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**Methods for radiographic test
and classification by radiographs
of aluminium castings**

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non-ferrous metals, casting, defects, defect counting, classification systems

Reference number : JIS H 0522 : 1999 (E)

Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of International Trade and Industry through deliberations at the Japanese Industrial Standards Committee in accordance with the Industrial Standardization Law. Consequently **JIS H 0522 : 1969** is replaced with **JIS H 0522 : 1999**.

In this revision, this Standard has been conformed to the corresponding International Standard **ISO 9915 : 1992**, *Aluminium alloy castings—Radiography testing* and the relating International Standard **ISO 5579 : 1985**, *Non-destructive testing—Radiographic examination of metallic materials by X- and gamma rays—Basic rules*.

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In the event of any doubts arising as to the contents,
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Methods for radiographic test and classification by radiographs of aluminium castings

Introduction This Japanese Industrial Standard has been prepared based on **ISO 9915**, *Aluminium alloy castings—Radiography testing* published in 1992, as the first edition, without changing the technical contents as to the corresponding parts.

1 Scope This Standard specifies the testing methods by the X-ray or γ -ray radiographs and the method of grade classification of radiographs of aluminium castings.

Remarks : The International Standard corresponding to this Standard is given as follows:

ISO 9915 : 1992 *Aluminium alloy castings—Radiography testing*

2 Normative references The following standards contain provisions which, through reference in this Standard, constitute provisions of this Standard. The most recent editions of the standards indicated below shall be applied.

JIS Z 2306 *Radiographic image quality indicators for non-destructive testing*

ASTM E 155 *Standard reference radiographs for inspection of aluminium and magnesium castings*

3 General items The general items shall be in accordance with the following.

- a) The radiographic test is to classify the grades, by irradiating the aluminium castings with X-ray or γ -ray to detect the defects on the photographed radiographs.
- b) The radiographic test shall usually be carried out by the direct radiographic photography.
- c) The technicians who perform the radiographic tests shall have knowledge relating to aluminium castings, and shall have sufficient techniques and experiences in respect to the radiographic testing method including radiation equipment, shielding of radiation and photographic treatment and the method of grade classification of radiographs.
- d) As to the photographic range of the aluminium castings to be tested and the allowance of defects and the like should preferably be determined separately, examining the uses, designs and specifications thereof, upon the agreement between the parties concerned with acceptance in advance.

4 Photographing method of radiographs

4.1 Performance of testing instruments The radiation equipment, sensitive materials, photographing instrument and observing instrument shall be capable of photographing the radiographs presenting the defects on the inspected parts of the aluminium castings (hereafter referred to as "inspection parts") clearly, and shall be capable of observing those.