Application of dj method, a quantitative analysis method, to ED-XRF

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The dj method, which has been used in WD- XRF for quantitative analysis, was applied to ED-XRF. Four kinds of binary standard samples (Fe-Cr, Fe-Mn, Fe-Ni, Fe-Mo) were measured for each of about 8 compositions and a calibration curve was prepared. The calibration curve is shown in Fig.1. and a representative spectrum is showing in Fig.2. Then, one composition of a ternary standard sample (Fe-Cr-Mn, Fe-Cr-Ni, Fr-Cr-Mo) was measured, and the correction factor (dj) was obtained. Using this dj, calculate the Cr concentration contained in the alloy.

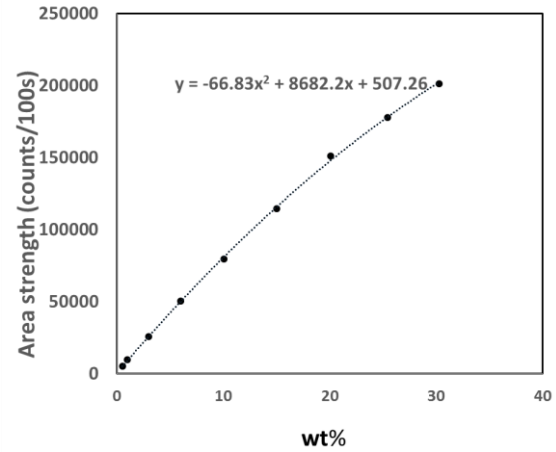

Fig1 calibration curve (Cr)

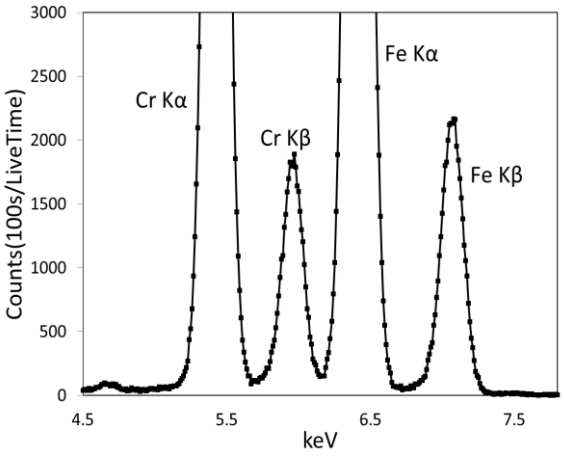

Fig2 Measured Fe-Cr binary standard sample (30.25wt%Cr) X-ray spectrum