CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2006

DateRun: 10/15/2006

Experimenters: Jason Marshall

ClientType: Metal Finishing

ProjectNumber: Project #1

Substrates: Brass

PartType: Coupon

Contaminants: Buffing/Polishing Compounds

Cleaning Methods: Immersion/Soak

Analytical Methods: Visual

Purpose: To evaluate selected products on first supplied buffing compound

Experimental Procedure: Five alternative products were selected from the lab's database of testing results based on supplied client information. Products were selected based on buffing compound removal potential and compatibility with brass metal substrates. Each product was diluted to 5% in 250 ml beakers using DI water and heated to 130 F on a hot plate.

Fifteen preweighed coupons were coated with the Matchless Metal Polishing TSX Tripoli (1317-95-9) buffing compound by heating the buffing compound and rubbing it onto the surface of the coupons. Coupons were weighed a second time to determine the amount of buffing compound added. Three coupons were cleaned in each solution for five minutes using minimal stir bar agitation. Coupons were rinsed for 15 seconds in a tap water bath at 120 F and dried using a dry compressed air for 30 seconds. Once dry coupons were weighed a final time and product efficiencies were calculated.

Results: One product removed over 95% of the buffing compound from the brass coupons after five minutes of immersion cleaning. Two other products removed around 70%. The last two products removed under half of the buffing compound. The following table lists the amount of buffing compound applied, the amount remaining and the efficiency for each coupon cleaned.

Cleaner	Initial wt	Final wt	% Removed
Polyspray Jet 790 XS	0.3110	0.1351	56.56
	0.1569	0.0204	87.00
	0.1025	0.0349	65.95
MC 132	0.4157	0.3699	11.02
	0.4094	0.3444	15.88
	0.2203	0.2040	7.40
Detergent 8	0.0872	0.0069	92.09
	0.0880	0.0038	95.68
	0.1395	0.0001	99.93
Inproclean 3800	0.0278	0.0010	96.40
	0.4676	0.4506	3.64
	0.1828	0.1359	25.66
Micro 90	0.0280	0.0017	93.93
	0.1611	0.0899	44.20
	0.0922	0.0042	95.44

Summary:

Substrates:	Brass
Contaminants:	Buffing/Polishing Compounds

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
US Polychem Corporation	Polyspray Jet 790 XS	5	69.84	☑	
Matchless Metal Polish Company	MC 132	5	11.43	☐	
Alconox Inc	Detergent 8	5	95.90	☑	
Oakite Products	Inproclean 3800	5	41.90	☐	
International Products Corporation	Micro 90 Conc.	5	77.86	☑	

Conclusion: The three successful products will be retested at a higher temperature and/or higher concentrations to improve the cleaning efficiencies.

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