

CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2006																														
DateRun:	08/22/2006																														
Experimenters:	Jason Marshall																														
ClientType:	Metal Working																														
ProjectNumber:	Project #1																														
Substrates:	Brass																														
PartType:	Coupon																														
Contaminants:	Buffing/Polishing Compounds																														
Cleaning Methods:	Immersion/Soak																														
Analytical Methods:	Gravimetric																														
Purpose:	To evaluate cleaners on water-based buffing compound using immersion cleaning.																														
Experimental Procedure:	<p>The top two products from the previous trial were diluted to 5% in 250 ml beakers using DI water and heated to 130 F.</p> <p>Six preweighed coupons were coated with the water-based compound using a handheld swab after heating. Coupons were weighed a second time to determine the amount of buffing compound added. Three coupons were cleaned in each solution for five minutes using immersion only. Coupons were rinsed for 15 seconds in a tap water bath at 120 F and dried using a dry compressed air for 30 seconds. Once dry coupons were weighed a final time and product efficiencies were calculated.</p>																														
Results:	<p>The Polyspray 790 XS removed over 85% of the buffing compound using immersion cleaning. The Daraclean 283 removed about half. The following table lists the amount of buffing compound applied, the amount remaining and the efficiency for each coupon cleaned.</p> <table border="1"> <thead> <tr> <th>Cleaner</th> <th>Initial wt</th> <th>Final wt</th> <th>% Removed</th> </tr> </thead> <tbody> <tr> <td>Daraclean 283</td> <td>0.6750</td> <td>0.2790</td> <td>58.67</td> </tr> <tr> <td></td> <td>0.6979</td> <td>0.3241</td> <td>53.56</td> </tr> <tr> <td></td> <td>1.8303</td> <td>0.9474</td> <td>48.24</td> </tr> <tr> <td>Polyspray Jet 790 XS</td> <td>1.5549</td> <td>0.0169</td> <td>98.91</td> </tr> <tr> <td></td> <td>0.4814</td> <td>0.1249</td> <td>74.05</td> </tr> <tr> <td></td> <td>0.8616</td> <td>0.0325</td> <td>96.23</td> </tr> </tbody> </table>	Cleaner	Initial wt	Final wt	% Removed	Daraclean 283	0.6750	0.2790	58.67		0.6979	0.3241	53.56		1.8303	0.9474	48.24	Polyspray Jet 790 XS	1.5549	0.0169	98.91		0.4814	0.1249	74.05		0.8616	0.0325	96.23		
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Conclusion:	The addition of ultrasonic energy will result in an increase in efficiency for both products. Next steps will be to evaluate top cleaners on supplied parts at or after workshop.																														