

KES

Methods for Analysis
of Aluminum in Zinc
Alloy Die Casting

KES T – M202

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1. Scope of Application

This standard shall specify an atomic spectrophotometry method for specimen, which aluminum content in the zinc alloy die castings is 0.002%~0.5%.

2. Summary

Dissolve the specimen with hydrochloric acid, measure the absorptivity of magnesium measuring line standard solution and the specimen at a range of wavelength 309.3nm with the atomic spectrophotometer, and obtain concentration of the aluminum from the measuring line.

3. Test Apparatus

Atomic spectrophotometer

Remark : Follow KES T-M 002 (Atomic Spectrophotometry Method) for manual.

4. Reagent

- (1) Hydrochloric acid (1 : 1)
- (2) Hydrochloric acid (1 : 9)
- (3) Hydrogen peroxide (30%)
- (4) Aluminum standard solution (1.0 mgMg / ml) : Follow KS M 0002
(Production Method of Standard Solution Kinds for Chemical Analysis)
- (5) Pure zinc (More than 99.9 %)

5. Test Method

- (1) Measure exactly 10 g of the specimen to 10 mg and move to a beaker (300 ml).
(For the specimen, which Al content is more than 0.5 %, obtain 2.5 g of the specimen)
- (2) Cover a clock dish, put 50ml of the hydrochloric acid (1 : 1), and add more little by little according to a reaction rate.