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**Method for ultrasonic examination for
carbon steel and low alloy steel
forgings**

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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 G 0587** : 1995 is replaced with this Standard.

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Method for ultrasonic examination for carbon steel and low alloy steel forgings

Introduction This Japanese Industrial Standard was established in 1987 and has been revised twice until now, the last one of which was done in 1995. Revision at this time is for the purpose of accommodating the improved accuracy of DGS diagram and adding the specifications for artificial flaw for sensibility calibration.

No International Standard corresponding to this Standard has been so far established.

1 Scope This Standard specifies the methods for ultrasonic examination for carbon steel and low alloy steel forgings (hereafter referred to as “steel forgings”) 20 mm or over in thickness and 50 mm or more in radius of outside curvature by means of an ultrasonic flaw detector with pulse echo type of A-scope presentation (hereafter referred to as “test”).

As for stainless steel forgings, this Standard may be applied when the purchaser and the manufacturer agree the test method considering the attenuation of ultrasonic wave.

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 B 0601 *Geometrical Product Specifications (GPS)—Surface texture: Profile method—Terms, definitions and surface texture parameters*

JIS G 0431 *Qualification and certification of non-destructive testing (NDT) personnel for steel products*

JIS K 2238 *Machine oils*

JIS Z 2300 *Terms and definitions of nondestructive testing*

JIS Z 2305 *Non-destructive testing—Qualification and certification of personnel*

JIS Z 2345 *Standard test blocks for ultrasonic testing*

JIS Z 2352 *Method for assessing the overall performance characteristics of ultrasonic pulse echo testing instrument*

3 Terms and definitions For the purpose of this Standard, the terms and definitions in **JIS Z 2300** and the following apply.

3.1 Q-value the central frequency value, divided by the band width, obtained by the frequency analysis by means of the combination of a ultrasonic flaw detector and a ultrasonic probe