

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2023
 DateRun: 11/15/2023
 Experimenters: Amelia Wagner
 ClientType: Lab
 ProjectNumber: Project #6
 Substrates: Aluminum
 PartType: Coupon
 Contaminants: Cutting/Tapping Fluids
 Cleaning Methods: Vacuum Cycle Nucleation
 Analytical Methods: Gravimetric, Visual

Purpose: To determine the efficacy of aqueous cleaners compared to water utilizing VCN equipment.

Experimental Procedure: Three pre weighed aluminum complex mesh parts were used as coupons. The coupons were soiled by swabbing the bottom third of the coupons with water coolant. The dirty weights of the coupons were then recorded and visual rankings according to the key shown below were recorded. The coupons were then subjected to a one-minute heated cycle at 140 degrees F in the VCN using Suma Break Up Heavy Duty Foaming Grease Release Cleaner 1% concentration. The coupons were then removed and left to air dry overnight. The next day the clean weights of the coupons were recorded, and visual rankings were recorded.

Visual Rankings Key

- 1= 100% of soil removed
- 2= 75% of soil removed
- 3= 50% of soil removed
- 4= 25% of soil removed
- 5= 0% of soil removed

Results:

Cleaner	Soil	Initial wt of cont.	Final wt of cont.	%Cont Removed	% AVG
Suma Break Up 1%	Water Coolant	0.6547	0.3347	48.88	37.91
		0.7516	0.4357	42.03	
		0.7025	0.5421	22.83	
Cleaner	Soil	Dirty Visual	Clean Visual	AVG Clean Visual	
Suma Break Up 1%	Water Coolant	5	2	2	
		5	2		
		5	2		

Summary:

Conclusion: The Suma Break Up 1% concentration was not effective in removing water coolant from complex aluminum mesh pieces utilizing VCN methods.