

JIS

JAPANESE INDUSTRIAL STANDARD

Method of Repeated Tension Fatigue Testing for Fusion Welded Joints

JIS Z 3103^{—1987}

Translated and Published

by

Japanese Standards Association

In the event of any doubt arising,
the original Standard in Japanese is to be final authority.

1. Scope

This Japanese Industrial Standard specifies the general repeated tension fatigue test, hereinafter referred to as the "test", at room temperature and in the atmosphere for butt welded joint and fillet welded joint test pieces by various arc welding methods for structural steel plates, taking the fatigue life of number of cycles of 10^5 or more as object, on condition that the plate thickness is 4 mm or more.

Remark: The units and numerical values given in { } in this Standard are in accordance with the International System of Units (SI) and are appended for informative reference.

Further, the traditional units and numerical values, together with the accompanying SI units and the converted values based on them in parentheses given in this Standard, all of these shall be converted, January 1, 1991, to the units and numerical values specified in Appendix.

2. Definitions

For the purposes of this Standard, the principal definitions regarding fatigue given in 2. of JIS Z 2273 except the following apply:

- (1) load-carrying cruciform fillet welded joint A joint form of which two sheets of main plate, jointed approximately at right angles with respect to a through plate, carry load (see Fig. 3).
- (2) non-load-carrying cruciform fillet welded joint (ribbed cruciform fillet welded joint) A joint form of which one sheet of load-carrying main plate is jointed with two sheets of attachment plates in cruciform approximately at right angles (see Fig. 4).
- (3) main plate In a cruciform fillet welded joint, the plate which carries the load through gripping device of the testing machine (see Fig. 3 and Fig. 4).
- (4) through plate In the load-carrying cruciform fillet welded joint, the plate which is jointed approximately at right angles between the two sheets of main plate (see Fig. 3).
- (5) attachment plates In the non-load-carrying cruciform fillet welded joint, the plates which are jointed approximately at right angles to both surfaces of one sheet of the main plate (see Fig. 4).

Applicable Standards:

JIS Z 2273-General Rules for Fatigue Testing of Metals

JIS Z 8401-Rules for Rounding off of Numerical Values