



Combined State Binder Group

Method of Acceptance for
Asphalt Binders

RR 2007-1
SUMMARY A

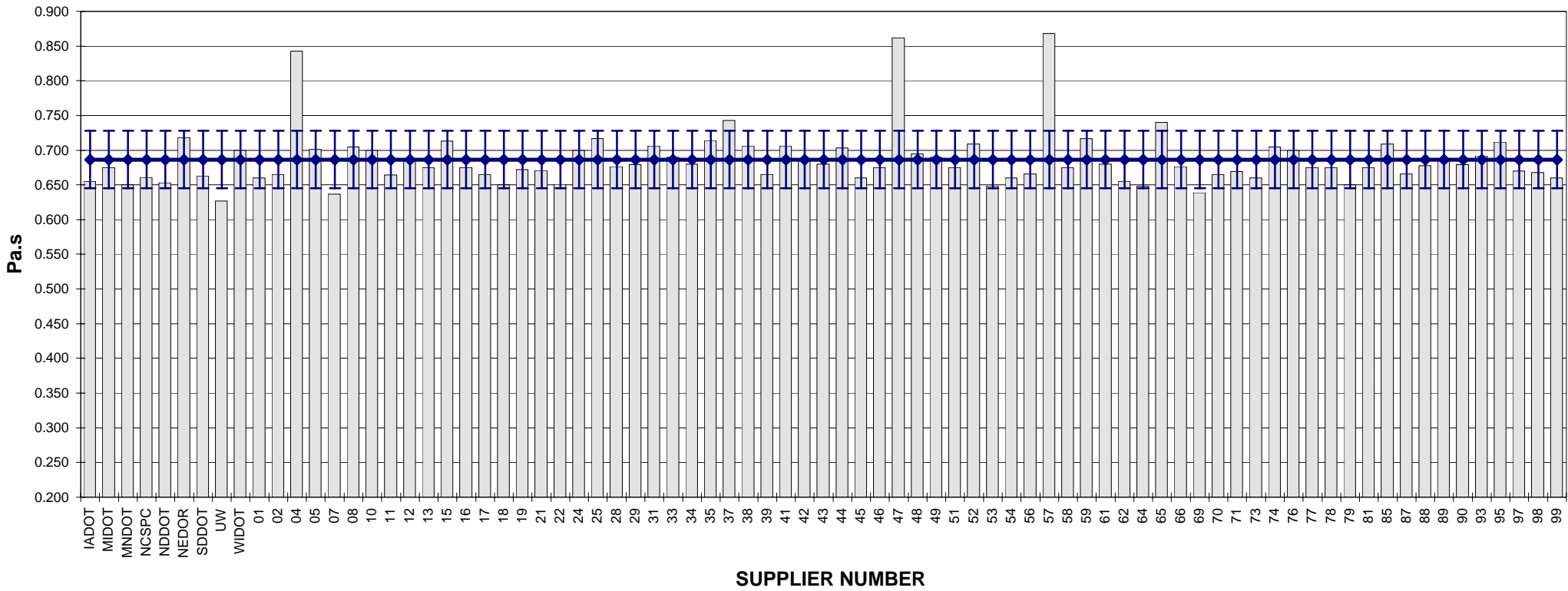
**COMBINED STATE BINDER GROUP ROUND ROBIN 2007-1
SUMMARY A
PG 64-34P**

Supplier Number	Rotational Viscosity (Pa.s) @135°C	DSR Original (kPa) @64°C	Phase Angle @64°C	DSR RTFO (kPa) @64°C	Elastic Recovery (%) @25°C	DSR PAV (kPa) @19°C	Mass Loss (%) @163°C	BBR S-value (MPa) @-24°C	BBR m-value @-24°C	DTT Strain (%) @-24°C	DTT Stress (MPa) @-24°C	CRITICAL CRACK TEMP (°C)
IADOT	0.655	1.22	64.1	2.54	88	1,257	-0.514	221	0.313			
MIDOT	0.675	1.30	63.8	2.68	88	1,272	-0.565	221	0.333			
MNDOT	0.650	1.23	63.8	2.78		1,771	-0.611	224	0.329			
NCSPC	0.661	1.39	63.7	2.43	90	1,535	-0.507	218	0.324			
NDDOT	0.653	1.28	64.7	2.61	90	1,514	-0.568	221	0.325			
NEDOR	0.718	1.27	63.6	3.05	89	1,917	-0.099	246	0.324			
SDDOT	0.663	1.35	63.8	2.76	89	1,765	-0.658	225	0.327			
UW	0.627	1.28	63.3	2.32		1,659	-0.108	223	0.320			
WIDOT	0.700	1.28	63.5	2.43		1,416	-0.482	208	0.337			
01	0.660	1.29	63.7	2.86	88	1,318	-0.481	212	0.332			
02	0.665	1.26	63.8	2.55	89	1,371	-0.559	236	0.331			
04	0.843	1.35	64.2	2.60		1,533	-0.576	214	0.335			
05	0.701	1.28	63.8	2.79	89	1,235	-0.436	215	0.325			
07	0.637	1.33	64.5	2.60	90	1,548	-0.537	220	0.329			
08	0.705	1.30	63.9	2.57	89	1,445	-0.421	211	0.322			
10	0.700	1.32	63.5	2.72	90	1,436	-0.439	214	0.321			
11	0.664	1.29	63.6	2.53	90	1,444	-0.546	237	0.325			
12	0.685	1.27	63.8	2.70		1,616	-0.705	230	0.330			
13	0.675	1.24	63.5	2.55	90	1,405	-0.444	227	0.326			
15	0.713	1.21	63.9	2.74	90	1,487	-0.648	226	0.324			
16	0.675	1.28	63.4	2.63	85	1,746	-0.621	230	0.328			
17	0.665	1.27	63.7	2.73	88	1,417	-0.470	220	0.335			
18	0.650	1.29	64.0	2.76	91	1,715	-0.557	245	0.334			
19	0.672	1.25	63.8	2.73	88	1,348	-0.645	234	0.329			
21	0.671	1.26	64.0	2.77	89	1,618	-0.505	236	0.318			
22	0.651	1.30	64.0	2.58		1,652	-0.660	235	0.331			
24	0.700	1.34	63.0	2.91	90	1,465	-0.508	214	0.324			
25	0.717	1.28	64.0	2.80	90	1,834	-0.690	227	0.327			
28	0.676	1.26	64.0	2.66	89	1,766	-0.503	232	0.316			
29	0.679	1.29	63.6	2.42	91	1,664	-0.565	225	0.321			
31	0.706	1.27	63.5	2.56	90	1,436	-0.421	214	0.326			
33	0.690	1.30	63.2	2.71	90	1,430	-0.473	222	0.335			
34	0.680	1.29	63.8	2.51	89	1,463	-0.559	245	0.321			
35	0.714	1.23	63.6	2.70		1,694	-0.282	254	0.309			
37	0.743	1.30	63.6	2.67	91	2,043	-0.536	240	0.317	1.76	5.07	-36.4
38	0.706	1.30	63.8	2.63	90	1,239	-0.417	213	0.324			
39	0.665	1.30	64.0	2.63	89	1,636	-0.430	220	0.326			
41	0.706	1.32	63.9	2.70	90	1,468	-0.407	212	0.324			
42	0.688	1.27	64.0	2.72	90	1,480	-0.631	217	0.326			
43	0.680	1.32	63.8	2.75	90	1,525	-0.546	233	0.335			
44	0.703	1.29	63.3	2.65	91	1,449	-0.424	223	0.316			
45	0.660	1.33	63.7	2.80	88	1,518	-0.476	224	0.330			
46	0.675	1.29	63.7	2.69	82	1,570	-0.567	214	0.324			
47	0.862	1.31	64.1	2.50		1,539	-0.559	216	0.319			
48	0.695	1.31	63.7	2.61	91	1,395	-0.538	251	0.326			
49	0.690	1.28	63.9	2.60	90	1,410	-0.557	222	0.324			
51	0.675	1.31	63.4	2.75	88	1,495	-0.697	236	0.329			
52	0.709	1.40	63.5	2.78	90	1,506	-0.418	223	0.324			
53	0.649	1.24	65.2	2.48		1,958	-0.560	219	0.323			
54	0.660	1.26	63.9	2.63	89	1,607	-0.451	221	0.329			
56	0.666	1.32	63.7	2.40	90	1,457	-0.613	247	0.322			
57	0.868	1.30	63.9	2.58		1,515	-0.550	219	0.323	1.74	4.42	
58	0.675	1.32	63.8	2.77	91	1,716	-0.674	227	0.330			
59	0.717	1.20	63.6	2.70	90	1,763	-0.690	230	0.326			
61	0.680	1.27	63.9	2.57	90	1,430	-0.441	228	0.334			
62	0.655	1.27	63.9	2.51	90	1,492	-0.603	249	0.328			
64	0.648	1.27	64.2	2.69		1,887	-0.602	233	0.321			
65	0.740	1.36	63.4	2.50		1,934	-0.583	207	0.348			
66	0.676	1.26	64.1	2.58	89	1,768	-0.524	232	0.320			
69	0.639	1.25	64.3	2.51	90	1,658	-0.354	216	0.326	2.84	6.12	-38.0
70	0.665	1.27	63.7	2.43		1,475	-0.540	189	0.336			
71	0.669	1.20	64.2	2.61		1,474	-0.365	233	0.329			
73	0.660	1.33	63.9	2.46		1,606	-0.370	245	0.320			
74	0.705	1.28	63.4	2.60	90	1,488	-0.405	215	0.330			
76	0.700	1.30	63.7	2.38	90	1,492	-0.292	241	0.330			
77	0.675	1.21	63.5	2.64	91	1,684	-0.583	229	0.327			
78	0.675	1.32	63.9	2.69	91	1,776	-0.651	228	0.328			
79	0.650	1.29	63.8	2.66	91	1,580	-0.564	234	0.326			
81	0.675	1.33	63.6	2.69	91	1,705	-0.655	230	0.323			
85	0.709	1.31	63.6	2.52	90	1,631	-0.305	232	0.336			
87	0.666	1.26	63.9	2.59	89	1,545	-0.438	213	0.328			
88	0.678	1.28	64.0	2.81	89	1,678	-0.543	217	0.327			
89	0.688	1.23	64.2	2.65	90	1,511	-0.676	226	0.324			
90	0.679	1.28	63.7	2.62	89	1,698	-0.503	235	0.314			
93	0.692	1.24	63.7	2.49	89	1,523	-0.594	235	0.326			
95	0.712	1.34	63.7	3.00	90	1,624	-0.484	221	0.330			
97	0.670	1.25	63.7	2.70	88	1,397	-0.682	227	0.334			
98	0.668	1.25	63.7	2.66	88	1,452	-0.689	235	0.325			
99	0.660	1.27	64.0	2.65	89	1,709	-0.519	235	0.317			
Average	0.686	1.29	63.8	2.64	89	1,566	-0.520	226	0.326	2.11	5.20	-37.20
Std. Dev.	0.0414	0.0392	0.3209	0.1338	1.4664	169.23	0.1206	11.53	0.0062	0.629	0.86	1.13
Coef. of Var.	6.037	3.046	0.503	5.070	1.642	10.808	23.197	5.096	1.905	29.782	16.49	-3.04

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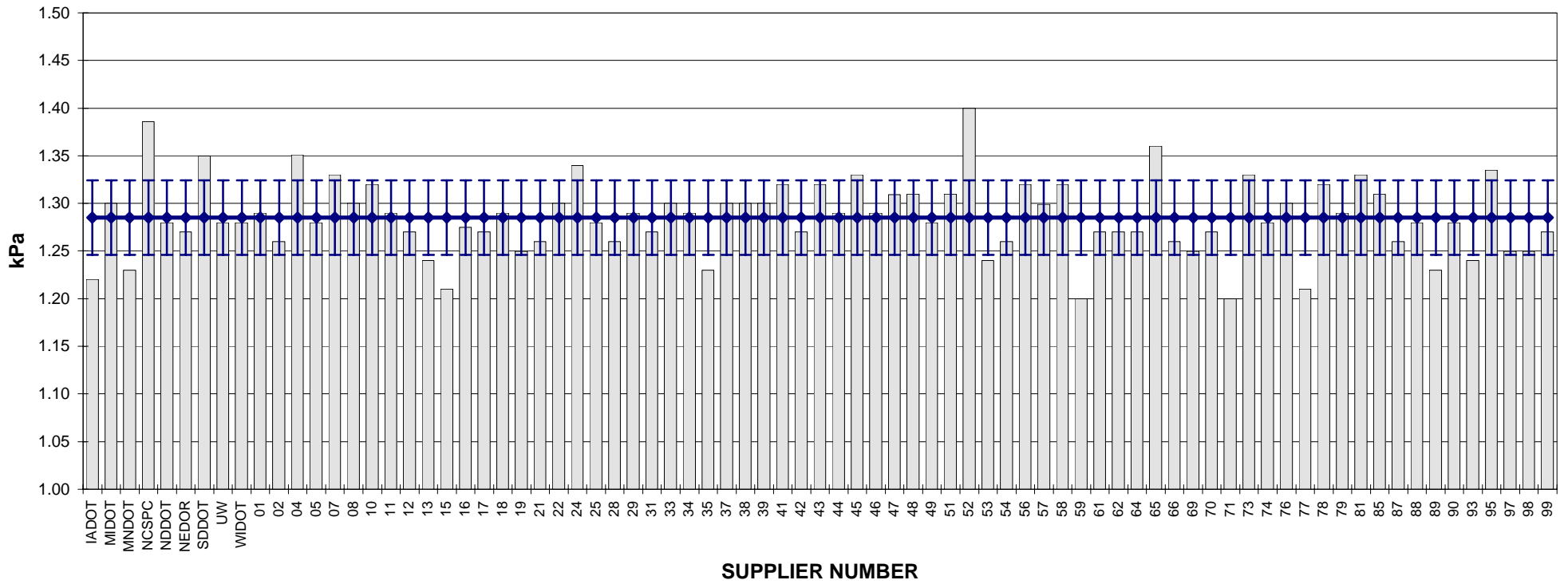
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ROTATIONAL VISCOSITY



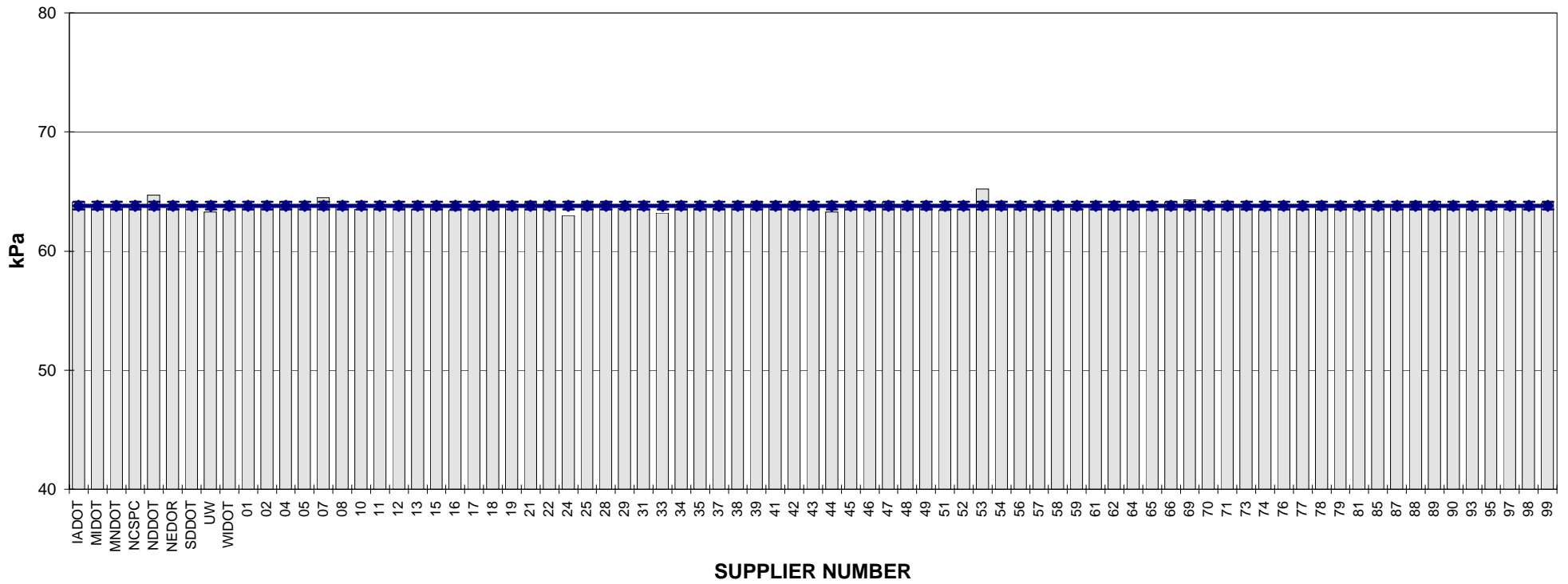
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DSR - ORIGINAL



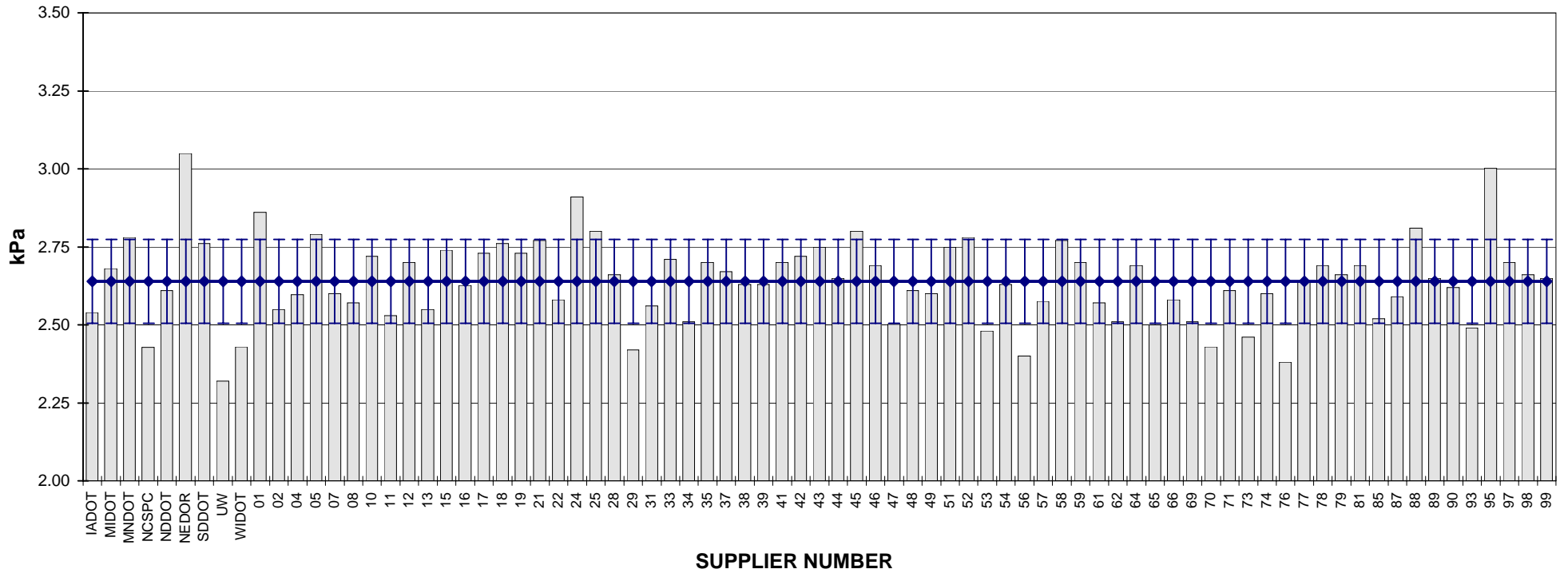
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DSR - PHASE ANGLE



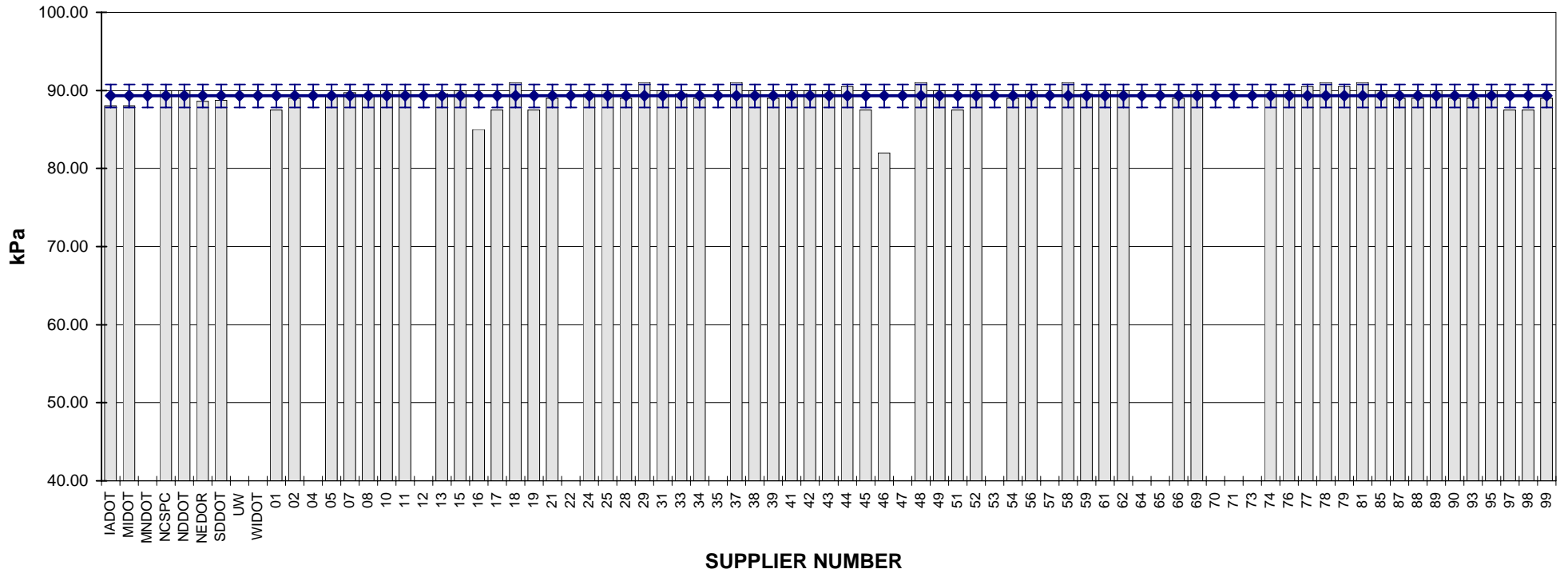
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DSR - RTFO



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ELASTIC RECOVERY

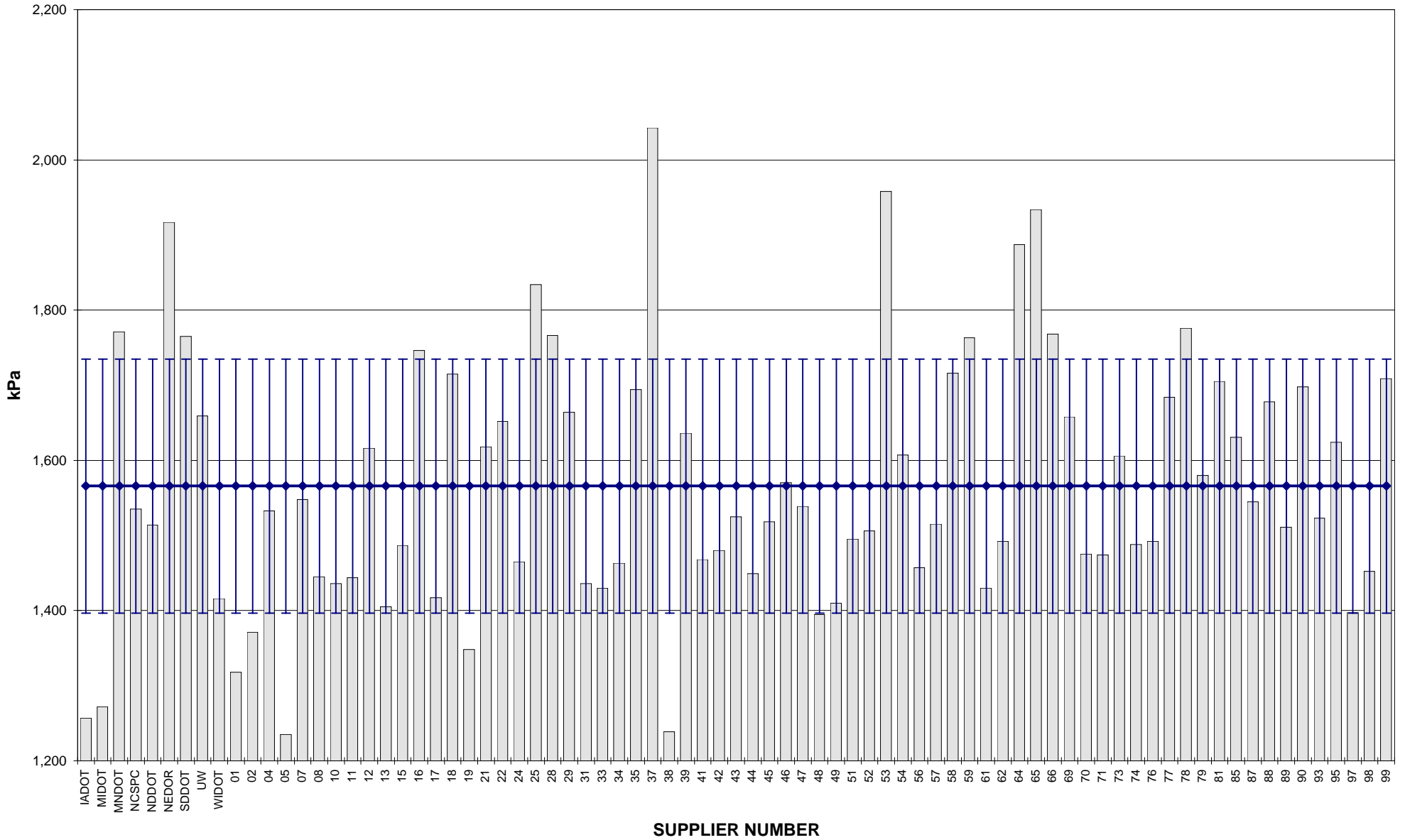


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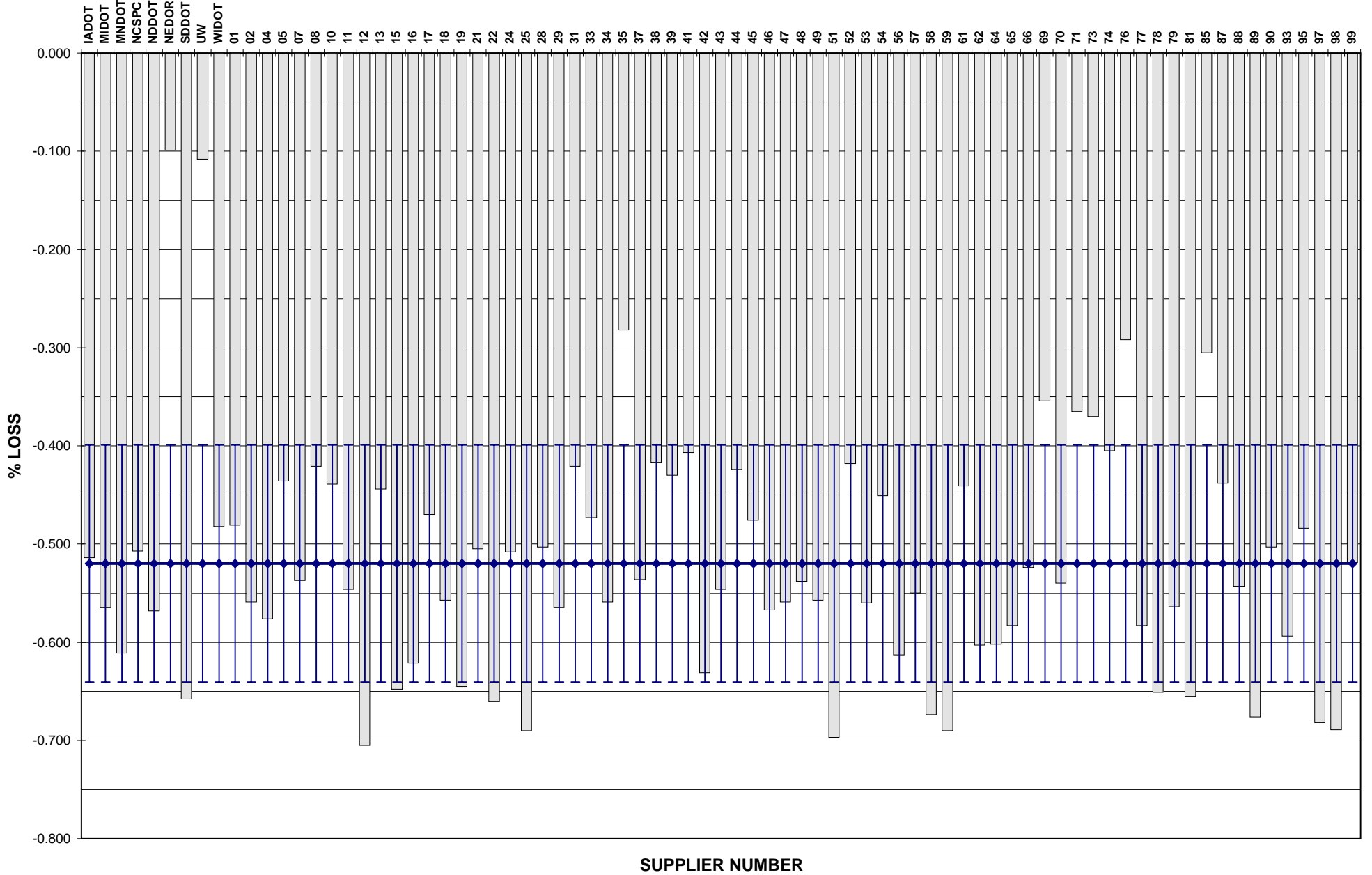
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DSR - PAV



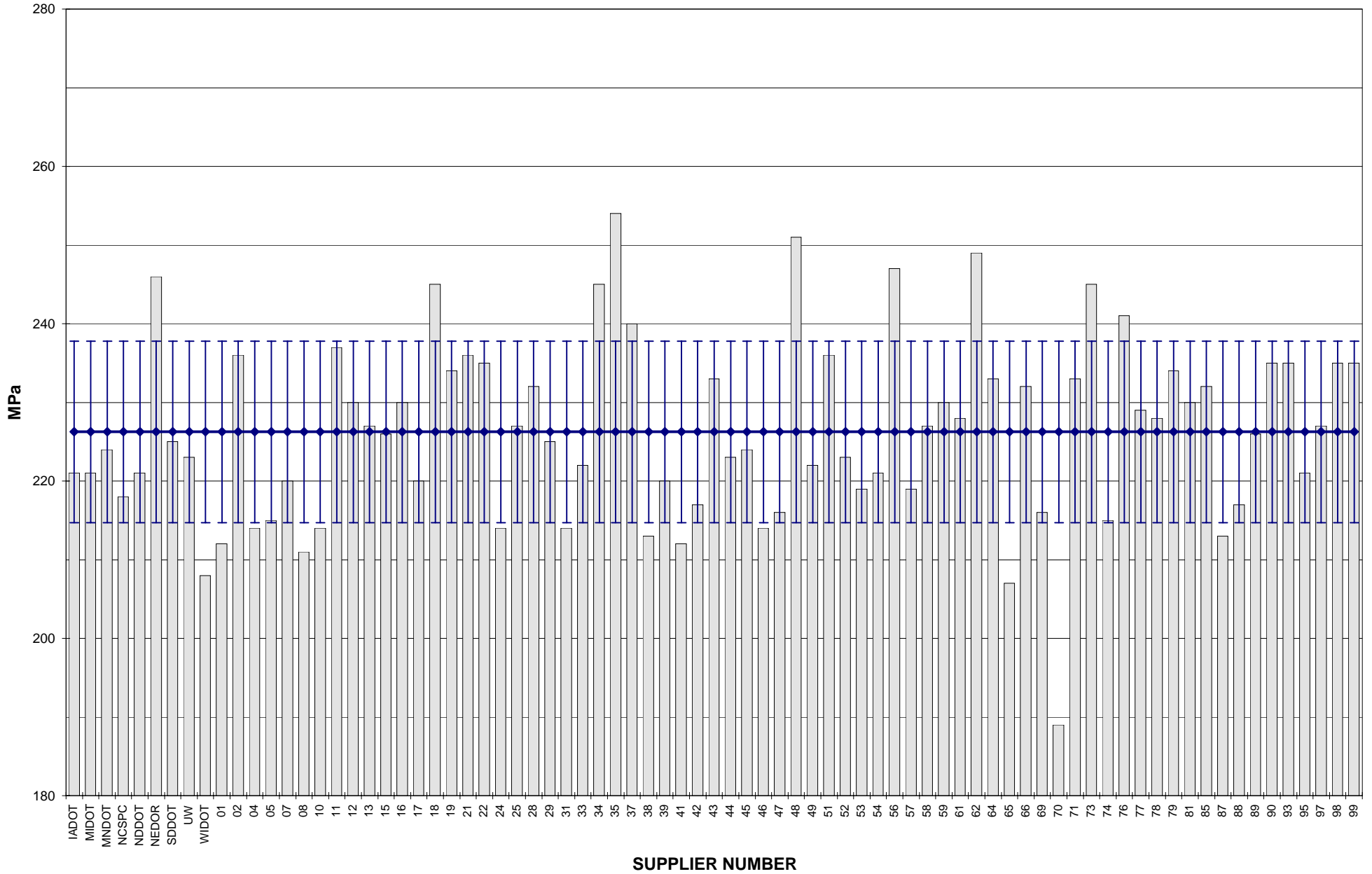
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RTFO MASS LOSS



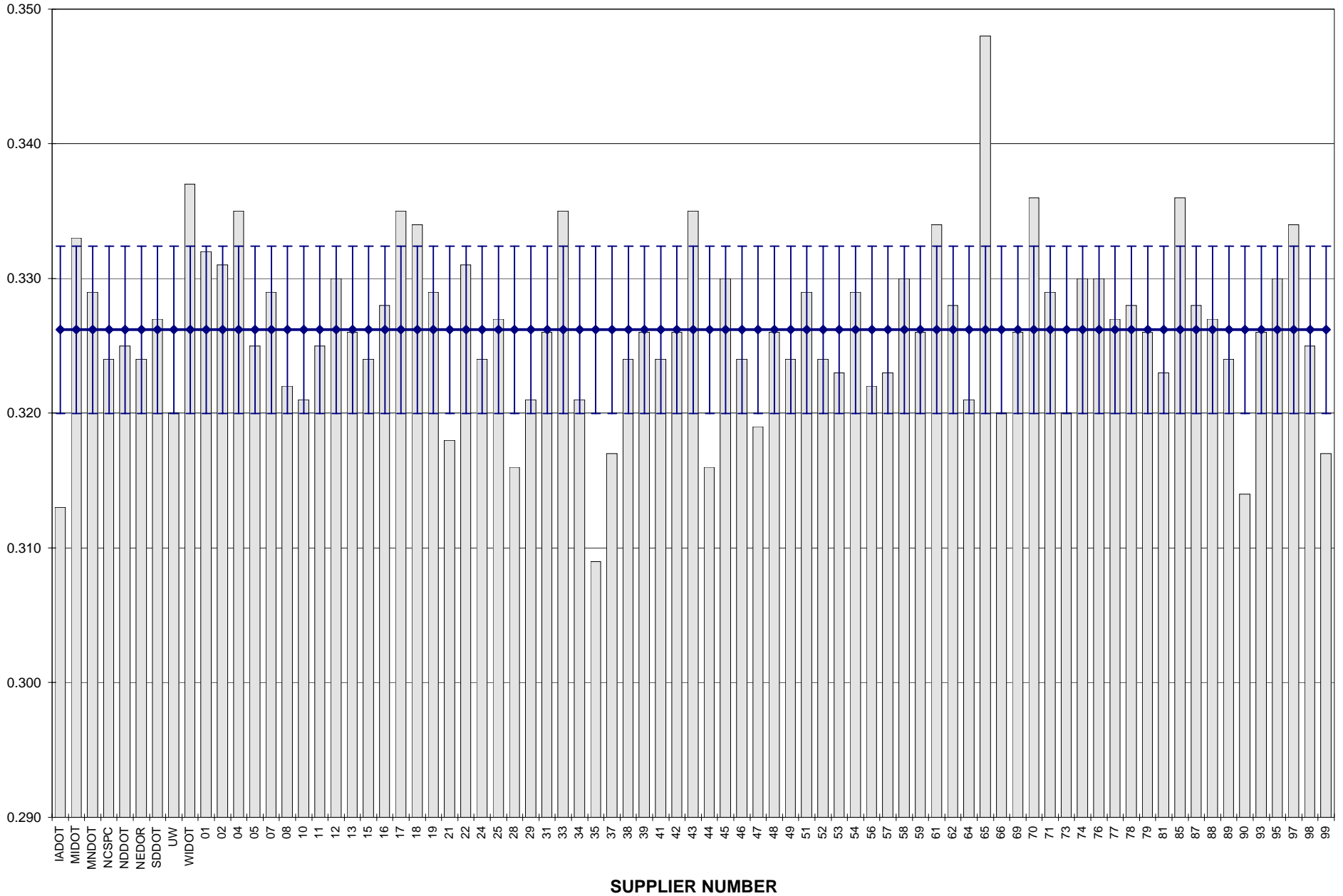
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BBR STIFFNESS



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BBR m-VALUE



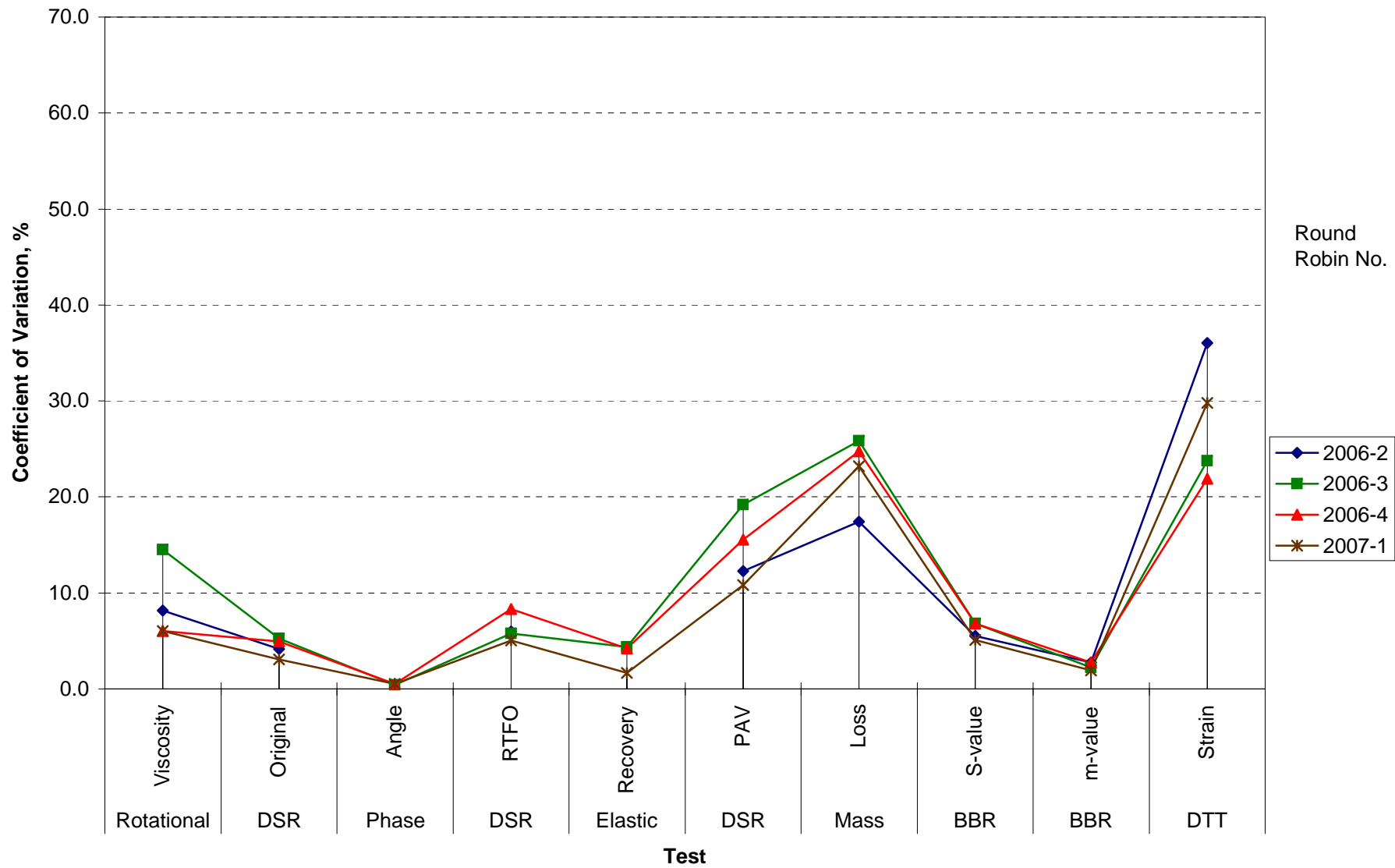
**COMBINED STATE BINDER GROUP ROUND ROBIN 2007-1
SUMMARY A**

COEFFICIENT OF VARIATION

Round Robin No.	Number of Participants	Coefficient of Variation, %									
		Rotational Viscosity	DSR Original	Phase Angle	DSR RTFO	Elastic Recovery	DSR PAV	Mass Loss	BBR S-value	BBR m-value	DTT Strain
2006-2	77	8.182	4.138		5.992		12.270	17.442	5.496	2.752	36.040
2006-3	75	14.526	5.259	0.417	5.762	4.346	19.183	25.848	6.829	2.219	23.743
2006-4	74	6.040	4.957	0.523	8.340	4.201	15.562	24.755	6.799	2.734	21.909
2007-1	79	6.037	3.046	0.503	5.070	1.642	10.808	23.197	5.096	1.905	29.782

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COEFFICIENT OF VARIATION



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STATISTICS WITH OUTLIERS REMOVED:

	Rotational Viscosity (Pa.s) @135°C	DSR Original (kPa) @64°C	Phase Angle @64°C	DSR RTFO (kPa) @64°C	Elastic Recovery (%)	DSR PAV (kPa) @19°C	Mass Loss (%) @163°C	BBR S-value (MPa) @-24°C	BBR m-value @-24°C
Average	0.680	1.29	63.8	2.63	89	1,566	-0.531	227	0.326
Std. Dev.	0.0237	0.0392	0.2615	0.1262	1.1440	169.23	0.1012	10.79	0.0057
Coef. of Var.	3.485	3.046	0.410	4.790	1.279	10.808	19.073	4.759	1.759