
**Resistance welding — Destructive
testing of welds — Method for the
fatigue testing of multi-spot-welded
specimens**

*Soudage par résistance — Essais destructifs des soudures — Méthode
d'essai de fatigue des échantillons soudés par points multiples*





COPYRIGHT PROTECTED DOCUMENT

© ISO 2019

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

	Page
Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	2
3 Terms and definitions	2
4 Symbols and abbreviated terms	3
5 Specimens	5
5.1 General	5
5.2 Selection of suitable specimens	6
5.3 Specimen fabrication	7
5.3.1 Sheet material	7
5.3.2 Bending and forming	7
5.3.3 Tolerances	8
5.3.4 Welding	8
5.3.5 Storage	9
5.3.6 Inspection	9
5.4 Specimen geometry	9
5.4.1 General	9
5.4.2 Specimen geometry of tensile shear and peel specimens	9
5.4.3 Geometry of the hat and closed section specimens	15
5.4.4 Double disc and KS-2 specimen	17
6 Requirements for testing machine	19
7 Specimen grips and alignment	20
7.1 General	20
7.1.1 Alignment verification	20
7.1.2 Clamping device calibration	20
7.2 Shear and peel loading	21
7.2.1 General	21
7.2.2 Shear loading	21
7.2.3 Peel loading	21
7.2.4 Shear loading parallel to the joint line	21
7.2.5 Torsion loading	22
8 Test procedure	22
8.1 General	22
8.2 Mounting the H-specimens	22
8.3 Clamping procedure for the H-specimens	22
8.4 Fatigue test	22
8.4.1 General	22
8.4.2 Test frequency	22
8.5 Test termination	23
8.5.1 General	23
8.5.2 Stiffness calculation	23
8.5.3 Data acquisition	23
8.5.4 Failure criterion and number of cycles to failure	24
9 Test report	25
9.1 Basic information	25
9.1.1 General	25
9.1.2 Material prior to fatigue test specimen preparation	25
9.1.3 Mechanical properties	25
9.1.4 Specimen design and preparation	26
9.1.5 Test procedure	26