CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2006
DateRun:	08/15/2006
Experimenters:	Jason Marshall
ClientType:	Metal Working
ProjectNumber:	Project #1
Substrates:	Brass
PartType:	Coupon
Contaminants:	Buffing/Polishing Compounds
Cleaning Methods:	Immersion/Soak
Analytical Methods:	Gravimetric
Purpose:	To evaluate selected products for buffing compound removal.
Experimental Procedure:	Eight alternative products were selected from the lab's database of testing results based on supplied client information. Products were selected based on buffing compound and oil 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. Twenty-four preweighed coupons were coated with the green buffing compound using a handheld swab after heating to its melting point with a heat gun. 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:	Only one of the products, Polyspray Jet 790 XS, removed over 85% using immersion cleaning. A second product, Inproclean 3800, removed just over 60%. 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
KPC 820 N	0.3450	0.2243	34.99
	0.5303	0.3470	34.57
	0.7658	0.5817	24.04
1990 GD	0.7036	0.5119	27.25
	0.2148	0.1132	47.30
	0.8864	0.6942	21.68
SC Aircraft & Metal	0.6186	0.4965	19.74
	0.5409	0.5220	3.49
	0.4449	0.4332	2.63
Micro 90	0.2197	0.1408	35.91
	0.5064	0.3748	25.99
	0.9407	0.8823	6.21
Daraclean 283	0.2063	0.1094	46.97
	0.4799	0.2701	43.72
	0.2921	0.0817	72.03
Inproclean 3800	0.4517	0.1812	59.88
	0.3630	0.1230	66.12
	0.2662	0.1115	58.11
Beyond 2001	0.6450	0.3844	40.40
	0.3123	0.1155	63.02
	0.3038	0.0962	68.33
Polyspray Jet 790 XS	0.2699	0.0407	84.92
	0.6787	0.1967	71.02
	0.1059	0.0010	99.06

Summary:

Substrates:	Brass
Contaminants:	Buffing/Polishing Compounds

CLEANING LABORATORY EVALUATION SUMMARY

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
AW Chesterton	KPC 820 N	5	31.20	☐	
Brulin Corporation	Brulin 1990 GD	5	32.08	☐	
Gemtek Products	SC Aircraft & Metal Cleaner Super Concentrate	5	8.62	☐	
International Products Corporation	Micro 90 Conc.	5	22.70	☐	
Magnaflux	Daraclean 283	5	54.24	☐	
Oakite Products	Inproclean 3800	5	61.37	☐	
Today & Beyond	Beyond 2001	5	57.25	☐	
US Polychem Corporation	Polyspray Jet 790 XS	5	85.00	☑	

Conclusion: The one effective product, Polyspray 790 XS and the next three most effective products will be tested on the same buffing compound using ultrasonic energy.