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INTERNATIONAL STANDARD

NORME INTERNATIONALE

Resistance welding equipment – Part 2: Electromagnetic compatibility (EMC) requirements

Matériels de soudage par résistance – Partie 2: Exigences de compatibilité électromagnétique (CEM)

IEC 62135-2:2020-03(en-fr)

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FOREWORD

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International Standard IEC 62135-2 has been prepared by IEC technical committee 26: Electric welding.

This third edition cancels and replaces the second edition published in 2015. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) update of the applicable limits related to the updated references;
b) implementation of radiated magnetic field requirements.

The text of this standard is based on the following documents:

FDIS	Report on voting
26/696/FDIS	26/698/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts of the IEC 62135 series, under the general title *Resistance welding equipment*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

RESISTANCE WELDING EQUIPMENT –

Part 2: Electromagnetic compatibility (EMC) requirements

1 Scope

This part of IEC 62135 is applicable to equipment for resistance welding and allied processes which are connected to mains supplies with rated voltages up to 1 000 V AC RMS. This document does not define safety requirements.

Resistance welding equipment type tested in accordance with, and which has met the requirements of, this document, is deemed to be in compliance for all applications.

The frequency range covered is from 0 Hz to 400 GHz.

Arc welding equipment containing a radio receiver or transmitter is within the scope of this document. Additional requirements for such equipment is specified in Annex D.

The radiated emission requirements in this document are not intended to be applicable to the intentional transmissions from a radio transmitter as defined by the ITU nor to any spurious emissions related to these intentional transmitters.

This product EMC standard for resistance welding equipment takes precedence over all aspects of the generic standards and no additional EMC tests are required or necessary.

NOTE 1 Typical allied processes are resistance hard and soft soldering or resistance heating achieved by means comparable to resistance welding equipment.

NOTE 2 Limit values are specified for only part of the frequency range.

Resistance welding equipment are classified as Class A and Class B equipment.

This part of IEC 62135 specifies

a) test methods to be used in conjunction with CISPR 11:2015, CISPR 11:2015/AMD1:2016 and CISPR 11:2015/AMD2:2019 to determine radio-frequency (RF) emission;
b) relevant standards and test methods for harmonic current emission, voltage fluctuation and flicker;
c) additional requirements for equipment powered by internal or external batteries (Annex C).

NOTE 3 The limits in this document cannot, however, provide full protection against interference to radio and television reception when the resistance welding equipment is used closer than 30 m to the receiving antenna(e).

NOTE 4 In special cases, when highly susceptible apparatus is being used in close proximity, additional mitigation measures are sometimes employed to further reduce the electromagnetic emissions.

NOTE 5 The origins of the limit values in this document are summarized in Annex A.

This part of IEC 62135 also defines immunity requirements and test methods for continuous and transient, conducted and radiated disturbances including electrostatic discharges.

NOTE 6 These requirements do not, however, cover extreme cases which are extremely rare.