This is a free page sample. Access the full version online.

NSAI Standards

Irish Standard
I.S. EN ISO 8205:2021

Resistance welding equipment - Water-cooled secondary connection cables(ISO 8205:2021)

© CEN 2021 No copying without NSAI permission except as permitted by copyright law.

This is a free page sample. Access the full version online.

I.S. EN ISO 8205:2021

Incorporating amendments/corrigenda/National Annexes issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):

NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.

This document is based on:	*Published:*
EN ISO 8205:2021	2021-04-14

This document was published under the authority of the NSAI and comes into effect on:	ICS number:
2021-05-06	25.160.30
	NOTE: If blank see CEN/CENELEC cover page

NSAI	T +353 1 807 3800	Sales:
1 Swift Square,	F +353 1 807 3838	T +353 1 857 6730
Northwood, Santry	E standards@nsai.ie	F +353 1 857 6729
Dublin 9	W NSAI.ie	W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

This is a free page sample. Access the full version online.

National Foreword

I.S. EN ISO 8205:2021 is the adopted Irish version of the European Document EN ISO 8205:2021, Resistance welding equipment - Water-cooled secondary connection cables(ISO 8205:2021)

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

For relationships with other publications refer to the NSAI web store.

Compliance with this document does not of itself confer immunity from legal obligations.

In line with international standards practice the decimal point is shown as a comma (,) throughout this document.

This is a free page sample. Access the full version online.

This page is intentionally left blank

This is a free page sample. Access the full version online.

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 8205

April 2021

ICS 25.160.30

Supersedes EN ISO 8205-1:2002, EN ISO 8205-2:2002, EN ISO 8205-3:2012

English Version

Resistance welding equipment - Water-cooled secondary connection cables(ISO 8205:2021)

Matériel de soudage par résistance - Câbles secondaires refroidis par eau (ISO 8205:2021)

Widerstandsschweißeinrichtungen - Wassergekühlte Sekundäranschlusskabel (ISO 8205:2021)

This European Standard was approved by CEN on 26 March 2021.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

© 2021 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No. EN ISO 8205:2021 E

This is a free page sample. Access the full version online.

Contents

Page

European foreword **3**

This is a free page sample. Access the full version online.

European foreword

This document (EN ISO 8205:2021) has been prepared by Technical Committee ISO/TC 44 "Welding and allied processes" in collaboration with Technical Committee CEN/TC 121 “Welding and allied processes” the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2021, and conflicting national standards shall be withdrawn at the latest by October 2021.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 8205-1:2002, EN ISO 8205-2:2002 and EN ISO 8205-3:2012.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 8205:2021 has been approved by CEN as EN ISO 8205:2021 without any modification.

This is a free page sample. Access the full version online.

This page is intentionally left blank

This is a free page sample. Access the full version online.

INTERNATIONAL STANDARD

ISO 8205

First edition
2021-03

Resistance welding equipment — Water-cooled secondary connection cables

Matériel de soudage par résistance — Câbles secondaires refroidis par eau

Reference number
ISO 8205:2021(E)

© ISO 2021

This is a free page sample. Access the full version online.

COPYRIGHT PROTECTED DOCUMENT

© ISO 2021

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
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

This is a free page sample. Access the full version online.

Contents

Page

Foreword ..... **v**

1 Scope **1**

2 Normative references **1**

3 Terms and definitions **1**

4 Classification **1**
4.1 Form of the end lugs 1
4.2 Resistance and reactance 2

5 Dimensions **2**
5.1 Double conductor connection cables 2
5.1.1 Cross-sectional area 2
5.1.2 Length 2
5.1.3 End lugs 2
5.2 Single conductor connection cables 4
5.2.1 Cross-sectional area 4
5.2.2 Length 4
5.2.3 End lugs 5

6 Marking **6**

7 Designation **6**

8 Materials **7**

9 Electrical characteristics **7**
9.1 General 7
9.2 Permanent current 7
9.3 Resistance 8

10 Electrical requirement **9**
10.1 Type test 9
10.1.1 Measurement of insulation resistance 9
10.1.2 Determination of the impedance of the cable (only for cables in accordance with double conductor connection cables) 9
10.1.3 Determination of the resistance of the cable 10
10.1.4 Calculation of power factor (only for cables in accordance with double conductor connection cables) 10
10.2 Routine test (only for cables in accordance with double conductor connection cables) 10

11 Mechanical requirement **10**
11.1 General 10
11.2 Leak tightness and pressure resistance of the water circuit 11
11.3 Water flow 11
11.4 Verification of flexibility at ends 11
11.4.1 General 11
11.4.2 Fixing of the cable 11
11.4.3 Measurements to be taken 11
11.4.4 Interpretation of results 12
11.5 Torsion 12
11.5.1 General 12
11.5.2 Test rig 12
11.5.3 Measurement to be taken 12
11.6 Endurance test 14
11.6.1 Principle 14
11.6.2 Test apparatus 14
11.6.3 Adjustment parameters 14
11.6.4 Test cycle 14

© ISO 2021 – All rights reserved

This is a free page sample. Access the full version online.

11.6.5 Test procedure and duration ... 15
11.7 Test report ... 15
12 Delivery conditions ... 16
Bibliography ... 17

© ISO 2021 – All rights reserved

This is a free page sample. Access the full version online.

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 6, *Resistance welding and allied mechanical joining,* in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 121, *Welding and allied processes,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This first edition cancels and replaces ISO 8205-1:2002, ISO 8205-2:2002 and ISO 8205-3:2012.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Official interpretations of ISO/TC 44 documents, where they exist, are available from this page: https://committee.iso.org/sites/tc44/home/interpretation.html.

© ISO 2021 – All rights reserved

This is a free page sample. Access the full version online.

This is a free page sample. Access the full version online.

Resistance welding equipment — Water-cooled secondary connection cables

1 Scope

This document gives specifications for single- and double-conductor secondary connection cables used for resistance welding and allied processes. These specifications include requirements for electrical, mechanical and cooling characteristics of the cables and their test procedures.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
double-conductor connection cable
cable comprising two conductors providing an electrical link between the secondary terminals of a welding transformer and the welding set (manual or robotized guns) and designed so as to have as low an electrical reactance as possible

3.2
single-conductor connection cable
cable comprising one conductor providing an electrical link between the secondary terminals of a welding transformer and the welding set (manual or robotized guns)

4 Classification

4.1 Form of the end lugs

Double-conductor water-cooled connection cables are classified into two types, A-1 and A-2, in accordance with the form of the end lugs (see 5.1.3).

Single-conductor water-cooled connection cables are classified into three types, C-1, C-2 and D, in accordance with the form of the end lugs (see 5.2.3).

4.2 Resistance and reactance

Double-conductor, water cooled connection cables are classified into two types, A-1 and A-2, with power factor $\cos\varphi \geq 0{,}95$ as shown in Figure 1.

© ISO 2021 – All rights reserved

SAI GLOBAL

This is a free preview. Purchase the entire publication at the link below:

Product Page

Looking for additional Standards? Visit Intertek Inform Infostore

Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation