



MACHINE CALIBRATION CERTIFICATION

Machine Information:

Customer Name: C.F. Roark

Serial Number: 10251

Machine Type VX.3-138X108X107

Calibration Date: MAY 12, 2011

Next Calibration Due: NOV. 12, 2011

Electron Beam Welder Calibration Specifications

Parameter	Program Value	Display Value	Probe D.C / Actual KV
Accelerating Voltage (kV.)	10.0 kv	9.9	1.09 VDC 10,064 KV
	20.0 kv	20.0	2.140 19,723 KV
Spec = +/- 3 %	30.0 kv	29.9	3.190 29,537 KV
	40.0 kv	39.9	4.238 39,257 KV
	50.0 kv	49.8	5.293 49,191 KV
	54.0 kv	53.8	5.71 53,070 KV
	60.0 kv	59.8	6.351 59,089 KV
Beam Current(mA.)	10 ma	10	10 ma .050 vdc
	50 ma	50	51 .255 vdc
	100 ma	100	101 .505 vdc
	200 ma	200	201.8 1.009 vdc
	300 ma	300	302 1.51 vdc
	400 ma	400	401.8 2.009vdc
	500 ma	500	500.0 2.50 vdc
Beam Focus(A.)	2.50 amps	2.51	2.50 amp
	3.50 amps	3.51	3.503
	4.50 amps	4.51	4.507
	5.00 amps	5.01	5.005
	6.00 amps	6.01	6.008
	7.50 amps	7.51	7.51
XD/ YD Deflection test	+/-XD1000	-.990 1.000	-9.90 10.00
	+/-YD1000	-.997 1.000	-9.97 10.00
Scanner / Noise and Accuracy	Notes =	Noise normal	Accuracy good
X-Axis Speed	10.0 ipm	10.0 -10.0	Same as Display
	100.0 ipm	100.0 -100.0	Same as Display
Y-Axis Speed	10.0 ipm	10.0 -10.0	Same as Display
	100.0 ipm	100.0 -100.0	Same as Display
Z-Axis Speed	10.0 ipm	10.0 -10.0	Same as Display
	50.0 ipm	50.0 -50.0	Same as Display
R-Axis Speed	0.1 rpm	.10 -.10	Same as Display
	5.00 rpm	5.00 -5.00	Same as Display
T-Axis Speed	0.1 rpm	.10 -.10	Same as Display
	2.00 rpm	2.00 -2.00	Same as Display
RH-Axis Speed (IA)	0.1 rpm	.10 -.10	Same as Display
	5.00 rpm	5.00 -5.00	Same as Display



BIAS SUPPLY DATA

Input to Bias Amplifier (Crown DC300)	Output from Bias Amplifier (Crown DC300)	Output from High Voltage Tank
3.23 vac	85 vac	1,070 vdc

FILAMENT SUPPLY DATA

Program Reference Value	Output from High Voltage Tank	Ripple
10.00Vdc (from D/A/C)	3.40 vdc 78 mvac	2.29 %

The calibration was performed using a Fluke 87 V DVM S/N 00114
with a calibration date of 7-1-10 which is due for calibration on 7-1-11.

High Voltage probe Sciaky Model DT9903 S/N 3-8216 / 842570 with a
calibration date of 4-27-11 and due for calibration on 4-27-12.

All equipment used to calibrate the system were calibrated using calibration standards that are traceable to the National Institute of Standards and Technology (NIST). The calibrating facility conforms to ANSI Z540-1-1994.

Robbie Cherry Sciaky Inc. 5-12-11
Performed by Date