PAS 5500/300 Master
PM sys.XXXX
critical tools (DUV1)

WD Non

Engineer : XXXXXXX

Date: 11/6/2023

PM Type : QUARTERLY PM

Tool. DUV1

Manager sign off of PM Completion

Master

Sequence	Subject	Frequency	Action	Time	Procedure	Specification	Result	Verification	Comments
	BEFORE STARTING PM, PERFORM MACHINE CONSTANTS BACKUP	Monthly	Perform	0:05	Specific Backup MCs Run MCBackup script	Completed Y / N? Recommended backup filename example "PrePM_21Sept2016"	y		

	Image Quality Control	Monthly	Check	0:05	Image Quality Control	**3 sigma image sensor measurements:**
						Magnification: </= 0.3 ppm (Scanner) /// <=2.0 (Stepper)
						Rotation: </= 0.3 µrad (Scanner) /// <= 2.0 (Stepper)
						Translation X: </= 3 nm
						Translation Y: </= 3 nm
						Image Tilt Rx: </= 2.0 µrad
						Image Tilt Ry: </= 1.5 µrad (Scanner) /// <= 2.0 (Stepper)
						Focus: </= 20 nm (Scanner) /// <= 50 (Stepper)
							0.22
							0.27
							3.34
							4.39
							1.09
							1.49
							46.52		

	Edge Sensor repro	Monthly	Check	0:20	Edge Sensor Reproducibility 1x25 Wh_EdgSnsRep251.PER	Standard dev. Xalign: < 1.5 µm (Computed results) Standard dev. Yalign: < 1.5 µm Standard dev. Rot: < 30 µrad mean X align < 10 um (absolute value) mean Y align < 10 um (absolute value) mean Rotation < 100 urad (absolute value)	0.28 0.6 17.5 2.53 2.37 -80.76		
	Mark Sensor repro	Monthly	Check	0:20	Mark Sensor Reproducibility 1x25 WhMasRpr251.PER	Standard dev. Xtrans: < 4 µm (Computed results) Standard dev. Ytrans: < 4 µm Standard dev. Rot: < 30 µrad mean X align < 10 um (absolute value) mean Y align < 10 um (absolute value) mean Rotation < 100 urad (absolute value)	0.18 0.51 10.27 0.73 -0.87 -23.74		
	Uniformity - Conventional (Stepper only test , /300) NA =0.57, sigma = 0.75 **Field size X=22, Y =22 is enough**	Monthly	Check	0:10	Uniformity Il2IllUni.PER	Uniformity: 0 ± 1.0% Intensity: > 225mW/cm2 (Energy sensor)	2.81% 189		
	Uniformity - Annular (Stepper only test , /300) NA =0.54, sigma outer =0.75, sigma inner = 0.45 **Field size X=22, Y =22 is enough**	Monthly	Check	0:10	Uniformity Il2IllUni.PER	Uniformity: 0 ± 1.4% Intensity: > 225mW/cm2 (Energy sensor)	2.60% 187		
	Check C&T performance (Stepper only test , /300)	Monthly	Check	0:05	Check C&T performance CtChk.PER1	TCU water flow: 42.5 ± 0.5 Tlens - Tincoming water: < 0.4 ºC Incoming Air Pressure: 1000 ± 10 Pa	42.5 0.05 1094.5		
	Fine Tune Q above P for Wafer In dependency. (Use coated wafer)	Quarterly	Check/Adjust	0:10	Fine Tune Q above P for Wafer In dependency Ls_QxPxWafInd.ADJ	Q-Branch: mcc_q > 0.95 P-Branch: mcc_p > 0.95 Q above P : New Value < 10 µm Standard Deviation < 50 nm	 5.073 0.9		
	Determine RIS to Wafer Offset	Quarterly	Check/Adjust	0:05	Determine RIS to Wafer Offset RisWafOff.ADJ	Q-Branch: mcc_qRIS > 0.95 P-Branch: mcc_RIS > 0.95	na na		
	Monitor and Re-Adjust Q Above P Machine Constant	Quarterly	Check/Adjust	0:10	Monitor and Re-Adjust Q Above P Machine Constant Ls_QxPxCal.ADJ	Measured Difference < 50 nm If less than 50 select YES to update and run IQC	0 y		
	Check Level Sensor Coarse and Fine Performance	Quarterly	Check	0:15	Check Level Sensor Coarse and Fine Performance Ls_CrsFin.PER1	See procedure for specifications: Within Specification Y / N?	 y		
	Straylight w/ Rema O/C (Stepper only test , /300)	Monthly	Check	0:10	Straylight IpStrLgt.PER1	Performed Y / N? Maximum Straylight Number < 5%	 2.46%		
	Focal plane adjustment	Quarterly	Check/Adjust	1:00	Focal plane adjustment MetIqFocLat.ADJ1	Adjusted Y / N? Focus: <0.100 um Image Tilt Rx: < 10 µrad Image Tilt Ry: < 10 µrad	 39nm 2.57966 -0.71333		
	Clean wafer table **manually** (Stepper only test , /300)	Monthly	Perform	0:15	Clean wafer table using granite stone	Inspect surface with flashlight and make sure no particles / lint			

					WsStn.CLE FOLLOW MMM PROCEDURE		na		
	Measure Stone to Lens Tilt (Stepper only test , /300)	Monthly	Check/Adjust	0:10	Matching stone to lens tilt MetMatTlt.ADJ2 MODELLING and UPDATING FOR "STONE TO LENS" ONLY NEED TO RUN 2 WAFERS	Adjusted Y / N? Delta STOLE Rx: < 10 µrad Delta STOLE Ry: < 10 µrad UPDATE (Y/N) , VERIFY AGAIN IF UPDATED.	na 0 -0.8 na		
	Ris white offset tilt (Stepper only test , /300)	Monthly	Check/Adjust	0:10	Ris white offset tilt MetRisWhiOff.ADJ	MCs Updated Y / N?	y		
	Red-Blue	Quarterly	Check/Adjust	1:00	Red-Blue MetIqSet.ADJ8	Reticle Tilt X < 50 µrad Reticle Tilt Y < 50 µrad Reticle Height < 20 µm	-33.817 -15.67 -1.339		
	AFTER COMPLETING PM, PERFORM MACHINE CONSTANTS BACKUP	Monthly	Perform	0:05	Specific Backup MCs POST MCBACKUP	Completed Y / N? Recommended filename "PostPM_DDMMYY"	y		
	DISK TO DISK IMAGE	Monthly	Perform	1:00	Disk to Disk Backup script CsSw_D2dBck.ADJ	Completed Y / N?	y		
	HOT NMP STRIP ALL METROLOGY WAFERS (F6STRP RECIPE, ~22min)	Monthly	Perform	0:25	Strip wafer during DISK to DISK image.	Completed Y / N?	na		
	Clean/inspect reticle library ports	Monthly	Perform	0:10	Wipe with 100% IPA alll library ports and surrounding areas	Completed Y/N? Inspect for broken, bent, or loose pins/screws	y		
	Clean/inspect wafer reject ports	Monthly	Perform	0:10	Wipe with 100% IPA reject carriers/covers and surrounding area	Completed Y/N? Inspect for broken, bent, or loose pins/screws	y		
	ABSOLUTE WAVELENGTH REFERENCE (AWR) CALIBRATION. ELS 6610 Ops manual p. 160 of 224 absolute wavelength reference calibration.	Monthly	Check	0:15	List the pre/post values as seen on the Cymer paddle. If there was an error, record it. If there was no error, type in "N"/Can be completed during Disk2disk back up.	Delta Coarse < 2.0 Pr Delta Fine < 1.0 Post_Coarse Post_Fine	na na na na	#VALUE! #VALUE!	
	ANY MISC WORK DONE, NOTE HERE.	Monthly	MISC	TBD		SPECS:			