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**Non-destructive testing—Selection
of leak testing method**

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Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by the Japanese Society for Non-Destructive Inspection (JSNDI)/Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14.

Consequently **JIS Z 2330**:1992 is replaced with this Standard.

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Non-destructive testing—Selection of leak testing method

1 Scope

This Japanese Industrial Standard specifies the classification of leak testing methods commonly used and the guideline for the selection method of adoption thereof. However, this Standard is not intended for the enforcement of practical selection methods.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

JIS Z 2300 *Terms and definitions of nondestructive testing*

JIS Z 2329 *Methods for bubble leak testing*

JIS Z 2331 *Method for helium leak testing*

JIS Z 2332 *Test method for leaks using the pressure change measurement*

JIS Z 2333 *Test method for leaks using ammonia gas*

JIS Z 2343-1 *Non-destructive testing—Penetrant testing—Part 1: General principles—Method for liquid penetrant testing and classification of the penetrant indication*

3 Terms and definitions

For the purposes of this Standard, the terms and definitions given in **JIS Z 2300** apply.

4 Classification of leak testing methods

The leak testing methods are classified into the method using liquid, the method using gas such as air and the method using specific searching gas. In addition, they are classified into practical testing methods according to the leaking substance, and the principle and means (colouring, bubble, pressure gauge, mass spectrometer and semiconductor sensor, etc.) of leakage detection. On the other hand, there are many application methods depending on the pressurization and depressurization methods to induce the leakage, the sample method of the detection gas and the like.

4.1 Leak testing using liquid

There are following methods to detect the leakage using liquid. However, the method of direct visual observation of leaked liquid in hydraulic test is excluded from the leak testing methods specified in this Standard.

4.1.1 Leak testing by adding fluorescent dye

Detecting method where the test body is filled with liquid to which the fluorescent dye is added and observed in dark place by irradiating ultraviolet rays.