

KES

Method for Analysis of Sodium in Aluminum Alloy

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1. Scope of Application

This standard shall specify a quantitative analysis method of Na in aluminum and aluminum alloy, and be applied to an analysis of 0.002 ~ 0.01 % concentration of Na.

2. Summary

Dissolve the specimen with HCl or HNO₃, and quantitatively analyze Na with an atomic spectrophotometry at wavelength of 589.0nm.

3. Reagent

- (1) HCl special grade reagent
- (2) HNO₃ special grade reagent
- (3) Standard sodium solution
- (4) HF special grade reagent
- (5) Distilled water (Less than 0.001 ppm of amount of Na content)

4. Test Apparatus

- (1) Teflon beaker
- (2) PE, PP Mess flask
- (3) PE, PPP Punnel

5. Test Method

- (1) Weigh exactly 0.5 g to 1.0 g of the specimen, put in 250 ml Teflon beaker, add HCl 10 ml (1 + 3) and distilled water 30 ml, and thermally decompose.
- (2) In case that it does not melt well, add HNO₃, which is 1/3 amount of HCl.
- (3) In case that silicon is included in aluminum, although it is good to use HF, since it is possible to have more errors, a tester shall choose.
- (4) Cool down to the room temperature in flowing water, move to 100 ml Mess flask, and