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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 39081-2020

Test method of cross tension test for resistance spot and embossed projection welds

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard uses the redrafting method to modify and adopt ISO 14272.2016 "Destructive Test of Resistance Welding Seam Resistance Spot Welding and Projection Welding"

The size and procedure of the cross tensile test specimen of the joint.

Compared with ISO 14272.2016, this standard has many structural adjustments. Appendix A lists this standard and ISO 14272.2016

A list of changes in the chapter number

Compared with ISO 14272.2016, there are technical differences between this standard and the clauses involved in these differences have been passed on the outer margins.

The set vertical single line (|) is marked, and Appendix B gives a list of the corresponding technical differences and their reasons.

This standard has made the following editorial changes.

---Modified the standard name;

---References are deleted.

This standard was proposed and managed by the National Welding Standardization

Technical Committee (SAC/TC55).

Drafting organizations of this standard. CRRC Tangshan Locomotive and Rolling Stock Co., Ltd., Harbin Welding Research Institute Co., Ltd., and Jianghuai Yangtian Automobile in Lixin County

Co., Ltd., Chongqing University of Science and Technology, Shanghai Institute of Materials, Dongfeng Motor Group Co., Ltd. Passenger Vehicle Company, Geely Automobile Research Institute

(Ningbo) Co., Ltd., Beijing Aerospace Fresh Air Machinery Equipment Co., Ltd.

1 Scope

This standard specifies the equipment, specimens, test procedures and methods for the cross tensile test method of resistance spot welding and projection welding lap joints of metallic materials.

experiment report.

This standard applies to metal plates with a thickness of 0.5mm~5.0mm, a maximum solder joint diameter of 7t and less than 12mm (t is the plate thickness, when the plate thickness is

At different times, t is the thickness of the thinner plate) resistance welding joint.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this article

Pieces. For undated references, the latest version (including all amendments) applies to this document.

GB/T 3375 welding terminology

GB/T 16825.1 Inspection of static uniaxial testing machine Part 1.Inspection and calibration of the force measuring system of tensile and (or) compression testing machines

Standard (GB/T 16825.1-2008, ISO 7500-1.2004, IDT)

3 Terms and definitions

The following terms and definitions defined in GB/T 3375 apply to this document.

3.1

Crosstension test

By applying a test force perpendicular to the bonding surface of the solder joint, the

mechanical properties of the resistance welded joint sample and the tensile test of the fracture form are determined.

3.2

Crosstensionforce

The force applied to the specimen in a cross tensile test.

3.3

Solder diameter welddiameter

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After the destructive test, without the help of metallographic inspection, the average diameter of the melting area measured on the bonding surface.

4 Equipment

The tensile testing machine should meet the requirements of GB/T 16825.1, and the test force measurement accuracy should be within 1%.

5.1 Shape and size

The sample consists of two rectangular test pieces, as shown in Figure 1.If fastening bolts are used to hold the specimen, two drills should be machined on each specimen.

hole. If a hydraulic clamp is used to clamp the sample, the test piece does not need to be drilled.

The solder joint should be located in the center of the sample, and the position tolerance in any direction is +/-1mm.