
Varnostne zahteve za naprave za elektroporovno varjenje in podobne postopke (prevzet standard EN 50063:1989 z metodo platnice)

Safety requirements for the construction and the installation of equipment for resistance welding and allied process

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Règles de sécurité concernant la construction et l'installation du matériel de soudage électrique par résistance et techniques connexes

Sicherheitsanforderungen für den Bau und die Errichtung von Einrichtungen zum Widerstandsschweißen und für verwandte Verfahren

Deskriptorji: varnostne zahteve, varilne naprave, električno varjenje, uporovno varjenje

UVOD

Standard SIST EN 50063 (de), Varnostne zahteve za naprave za elektroporovno varjenje in podobne postopke, prva izdaja, 1996, ima status slovenskega standarda in je z metodo platnice prevzet evropski standard EN 50063, Sicherheitsanforderungen für den Bau und die Errichtung von Einrichtungen zum Widerstandsschweißen und für verwandte Verfahren, 1989-02-00, v nemškem jeziku.

NACIONALNI PREDGOVOR

Evropski standard EN 50063:1989 je pripravil tehnični odbor Evropske organizacije za standardizacijo CENELEC/TC 26B Naprave za električno uporovno varjenje.

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Ta slovenski standard je dne 1996-05-16 odobril direktor USM.

PREDHODNA IZDAJA

- SIST EN 50063:1996, Varnostne zahteve za naprave za elektroporovno varjenje in 1. izdaja podobne postopke

OSNOVA ZA IZDAJO STANDARDARDA

- Prevzem standarda EN 50063:1989

OPOMBI

- Povsod, kjer se v besedilu standarda uporablja izraz evropski standard, v SIST EN 50063:1996 to pomeni slovenski standard
- Uvod in nacionalni predgovor nista sestavni del standarda.

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KEY WORDS: Safety requirements; welding equipment; electric welding;
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ENGLISH VERSION

SAFETY REQUIREMENTS FOR THE CONSTRUCTION AND THE
INSTALLATION OF EQUIPMENT FOR RESISTANCE WELDING
AND ALLIED PROCESSES

Règles de sécurité concernant la
construction et l'installation
du matériel de soudage
électrique par résistance et
techniques connexes

Sicherheitsanforderungen
für den Bau und
die Errichtung von Einrichtungen
zum Widerstandsschweißen
und für verwandte Verfahren

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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BRIEF HISTORY

The European Standard 50 063 was elaborated from the Harmonization Document HD 389 by TC 26B of CENELEC and replaces the Harmonization Document; it was submitted to the CENELEC members for formal vote and acceptance as European Standard (EN) by CENELEC.

TECHNICAL TEXT

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FOREWORD

General requirements for the electrical and electronic equipment of industrial machines are contained in EN 60 204-1:1984, which is a modified edition of IEC 204-1 (1981).

Though such power circuits are excluded from the scope where electrical power is directly used as a working tool as it is the case of resistance welding, the requirements are applicable to resistance welding equipment with the exception of the welding circuit.

Consequently this standard was established on the basis of EN 60 204-1 stating where exemptions are necessary and specifying special safety requirements. In this way it is possible to design and construct electrical equipment for industrial machines and for resistance welding equipment on the same basis, while taking this standard into account.

Also included in this standard are safety requirements for d.c. resistance welding equipment which are not covered by ISO 669.

A guide for the connection to the main supply for equipment for resistance welding and allied processes is under consideration.

1. Scope and object

1.1 Scope

This standard applies to equipment for resistance welding and allied processes. ISO 669 and EN 60 204-1 are an integral part of this Standard.

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1.2 Object

The object of this standard is to complete the requirements of ISO 669 for the construction and installation and to specify deviations and special safety requirements as EN 60 204-1 does not apply, as such, to the welding circuit.

2. References

Standards referred to in this European Standard:

EN 60 204-1	Electrical equipment of industrial machines, Part 1: General requirements (IEC 204-1 (1981))
HD 366	Classification of electrical and electronic equipment with regard to protection against electric shock (IEC 536)
IEC 112	Method for determining the comparative and the proof tracking indices of solid insulating materials under moist conditions
IEC 364-4-41	Electrical installations of buildings, Part 4: Protection for safety, Chapter 41: Protection against electric shock
IEC 364-6-61	Electrical installations of buildings, Part 6: Verification, Chapter 61: Initial verification
IEC 664	Insulation co-ordination within low-voltage systems including clearances and creepage distances for equipment
ISO 669	Rating of resistance welding equipment

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SIST EN 50063-1996

- ISO 5826 Transformers for resistance welding machines - General specifications applicable to all transformers
- ISO 5828 Resistance welding equipment - Secondary connecting cables with terminals connected to water-cooled lugs - Dimensions and characteristics

3. Definitions

The following definitions apply. In addition, terms defined in ISO 669 and EN 60 204-1 apply where applicable.

3.1 Equipment for resistance welding and allied processes

All equipment associated with carrying out the processes of resistance welding or allied processes consisting of e.g. power source, electrodes, and associated control equipment.

It may be a separate unit or part of a complex machine.

Note.- The term "Resistance welding equipment" is used in the following text.

3.2 Processes allied to resistance welding

The following processes, which are carried out on machines comparable to resistance welding equipment, are considered as allied to resistance welding e.g.: resistance brazing and soldering or resistance heating.

3.3 Input circuit (primary circuit)

A power circuit used for supplying power from the main supply to the input side of the welding transformer.

3.4 Welding circuit (secondary circuit)

An output circuit including the workpiece and all parts carrying the welding current.

Note.- The welding circuit is excluded from the scope of EN 60 204-1.

3.5 Portable hand-held resistance welding equipment with incorporated transformer

A resistance welding equipment with built-in transformer and all conductors carrying their welding current, which is intended to be held in the hand during use.

4. Environmental conditions

Resistance welding equipment complying with this standard shall be capable of carrying out their welding operation when the following usual service conditions prevail:

- a) The temperature of the cooling medium does not exceed:
 1. in the case of a liquid: 30°C at the inlet
 2. in the case of the ambient air: 40°C
- b) The ambient air shall be free from abnormal amounts of dust, acids, corrosive gases or substances etc. other than those generated by the welding process.