CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2020

DateRun: 09/09/2020

Experimenters: Nicole Kebler

ClientType: Metal Finishing

ProjectNumber: Project #1

Substrates: Steel

PartType: Coupon

Contaminants: Oil

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric

Purpose: Evaluate aqueous and solvent cleaners to remove oil from steel.

Experimental Procedure: Three pre-weighed steel coupons were contaminated with vanishing oil provided by the company on the bottom third of the coupons before dirty weights were taken. Coupons were immersed in heated and unheated cleaners for 15 minutes, rinsed for 20 seconds in heated 120F tap water, and then air dried with a heat gun. Dried coupons were weighed for clean weights and final observations were recorded.

Results:

Cleaner	Concentration	Temperature ˚F	Initial wt of cont.	Final wt of cont.	%Cont Removed
Matalnox 6386	100%	68	0.0332	0.0000	100.00
			0.0233	0.0001	99.57
			0.0219	0.0001	99.54
Mirachem 500	20%	110	0.0371	0.0005	98.65
			0.0332	0.0016	95.18
			0.0223	0.0017	92.38
SC Aircraft and Metal Cleaner	20%	130	0.0386	0.0021	94.56
			0.0265	0.0023	91.32
			0.0207	0.0000	100.00
Shopmaster LPH	20%	130	0.0072	0.0007	90.28
			0.0175	0.0004	97.71
			0.0103	0.0008	92.23

Summary:

Substrates:	Steel				
Contaminants:	Oil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Kyzen Corporation	Metalnox M6386	100%	99.70	☑	
Mirachem Corporation	Mirachem 500 A	20%	95.40	☑	
Gemtek Products	SC Aircraft & Metal Cleaner Super Concentrate	20%	95.29	☑	
Buckeye International	Shopmaster LPH	20%	93.41	☑	

Conclusion: All four cleaners were effective at removing the vanishing oil from the steel coupons. Metalnox 6386 was the most effective.