DIRECTIONAL CONTROL VALVE (Metallic Chip)

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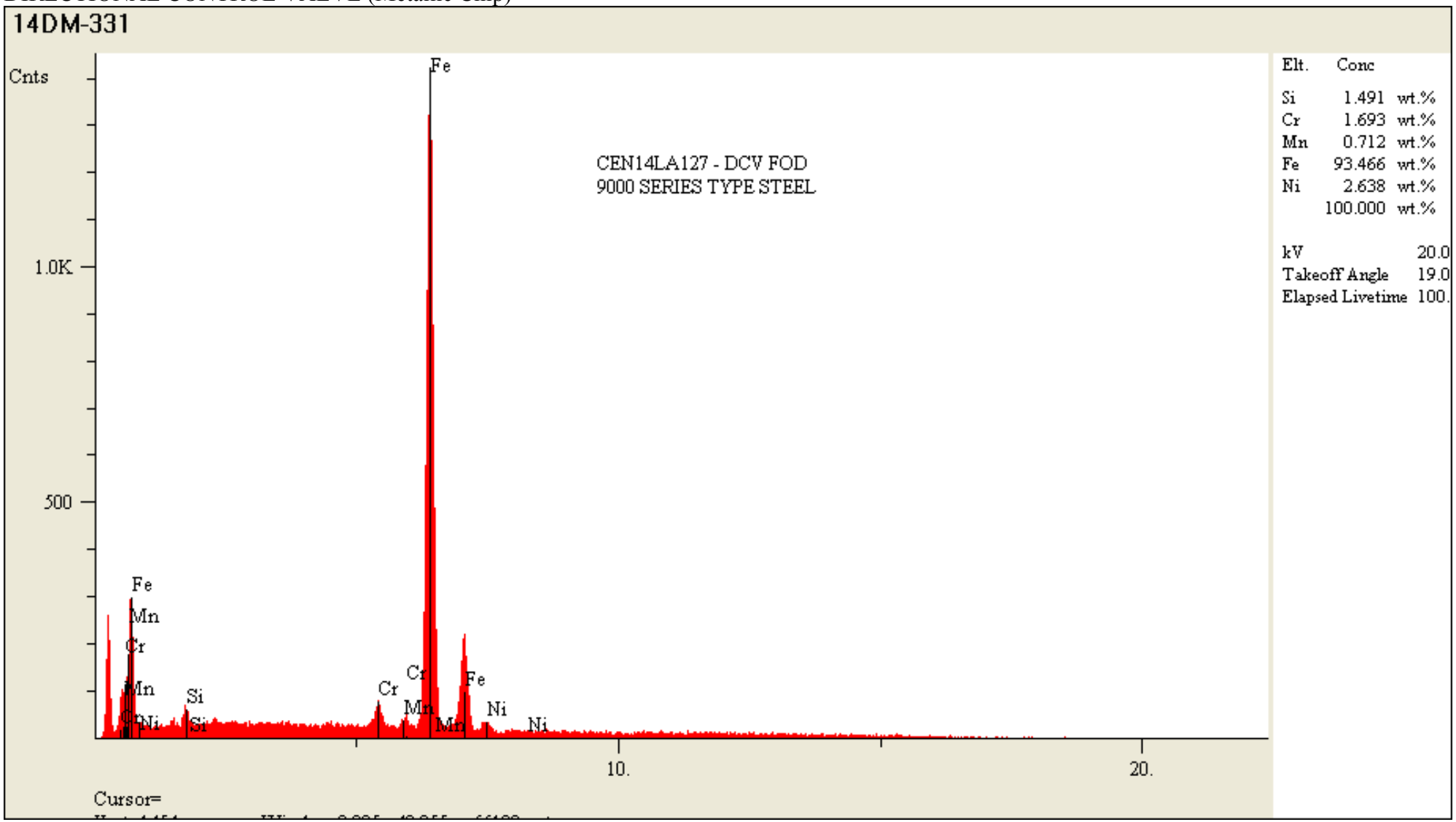
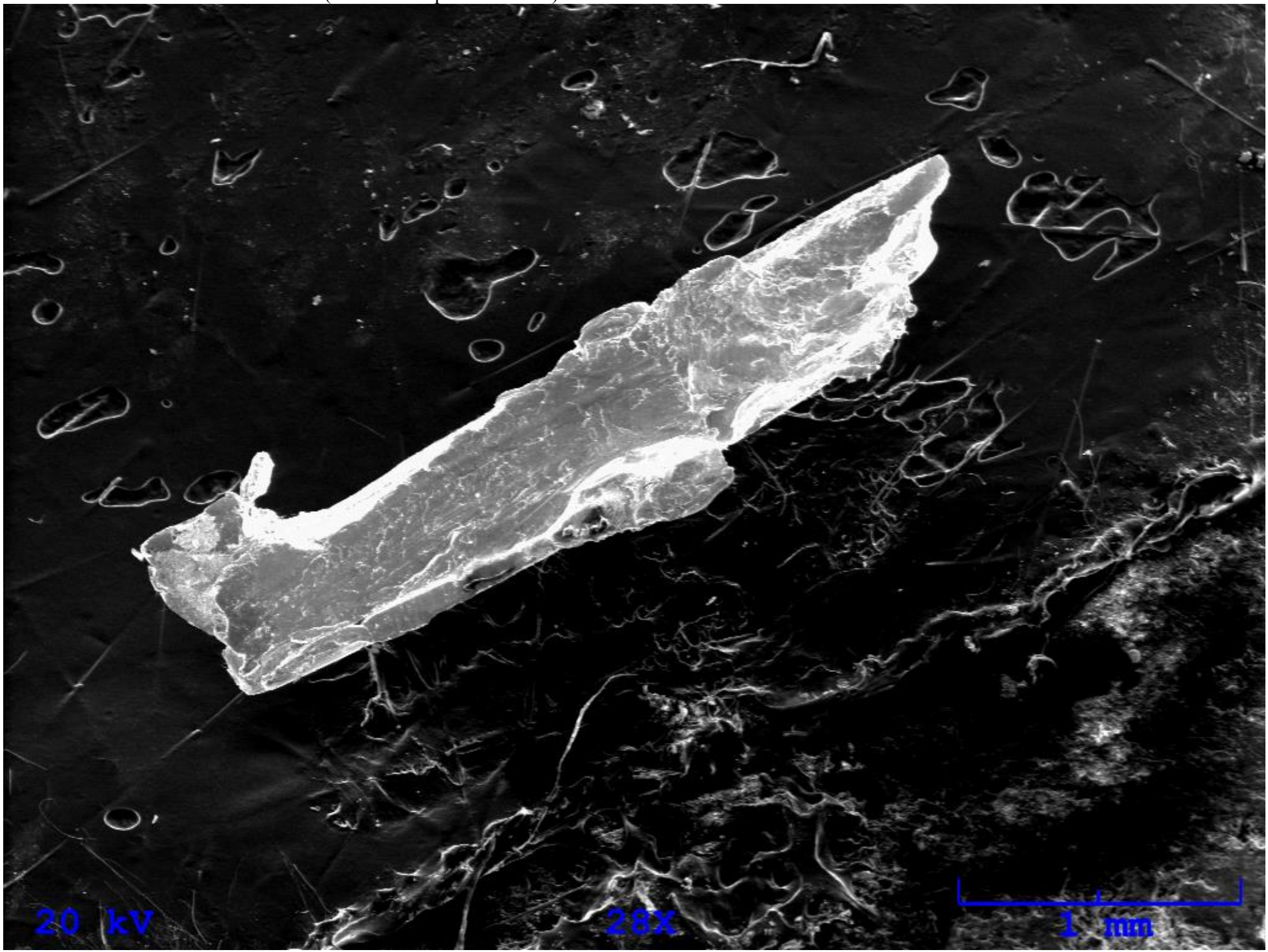
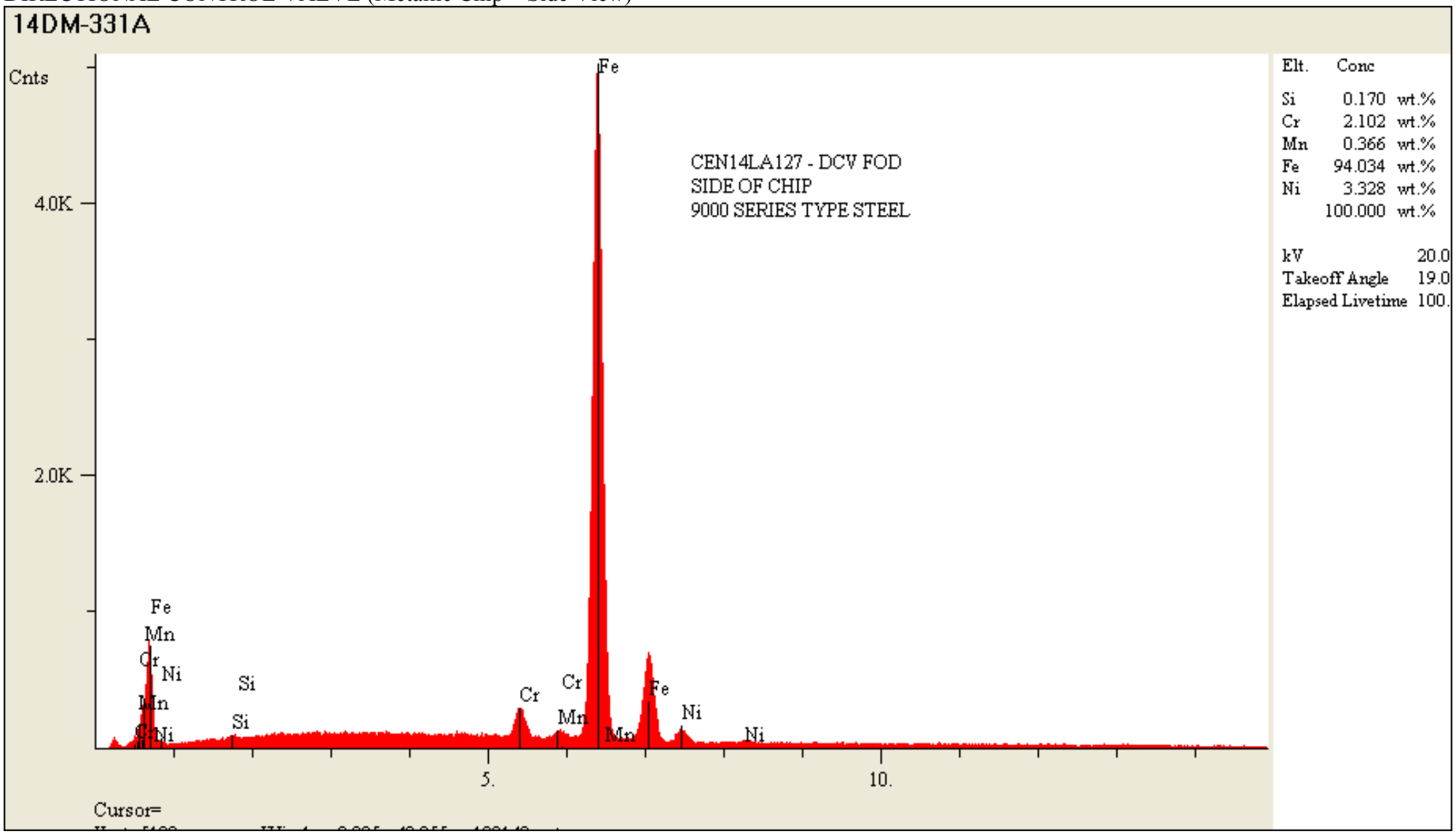


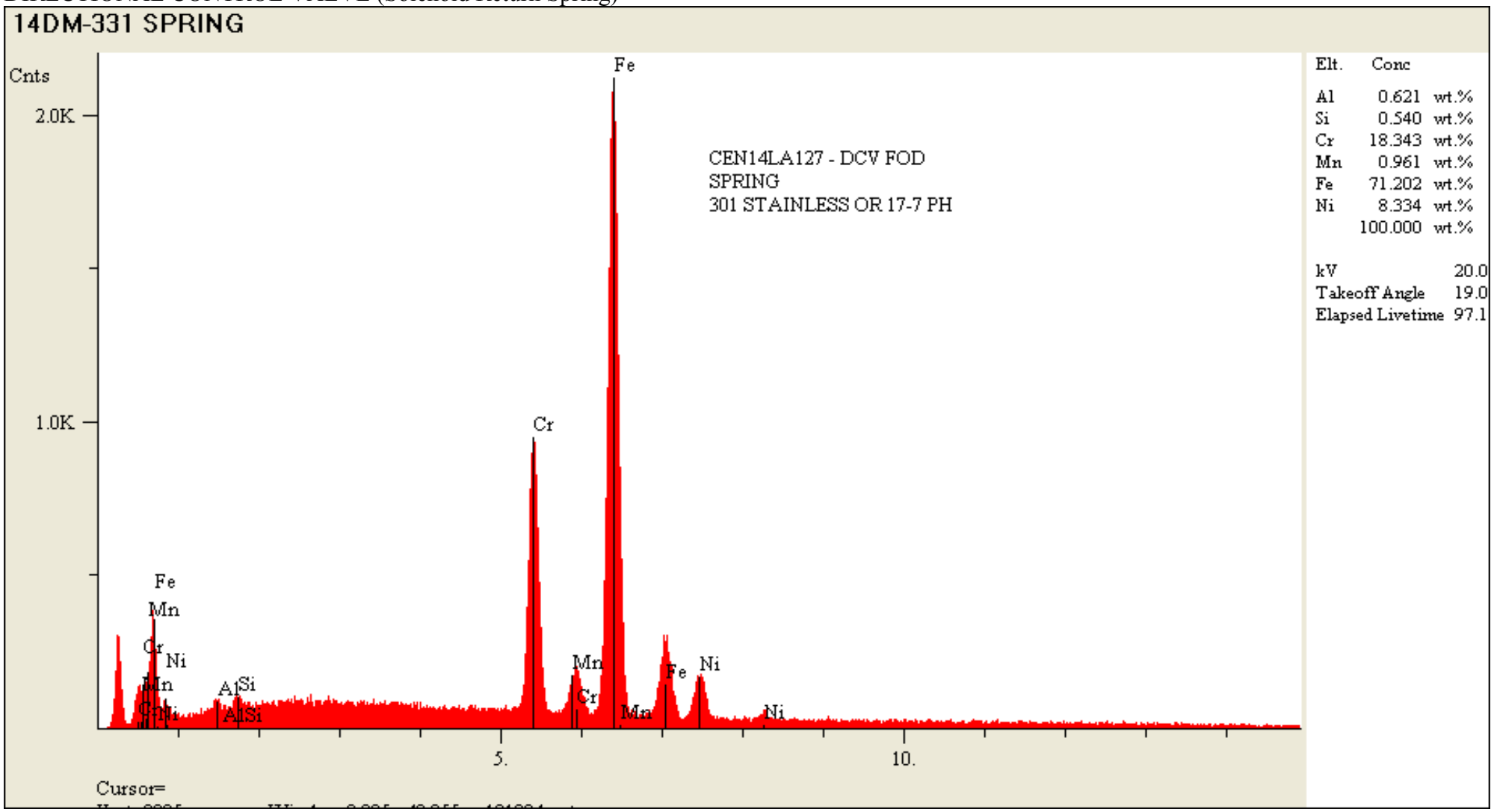
DIRECTIONAL CONTROL VALVE (Metallic Chip – Side View)



DIRECTIONAL CONTROL VALVE (Metallic Chip – Side View)



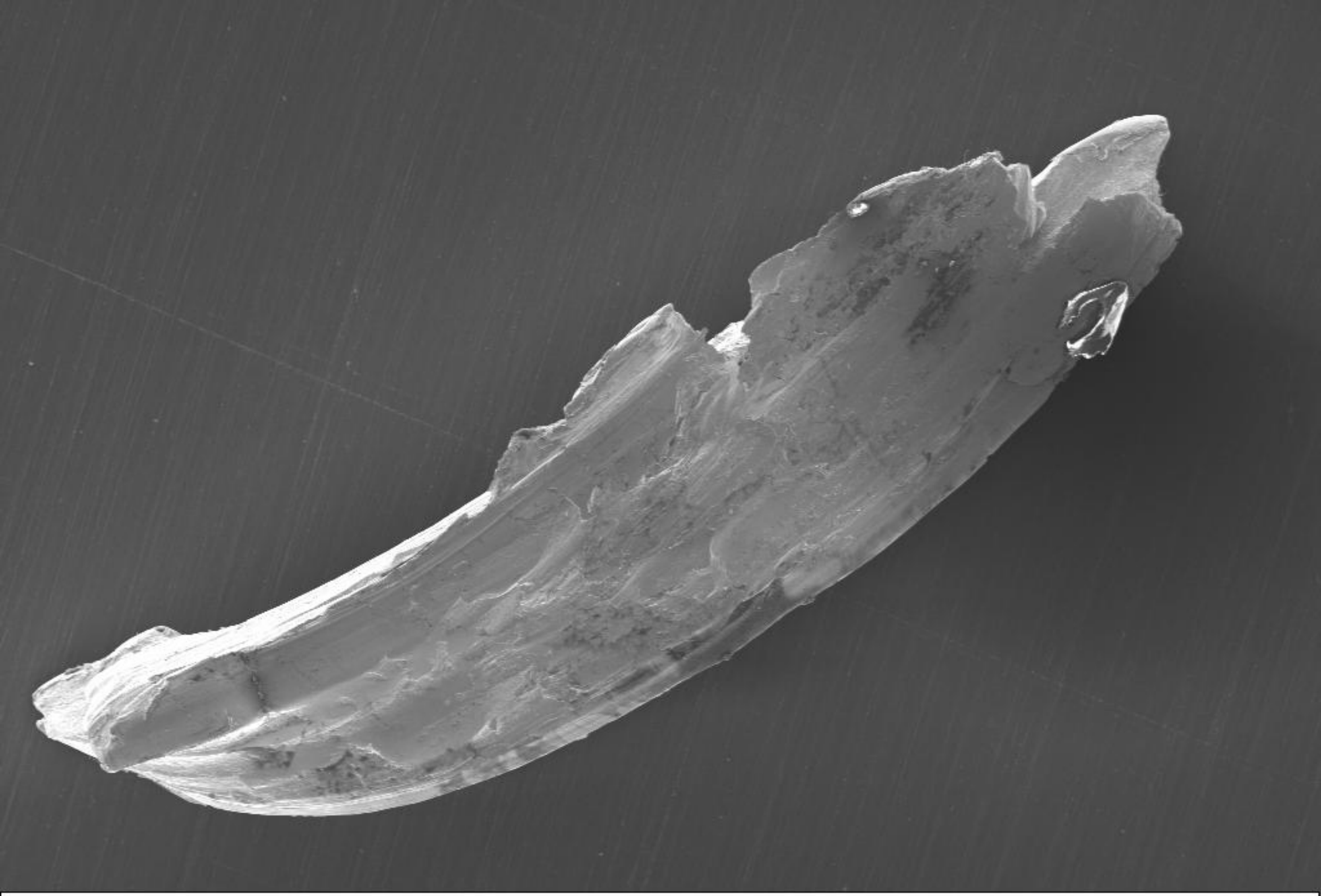
DIRECTIONAL CONTROL VALVE (Solenoid Return Spring)



100 µm

EHT = 10.00 kV Mag = 100 X Det. = SESI Mode = SEM Ref. No. = 706

WD = 19.1 mm Ref. Std. = Out Dev. Aperture = 30.00 µm **NTSB Materials Laboratory**



100 µm

EHT = 10.00 kV Mag = 100 X Det. = SESI Mode = SEM Ref. No. = 703

WD = 18.9 mm Ref. Std. = Out Dev. Aperture = 60.00 µm **NTSB Materials Laboratory**

--- Metallic Chip (top) @ 20kV 500X ---

Wed Apr 16 10:28:40 2014
Filter Fit Chi-squared value: 30.571
Correction Method: ZAF
Acc.Voltage: 20.0 kV Take Off Angle: 43.3 deg

Element Line	Element Wt.%
Cr K	1.27
Mn K	0.91
Fe K	94.49
Ni K	3.33
Total	100.00

--- Metallic Chip (bottom) @ 20kV 500X ---

Wed Apr 16 10:37:43 2014
Filter Fit Chi-squared value: 25.330
Correction Method: ZAF
Acc.Voltage: 20.0 kV Take Off Angle: 37.5 deg

Element Line	Element Wt.%
Si K	0.27
Cr K	2.57
Mn K	0.70
Fe K	93.33
Ni K	3.13
Total	100.00