

JIS

JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS B 8286 : 2005

(JBA/JSA)

Sight glasses for pressure vessels

ICS 23.020.30:81.040.30

Reference number : JIS B 8286 : 2005 (E)

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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 Japan Boiler Association(JBA)/ 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 B 8286:1994 is replaced with this Standard.

Attention is drawn to the possibility that some parts of this Standard may conflict with a patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have technical properties. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying the patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have the said technical properties.

Date of Establishment: 1984-03-01

Date of Revision: 2005-03-20

Date of Public Notice in Official Gazette: 2005-03-22

Investigated by: Japanese Industrial Standards Committee

Standards Board

Technical Committee on Industrial Machinery

JIS B 8286 : 2005, First English edition published in 2005-12

Translated and published by: Japanese Standards Association
4-1-24, Akasaka, Minato-ku, Tokyo, 107-8440 JAPAN

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Sight glasses for pressure vessels

1 Scope This Japanese Industrial Standard specifies the structure of sight glasses used for pressure vessels of design pressure less than 30 MPa (hereafter referred to as "sight glass") and the glasses used for them.

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 0621 *Definitions and designations of geometrical deviations*

JIS B 8265 *Construction of pressure vessel—General principles*

JIS K 6253 *Hardness testing methods for rubber, vulcanized or thermoplastic*

JIS R 3102 *Testing method for average linear thermal expansion of glass*

3 Terms and definitions For the purpose of this Standard, the following definitions apply:

- a) **highest temperature in service** the highest temperature usable normally in continuous service
- b) **bubble** that is generated by the remaining gas or air after melting, forming and solidifying of glass material, of a circular or elliptical shape
- c) **striae** parts discerned by the naked eye (mostly in a state of a string) due to the difference in refractive index which are caused by the reason that the chemical component or the density is partially deviated from the mean value of the inside of glass

4 Construction of sight glass The sight glass in which the inside parts are able to be seen easily shall be of sufficient strength and airtightness in design pressure and temperature and of the structure such that the glass can be fixed without receiving excessive bending. Figure 1 shows an example of the structure.

The glass for sight glass shall be the circular glass specified in this Standard and sight glass seat, material such as press plate, calculated thickness, machining, test and inspection shall be as specified in JIS B 8265 depending on the respective structure.

Moreover, the sight glass shown in figure 1 a) shall not be installed on the parts which receive excessive bending of shell or end plate.