

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION R 626

STRENGTH CALCULATION OF BUTT WELDED JOINTS

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BRIEF HISTORY

The ISO Recommendation R 626, *Strength Calculation of Butt Welded Joints*, was drawn up by Technical Committee ISO/TC 44, *Welding*, the Secretariat of which is held by the Association Française de Normalisation (AFNOR).

Work on this question by the Technical Committee began in 1957 and led, in 1958, to the adoption of a Draft ISO Recommendation.

In October 1965, this Draft ISO Recommendation (No. 847) was circulated to all the ISO Member Bodies for enquiry. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies:

Australia	India	Romania
Austria	Israel	Spain
Belgium	Italy	Sweden
Brazil	Japan	Switzerland
Chile	Netherlands	U.A.R.
Colombia	New Zealand	United Kingdom
Denmark	Portugal	U.S.S.R.
France	Republic of South Africa	Yugoslavia

Three Member Bodies opposed the approval of the Draft:

Canada
Ireland
U.S.A.

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in October 1967, to accept it as an ISO RECOMMENDATION.

STRENGTH CALCULATION OF BUTT WELDED JOINTS

1. In the case of a butt welded joint between two flats or plates of different thicknesses occurring in a heavily loaded structure, particularly under fatigue conditions, the section of the thicker part should be gradually reduced, by tapering or by a suitable shape of the weld, to the thickness of the thinner part, in such a way that the flow of stress does not undergo any notable deviation in the zone of the joint.

Under these conditions, the section to be taken into consideration for the purpose of strength calculation should be the section of the thinner part.

2. The comparative stress resulting from the strength calculation of a butt weld should be not more than the maximum pure tensile stress in the parent metal which is permissible for the loading condition under consideration.