 5 minutes. The parts were rinsed in tap water at 120 F for 30 seconds. Observations of effectiveness were recorded throughout the experiment.

SUBSTRATE MATERIAL: Steel rachet handles
CONTAMINANTS: Grease, buffing compound, dirt & metal fines.

Results: Three of the cleaners worked as well as the current chemistry. All of the parts, including parts cleaned in current chemistry, started to form rust after several minutes. Table 1 compares the cleaning effectiveness of the six chemistries. A ranking of 1 would be equal to the current cleaner.

Table 1 Chemistries Ranking

CHEMISTRY	CLEANING	RUSTING
US Polychem	4	3
EMKAY	2	2
Chrisal USA	6	4
Matchless	1	1
Oakite Products	5	5
Calgon Corp	3	6

Both the cleaning and rusting ranking were based on comparing the selected cleaner to the client's current cleaning chemistry. Two products, Matchless and EMKAY, both cleaned about the same and had similar amounts of rusting.

Summary:

Substrates:	Steel				
Contaminants:	Buffing/Polishing Compounds, Greases, Dirt, Metal fines				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
US Polychem Corporation	Polyspray Jet 790 XS	5	0.00	☐	
Oakite Products	Inproclean 3800	5	0.00	☐	
Matchless Metal Polish Company	MC 132	5	0.00	☑	
Emkay Chemical Company	Safety Wash	5	0.00	☑	
Chrisal USA Inc	Super CMF 240	5	0.00	☐	
Calgon Corporation	Geo Guard 2215	5	0.00	☐	
Hubbard Hall Inc	Aquaease PL 110	5	0.00	☐	

Conclusion: After cleaning the parts, two cleaners appear to have similar cleaning capacities as the current cleaner. Each had slightly more rusting develop. MSDSs and technical data sheets of each chemistry has been included with the report.
Information on filtration is currently being gathered by the Surface Cleaning Laboratory staff. This information will be sent within a week or two.