

# CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 1997  
 DateRun: 07/29/1997  
 Experimenters: Jason Marshall, Prashant Trivedi  
 ClientType: Machine Construction Company  
 ProjectNumber: Project #1  
 Substrates: Stainless Steel  
 PartType: Coupon  
 Contaminants: Coatings  
 Cleaning Methods: Immersion/Soak  
 Analytical Methods: Gravimetric  
 Purpose: Petroleum based rust preventative trial.

Experimental Procedure: Eighteen (18) coupons were weighed after being precleaned. The coupons were then contaminated with the rust preventive compound and placed in an conventional oven at 100 F for two hours. The coupons were allowed to reach room temperature and weighed. The same six chemistries from the pervious trial were used using the same operating conditions.

SUBSTRATE MATERIAL: Stainless Steel

CONTAMINANTS: Tectyl 506, Petroleum based rust preventative

Results:

% Contaminant Removed						
Product	AK-6215	Precision	2000XS	SP 2200	Blue Gold	625-XL
	99.90	41.60	14.80	26.70	14.10	10.90
	98.40	36.50	61.70	38.90	11.50	11.90
	100.00	12.10	23.40	19.90	10.50	14.90
Average	99.43	30.07	33.30	28.50	12.03	12.57
Std Dev	0.90	15.77	24.97	9.63	1.86	2.08

Summary:

Substrates:	Stainless Steel						
Contaminants:	Coatings						
Company Name:		Product Name:		Conc.:	Efficiency:	Effective:	Observations:
LPS Laboratories		Precision Clean Concentrate		5	30.07	<input type="checkbox"/>	
Quaker Chemical		Formula 625 XL		5	12.57	<input type="checkbox"/>	
Calgon Corporation		AK 6215		5	99.43	<input checked="" type="checkbox"/>	
Carroll Company		Blue Gold Heavy Industrial Cleaner		5	12.03	<input type="checkbox"/>	
US Polychem Corporation		Polychem A 2000 XS		5	33.30	<input type="checkbox"/>	
Valtech Corporation		Valtron SP 2200		5	28.50	<input type="checkbox"/>	

Conclusion:

Calgon's AK-6215 cleaner solution was by far the most effective in the removal of the hard rust preventive substance. The solution had very good cleaning capabilities in the previous trial as well, 99.3% removal of the slushy, rust-preventive substance. Also the solution was able to be filtered quite readily, which would result in a longer bath life. From the results of the two experiments, Calgon AK-6215 appears to be the best cleaner for use in cleaning both rust-preventive materials. The next step in testing for Morgan will be to test cleaners for the removal of the final contaminant.