CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 1995

DateRun: 05/10/1995

Experimenters: Donald Garlotta, Jay Jankauskas

ClientType: Brass Instrument Manufacturer

ProjectNumber: Project #1

Substrates: Brass

PartType: Coupon

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

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric

Purpose: Evaluation of Oakite Inproclean 3800

Experimental Procedure: Coupons were cleaned and dried with a heat gun to get the clean weight. A total of nine coupons were contaminated with contaminants #1, #2 and #4. #3 was omitted because of lack of coupons and this appears to be the easiest contaminant to remove. The coupons were then weighed after contamination. Cleaning was done in an agitated stirbar beaker at 140 degrees for 5 minutes. The parts were then rinsed in tap water at 140 degrees for 5 minutes. Drying was done under the air knives for 2 minutes and then placed in an oven set at 216 degrees for 90 minutes.

Results: Lapping compound cleaned at 142 degrees, some removal by aggitation alone, very easy to remove contaminant by brushing for about 15 seconds. Vavoline grease cleaned at 146 degrees. Residual lapping compound in the cleaner seems to be clinging to the grease at first, but after a few minutes, you can see the grease being removed. Excellent removal of grease upon cleaning and rinsing. The Oakite cleaner is doing an excellent job of removing the Selmer oil. It appears one of the coupons was quite dirty after cleaning (the other two looked clean), this is probably due to the lack of aggitation it recieved.

TURI SURFACE CLEANING LAB EXPERIMENTAL DATA LOG
GRAVIMENTRIC ANALYSIS

sample # and contaminant	clean weight (g)	weight with contamination (g)	weight after cleaning (g)	weight change (g)	% Removal
5881, cont. #1	34.5897	34.9895	34.5895	0.40	100
4080, cont. #1	34.4089	34.6598	34.4089	0.2509	100
4401, cont. #1	34.4408	34.7038	34.4408	0.263	100
4317, cont. #2	34.4315	34.5241	34.4324	0.0917	99
4470, cont. #2	34.4474	34.5255	34.448	0.0775	99.2
7399, cont. #2	34.7364	34.8441	34.7406	0.1035	96.1
5330, cont. #4	34.5332	34.6049	34.5352	0.0697	97.2
4801, cont. #4	34.4806	34.5507	34.5149	0.0358	51.1
1803, cont. #4	34.1814	34.2687	34.1827	0.086	98.5

Cont. #1- Clover Grease Mix Lapping Compound
Cont. #2- Valvoline Wheel Bearing Grease
Cont. #3- 90 Wt Gear Oil
Cont. #4- Selmer Tuning Slide and Cork Grease

Summary:

Substrates:	Brass				
Contaminants:	Cutting/Tapping Fluids, Greases, Lubricating/Lapping Oils, Oil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Oakite Products	Inproclean 3800	10	96.10	☑	

Conclusion:

CLEANING LABORATORY EVALUATION SUMMARY

The Oakite 3800 was the best cleaner overall with a percentage removal of contaminants ranging from 100 to 51 percent. The 51 percent achieved on coupon 4801 was due to the lack of agitation this part received. Due to the success of this trial, Oakite 3800 will be used on the next trial for Musical Instrument Re-finisher when the parts from Musical Instrument Re-finisher will be cleaned with beaker agitation. This time contaminant #3 will be used and we are considering cleaning off the pieces with a cloth instead of a brush to protect the surface.