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Test Results on CMP Tester

Material	Parameter	2 psi			5 psi			8 psi		
		50 rpm	100 rpm	150 rpm	50 rpm	100 rpm	150 rpm	50 rpm	100 rpm	150 rpm
LowK on Silicon	COF	0.36	0.29	0.12	0.41	0.38	0.37			
	AE	0.161	0.105	0.069	0.540	0.470	0.230			
	Visual	partial removal			complete removal					
SiC on LowK on Silicon	COF	0.51	0.32	0.17	0.54	0.64	0.62	0.56	0.58	0.56
	AE	0.050	0.047	0.062	0.044	0.096	0.190	0.077	0.180	0.200
	Visual	scratches, almost no polish			partial polish, light delamination			more polish, delamination		
Cu on Ta on SiC on LowK on Silicon	COF	0.53	0.36	0.13	0.57	0.48	0.35	0.60	0.59	0.55
	AE	0.100	0.095	0.066	0.205	0.316	0.242	0.324	0.605	1.185
	Visual	scratches and very light polish			light polish and scratches			delamination and polish		

Notes:

- 1 - Sematech wafers, brought to CETR by ShinKook Lee
- 2 - Each test run was only 20 sec
- 3 - The pressure of 2 psi was obviously too low

Results:

- 1 - COF reflects contact conditions (floating or rubbing) and materials: low-K - 0.4, SiC - 0.6, Cu - 0.55
- 2 - AE evidences material removal (polishing - smooth curve, delamination - with peaks)