CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2001

DateRun: 09/17/2001

Experimenters: Jason Marshall

ClientType: Metal

ProjectNumber: Project #1

Substrates: Steel

PartType: Coupon

Contaminants: Cutting/Tapping Fluids, Lubricating/Lapping Oils, Oil

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric

Purpose: Evaluating previously tested effective products on third supplied contaminant

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 Power Stamp II 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.

Lubricant; ITW Fluid Products Power Stamp II

Results: The lubricant was has been the most difficult to remove to date for the lab selected products, removing between 90 and 98% from the steel coupons. Multikleen 1568 was the most successful followed by Dasco Clean 3250 and Inproclean 3800. The following table lists the calculated efficiencies and the ranking for this trial.

Table 1. Cleaning Efficiencies

Cleaner	Coupon 1	Coupon 2	Coupon 3	Average	Std Dev	Rank
Inproclean	95.31	94.57	94.75	94.88	0.39	3
Multikleen	96.94	98.09	98.14	97.72	0.68	1
Dasco	97.44	97.23	94.93	96.53	1.39	2
Beyond	85.85	91.87	92.48	90.07	3.67	5
Certa Clean	94.11	91.08	92.24	92.47	1.53	4

Summary:

Substrates:	Steel				
Contaminants:	Cutting/Tapping Fluids, Lubricating/Lapping Oils, Oil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Heatbath Corporation	Multi-Kleen 1568	5	97.72	☑	
Oakite Products	Inproclean 3800	5	94.88	☑	
Today & Beyond	Beyond 2001	5	90.07	☐	
DA Stuart Company	Dasco Kleen 3250		96.53	☑	
Houghton International	Cerfa Kleen 5387		92.47	☐	

Conclusion: Two of the client supplied cleaners, Oakite Products Inproclean 3800 and Heatbath Corp Multikleen 1568 have been very effective on all of the supplied contaminants.