

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2008
 DateRun: 12/09/2008
 Experimenters: Johanna Oviedo
 ClientType: Lab
 ProjectNumber: Project #1
 Substrates: Stainless Steel
 PartType: Coupon
 Contaminants: Resins/Rosins
 Cleaning Methods: Immersion/Soak
 Analytical Methods: Visual

Purpose: To test nontoxic industrial cleaning solutions for oil removal

Experimental Procedure: Basic cleaning performance testing was conducted using ASTM G122 as the bases for cleaning. Products were selected based on the compatibility of substrate and removal of foreign substance. Used 5% concentration and heated the samples at 135F. The steel coupons were immersed in a product for 5 minutes, rinsed for 30 seconds in tap water at 120F and dried in 30 seconds using compressed air is room temperature. Coupons were coated with used oil. Using a handheld swab and allowed to dry for 144 minutes at room temperature. The contaminated coupons were weighed again to determine the amount of soil added. After cleaning process, the final weights were recorded, efficiencies were calculated and recorded.

Results:

Cleaner	Initial wt	Final wt	% Removed
Sea Wash 77			
	0.5532	0.3600	34.92
	0.1223	0.1113	8.99
	0.9804	0.6202	36.74
SW Wash 10	10.0000		
	0.5245	0.3948	24.73
	0.2011	0.1369	31.92
	0.6825	0.5677	16.82
Metalnox CP30			
	1.9783	1.9546	1.20
	0.8599	0.8703	-1.21
	0.3391	0.3517	-3.72
Lonox 13302			
	1.6223	1.6305	-0.51
	0.5654	0.5662	-0.14
	1.1332	1.1398	-0.58
Nonsilicated HP			
	0.6200	0.5735	7.50
	2.2645	1.9089	15.70
	0.4922	0.4930	-0.16
Safety Strip 5890			
	1.5213	1.3694	9.98
	0.5644	0.5902	-4.57
	0.5036	0.5277	-4.79

Summary:

Substrates:	Stainless Steel				
Contaminants:	Resins/Rosins				
Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Warren Chemical Company	Sea Wash 77	10	26.89	<input type="checkbox"/>	good
A 1 Hydro Parke Hill Chemical	SW Wash 10 Aircraft Cleaner	10	24.49	<input type="checkbox"/>	
Kyzen Corporation	Metalnox CP 30	10	-1.24	<input type="checkbox"/>	
Kyzen Corporation	lonox 13302	10	-0.41	<input type="checkbox"/>	

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Brulin Corporation	Non Silicated HTD	10	7.68	<input type="checkbox"/>	
Brulin Corporation	Safety Strip 5896 B Oil Seal	10	0.21	<input type="checkbox"/>	

Conclusion: No product was effective at removing the resin from stainless steel using immersion cleaning.