

Title (en)

METHOD FOR PROCESSING WELDED METALWORK JOINTS BY HIGH-FREQUENCY HUMMERING

Title (de)

VERFAHREN ZUR VERARBEITUNG VON METALLWAREN-SCHWEISSVERBINDUNGEN DURCH HOCHFREQUENZBRUMMEN

Title (fr)

PROCEDE DE TRAITEMENT DE JOINTS SOUDES DE STRUCTURES METALLIQUES PAR MARTELAGE HAUTE FREQUENCE

Publication

EP 1447455 A4 20060823 (EN)

Application

EP 02756067 A 20020611

Priority

- UA 0200025 W 20020611
- UA 2001064020 A 20010612

Abstract (en)

[origin: US2004244882A1] The inventive method relates to reinforcing treatment of welded metalwork joints using a power ultrasound. Said method can be used for mechanical engineering, shipbuilding, bridge engineering and other branches of industry and construction producing welded structures which can be safely used at conditions of static, dynamic and repeated-variable loading. The inventive method consists in specifying the method for calculating normalised residual compressive stresses to be produced by an ultrasound impact processing. Said stresses are related to the geometrical dimensions of a groove formed when the area disposed along a line between the joint and a base metal is treated. Said invention makes it possible to maximally increase the fatigue limit and the cyclic life duration of welded joints.

IPC 8 full level

C21D 7/06 (2006.01); **B21D 1/00** (2006.01); **C21D 7/04** (2006.01); **C21D 10/00** (2006.01); **C21D 9/50** (2006.01)

CPC (source: EP US)

C21D 7/04 (2013.01 - EP US); **C21D 10/00** (2013.01 - EP US); **C21D 9/50** (2013.01 - EP US)

Citation (search report)

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- [PX] US 2002043313 A1 20020418 - STATNIKOV EFIM S [RU]
- [X] JANOSCH J J ET AL: "Improvement of fatigue strength in welded joints (in HSS and in aluminium alloys) by ultrasonic hammer peening", WELDING IN THE WORLD, ELSEVIER / INTERNATIONAL INSTITUTE OF WELDING, ROISSY, FR, vol. 37, no. 2, 4 March 1996 (1996-03-04), pages 72 - 83, XP004032175, ISSN: 0043-2288
- [A] PATENT ABSTRACTS OF JAPAN vol. 016, no. 180 (C - 0935) 30 April 1992 (1992-04-30)
- See references of WO 02101097A1

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