KYOTO ELECTRONICS MANUFACTURING CO.,LTD.

TIQ-97037enL

Application Memo

Ferrous Iron (Fe^{2+}) in Alloy Plating Solution

Industry	Non-ferrous metal
Instrument	Automatic potentiometric titrator
Measurement method	Redox titration

1. Overview

After adding Zimmermann-Reinhard reagent as chloride ion masking agent to the diluted sample, it is titrated with 0.02mol/L potassium permanganate solution. The endpoint is the maximum inflexion on the titration curve. The ferrous iron concentration is calculated from the titration volume of the potassium permanganate solution.

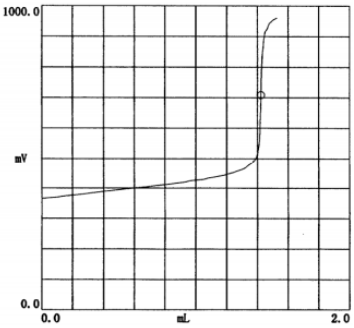
2. Apparatus

Main unit	Automatic potentiometric titrator (preamplifier STD)
Electrode	Platinum electrode Ceramic reference electrode

3. Reagents

Titrant	0.02mol/L potassium permanganate solution
Additive	Manganese sulfate solution (Zimmermann-Reinhard reagent)

4. Example



-Titration curve-

-Measurement results-

	Sample (mL)	Titer (mL)	Concentration (g/L)
1	5.0	1.4233	15.90
2		1.4268	15.94
3		1.4219	15.88
Average			15.91
SD			0.03
RSD(%)			0.2

Please feel free to contact us for any further information.

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