

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2000
 DateRun: 04/04/2000
 Experimenters: Jason Marshall
 ClientType: Metal Working
 ProjectNumber: Project #1
 Substrates: Alloys
 PartType: Part
 Contaminants: Cutting/Tapping Fluids, Lubricating/Lapping Oils, Oil
 Cleaning Methods: Mechanical Agitation
 Analytical Methods: OSEE
 Purpose: To compare cleaning on front and back of samples.

Experimental Procedure: Five readings were taken from both front and back of both sets of cleaned parts. Each set had four samples to be evaluated. Readings were recorded for each sheet and an average was calculated and compared to the back side readings for the same sheet. Any trends observed were to be noted.
 SUBSTRATE MATERIAL: Tantalum metal sheets
 CONTAMINANTS: Mobil Oil Corp, Vactra Oil Light
 CONTAMINATING PROCESS USED: Received cleaned

Results: In the first set of sheets, the results were varied as shown in Table 1. Two sheets had lower front side (Sheet 1 & 2) readings and two sheets (Sheets 3 & 4) had lower back side readings. The second set of sheets had more consistent readings with 3 of 4 samples having a lower front side value. With the combined data, it was decided to rerun the samples with lower back side OSEE readings. After reevaluating the samples, only one of the sheets had lower backside readings. Table 2 lists the retested values for each sheet.

Table 1. OSEE Readings

Coil Set 1	Sheet 1		Sheet 2		Sheet 3*		Sheet 4*	
	Side 1	Side 2	Side 1	Side 2	Side 1	Side 2	Side 1	Side 2
	261	378	348	373	373	382	360	305
	259	437	238	342	345	392	337	324
	284	425	346	401	356	343	334	332
	276	382	376	386	424	287	345	306
	255	372	353	420	378	410	342	309
Ave	267	398.8	332.2	384.4	375.2	362.8	343.6	315.2
Coil Set 2	Sheet 1		Sheet 2		Sheet 3*		Sheet 4*	
	Side 1	Side 2	Side 1	Side 2	Side 1	Side 2	Side 1	Side 2
	239	311	180	339	223	248	274	207
	214	302	210	262	224	248	287	251
	289	303	220	265	241	317	295	301
	209	328	223	295	261	240	270	272
	184	284	206	306	268	252	319	317
Ave	227	305.6	207.8	293.4	243.4	261	289	269.6
*To Be Retested								

Table 2. Retested OSEE Readings

Coil Set 1	Sheet 3		Sheet 4		Coil Set 2 Sheet 4	
	Side 1	Side 2	Side 1	Side 2	Side 1	Side 2

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	354	354	296	224	253	295
	319	419	329	197	258	265
	327	361	283	181	261	283
	329	362	265	226	241	282
	302	356	264	208	281	291
Ave	326.2	370.4	287.4	207.2	258.8	283.2

Summary:

Substrates:	Alloys				
Contaminants:	Cutting/Tapping Fluids, Lubricating/Lapping Oils, Oil				
Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Environmental Technology	RB Degreaser Cleaner			<input checked="" type="checkbox"/>	

Conclusion:

OSEE readings were mostly lower for the front sides of the supplied sheets. The backsides were marked up by the conveyor system during processing.