CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2001

DateRun: 09/18/2001

Experimenters: Jason Marshall

ClientType: Metal

ProjectNumber: Project #1

Substrates: Steel

PartType: Coupon

Contaminants: Coatings

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric

Purpose: Evaluating previously tested effective products on second Stubbs rust preventative

Experimental Procedure: Three successful cleaners and the two client supplied cleaners were selected from the previous trial. Each product was diluted to 5% with DI water in a 600 ml beaker. Fifteen preweighed steel coupons were coated with the Rustilo DW 924 HF using a hand held swab. The rust preventative was allowed to sit on the coupons for 10 minutes prior to being reweighed. Following the second weighing, three coupons were immersed into each solution and allowed to soak for 3 minutes at 130 F. At the end of the 3 minutes, each coupon was rinsed in a tap water bath at 120 F for 30 seconds and dried with a heat gun at 500 F for 1 minute. After the coupons cooled to room temperature, a final weight was recorded and cleaning efficiencies were calculated.

Rust Preventatives: Castrol Industrial, Inc Rustilo DW 924 HF (64742-53-6, 61790-48-5, 64742-47-8);

Results: Two of the lab selected cleaners were more effective than the Dasco Clean and the third removed just a little less than the Dasco. All of the lab products were more effective than the Certa Clean. The following table lists the calculated efficiencies and the rank of each cleaning solutions evaluated.

Table 1. Cleaning Efficiencies

Cleaner	Coupon 1	Coupon 2	Coupon 3	Average	Std Dev	Rank
Inproclean	99.10	99.02	99.38	99.17	0.19	1
Dasco Clean	98.10	98.90	99.04	98.68	0.50	3
Beyond	98.26	98.57	97.81	98.21	0.38	4
Multikleen	98.97	97.86	99.63	98.82	0.89	2
Certa Clean	73.82	89.34	87.27	83.47	8.43	5

Summary:

Substrates:	Steel
Contaminants:	Coatings

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Heatbath Corporation	Multi-Kleen 1568	5	98.82	☑	
Oakite Products	Inproclean 3800	5	99.17	☑	
Today & Beyond	Beyond 2001	5	98.21	☑	
DA Stuart Company	Dasco Kleen 3250		98.68	☑	
Houghton International	Cerfa Kleen 5387		83.47	☐	

Conclusion: The same five products will be used in the next experiment on the third supplied contaminant, Power Stamp II from Rome.