

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 1997
 DateRun: 07/30/1997
 Experimenters: Jason Marshall, Prashant Trivedi
 ClientType: Machine Construction Company
 ProjectNumber: Project #1
 Substrates: Stainless Steel
 PartType: Coupon
 Contaminants: Greases, Lubricating/Lapping Oils, Dirt, Metal fines
 Cleaning Methods: Immersion/Soak
 Analytical Methods: Gravimetric
 Purpose: Dirt, Grease, Oil, and metal fines cleaning.

Experimental Procedure: Seventeen (17) coupons were weighed after being precleaned. The coupons were then contaminated with the "gunk". The coupons were allowed to sit for a short while and then reweighed. Three of the cleaners from the previous trials were selected to be tested in this trial due to their possible ability to remove the listed contaminants. Also, three other cleaners were selected using the laboratory's database of chemistries. The coupons were placed in the cleaners for ten minutes at 150 F. Then the coupons were rinsed for two minutes in a tap water bath at 120 F. Finally the coupons were allowed to drip dry at ambient temperature. Once the coupons were dry, they were weighed to obtain their "cleaned" weight.
 SUBSTRATE MATERIAL: Stainless Steel
 CONTAMINANTS: Dirt, Grease, Oil, and metal fines ("gunk")

Results: Of the six chemistries selected only two showed possible signs of contaminant removal. The remaining cleaners had minimal to no effect on the "gunk."

| %Contaminant Removed | | | | | | |
|----------------------|-----------|---------|-----------|--------|-------|---------|
| | Blue Gold | Ak-6215 | Special F | 625-XL | 4000T | Release |
| | 2.70 | 0.19 | 1.97 | -11.08 | 3.23 | |
| | -4.44 | -2.53 | 0.98 | -12.12 | 14.31 | 11.32 |
| | -1.27 | 1.72 | 2.58 | 2.49 | 9.67 | 0.38 |
| Average | -1.00 | -0.21 | 1.84 | -6.90 | 9.07 | 5.85 |
| std dev | 3.57 | 2.15 | 0.81 | 8.15 | 5.57 | 7.74 |

| Summary: | | Substrates: Stainless Steel | | | | |
|------------------------|-------------------------------------|---|-------------|--------------------------|---------------|--|
| | | Contaminants: Greases, Lubricating/Lapping Oils, Dirt, Metal fines | | | | |
| Company Name: | Product Name: | Conc.: | Efficiency: | Effective: | Observations: | |
| Calgon Corporation | AK 6215 | 5 | -0.21 | <input type="checkbox"/> | | |
| Carroll Company | Blue Gold Heavy Industrial Cleaner | 5 | -1.00 | <input type="checkbox"/> | | |
| Quaker Chemical | Formula 625 XL | 5 | -6.90 | <input type="checkbox"/> | | |
| Hurri Kleen Corportion | HurriSafe - Hot Immersion Degreaser | 5 | 1.84 | <input type="checkbox"/> | | |
| Oakite Products | Inproclean 4000 T | 5 | 9.07 | <input type="checkbox"/> | | |
| Cleaning Systems | Release | 5 | 5.85 | <input type="checkbox"/> | | |

Conclusion: With the results of the experiment being unsatisfactory, a further trial will be run using Oakite Inproclean 4000T, Cleaning Systems Release at full strength as well as a couple of newly selected cleaners.