

Attachment B5
Positive Control Log Matrix for Branding Machine

POSITIVE CONTROL LOG MATRIX FOR BRANDING MACHINE								Revision: 3		
INPUT VARIABLE			PLATFORM (BRANDING MACHINE)							
Item	Category	Subcategory	Control Item	Frequency	MH3020	02MLAS	MLAS KETECA	ISMECA	SOLAS/ DUM-815 DYSEC& DIPBR	HSI250 BRANDING
1	Critical Parts	Power	Power	Start of the Shift/ Every Set-up	N/A	6-20W	5-90 %	N/A	N/A	N/A
			Current	Start of the Shift	N/A	5-23 A	5-23 A	N/A	N/A	N/A
			Acceptance Score	Start of the Shift	N/A	N/A	N/A	8-28 A	N/A	N/A
			Water Temperature	Start of the Shift	N/A	N/A	N/A	N/A	20-30°C	N/A
			Cabinet Temperature	Start of the Shift	N/A	N/A	N/A	N/A	15-35°C	N/A
			Lamp Current	Start of the Shift	N/A	N/A	N/A	N/A	8-20 A	N/A
			Diode Current / Pumping Power	Start of the Shift/ Every Set-up	N/A	N/A	N/A	N/A	8-28 A	N/A
			Frequency	Start of the Shift/ Every Set-up	N/A	1000-180000 Hz	1000-180000 Hz	5000-40000 Hz	5000-40000 Hz	N/A
2	Critical Parts	Laser	Laser Temperature	Start of the Shift/ Every Set-up	140 - 160	N/A	N/A	N/A	N/A	N/A
			Laser Set Power	Start of the Shift/ Every Set-up	3 - 10 W	N/A	N/A	N/A	N/A	N/A
			Current Percentage	Start of the Shift/ Every Set-up	60 - 99%	N/A	N/A	N/A	N/A	N/A
			Laser Frequency	Start of the Shift/ Every Set-up	20 - 100 kHz	N/A	N/A	N/A	N/A	N/A
			Pulse Width	Start of the Shift/ Every Set-up	100 ns	N/A	N/A	N/A	N/A	N/A
			Pulse Frequency	Every Set-up / Hang up	N/A	N/A	N/A	N/A	N/A	30000 Hz
			Gain Control	Start of the Shift/ Every Set-up	1	N/A	N/A	N/A	N/A	N/A
			Laser Running Time	Start of the Shift/ Every Set-up	<100,000 hours	N/A	N/A	N/A	N/A	N/A
3	Critical Parts	Mark	Mark Loop	Every Set-up / Hang up	N/A	1	1	N/A	N/A	N/A
			Mark Intensity	Start of the Shift/ Every Set-up/ Hang-up	N/A	N/A	N/A	10-85%	10-85%	5% - 30%
			Mark Delay	Every Set-up / Hang up	N/A	N/A	N/A	N/A	N/A	15 micro sec.
4		Line	Line Width	Every Set-up / Hang up	N/A	N/A	N/A	0.001 mm	0.001 mm	0.001-0.002 mm
			Overlap	Every Set-up / Hang up	N/A	N/A	N/A	15%	15%	0% - 15%
5	Critical Parts	Speed	Laser Speed	Start of the Shift/ Every Set-up	N/A	N/A	N/A	50-1200 mm/s	50-1200 mm/s	N/A
			Draw Speed	Start of the Shift/ Every Set-up	60 - 100 mm/s	N/A	N/A	N/A	N/A	N/A
			Jump Speed	Start of the Shift/ Every Set-up	800 - 1000 mm/s	250-4500 mm/s	250-4500 mm/s	4000 mm/s	4000 mm/s	1000 - 4000 mm/s
			Marking Speed	Start of the Shift/ Every Set-up	N/A	50-2500 mm/s	50-2500 mm/s	N/A	N/A	500-1000 mm/s
			Corner Delay	Every Set-up / Hang up	5 - 20 µs	N/A	N/A	N/A	N/A	N/A
			Stroke Delay	Every Set-up / Hang up	N/A	N/A	N/A	N/A	N/A	100-150 micro sec.
			Min Jump Delay/ Jump Delay	Every Set-up / Hang up	N/A	150 us	150 us	N/A	N/A	150-400 micro sec.
			Max Jump Delay	Every Set-up / Hang up	N/A	250 us	250 us	N/A	N/A	N/A
6	Critical Parts	Pre-vision	Max Limit Length	Every Set-up / Hang up	N/A	10 mm	10 mm	N/A	N/A	N/A
			Inspection Type	Start of the Shift/ Every Set-up	Mark Base	N/A	N/A	N/A	N/A	N/A
			ADD-ON Mark	Start of the Shift/ Every Set-up	80%	N/A	N/A	N/A	N/A	N/A
			PIN ID Model	Start of the Shift/ Every Set-up	75%	N/A	N/A	N/A	N/A	N/A
			Empty Pocket #1	Start of the Shift/ Every Set-up	50%	N/A	N/A	N/A	N/A	N/A
7	Critical Parts	Pre-mark	Empty Pocket #2	Start of the Shift/ Every Set-up	30%	N/A	N/A	N/A	N/A	N/A
			Pre-mark	Start of the Shift/ Every Set-up	30%	N/A	N/A	N/A	N/A	N/A
		Post-vision	Inverse ID	Start of the Shift/ Every Set-up	80%	N/A	N/A	N/A	N/A	N/A
8			OCV Test Accept Ratio	Start of the Shift/ Every Set-up	80%	N/A	N/A	N/A	N/A	N/A