exothermic welding CS1

Copper conductor end to a horizontal steel plate

Complies with IEEE 837 and UL 467

Conductor-to-steel plate exothermic welding



Code	CS1
Connection type	Copper conductor end to a horizontal steel plate
Group	Conductor to steel plate
Conductor cross-section	50 to 300 mm²
Weld powder	KWD 090 to KWD 250
Matching handle clamp	HC 01
Standard	As per IEEE 837 and UL 467
Mould body material	High-grade graphite
Mould lid material	Stainless steel
Mould life	50 to 60 welds with correct use

exothermic welding CS1 Used for joining the end of a copper conductor to a horizontal steel plate in earthing, bonding and lightning protection networks. After welding, the joint fuses with the conductors and has no nuts or bolts to work loose over time. CS1 is the heavier version of this joint, with a larger weld body; it suits conductors of 50 mm² and above and joints that need a more substantial weld. For smaller conductors and thinner steel plates, the lighter exothermic welding mould CS8 is the right choice.

Mould and powder selection table

Conductor (mm²)	Weld powder	Mould code
50	KWD 090	CS1-050
70	KWD 090	CS1-070
95	KWD 115	CS1-095
120	KWD 115	CS1-120
150	KWD 150	CS1-150
185	KWD 200	CS1-185
240	KWD 200	CS1-240
300	KWD 250	CS1-300

For 16, 25 and 35, use mould CS8 instead.

The mould code and powder size are also marked on the lid of each mould. Do not substitute powder from another mould or another size. For other sizes, contact our specialists.

Preparation and welding

Clean the weld area on the steel down to bright metal with a grinder or file; a brush alone is not enough. Paint, rust, oil and galvanised coating must be removed completely. After welding, cover the exposed surface around the joint with zinc spray or anti-

rust paint.

1. Check the mould and powder against the table.
2. Preheat a cold mould before the first weld.
3. Clean the conductors to bright metal and dry them fully.
4. Close the handle clamp, place the conductors in the centre of the chamber and lock the mould.
5. Place the steel disc concave side up and pour in the powder.
6. Add the starting powder, close the lid and ignite it with a flint igniter.
7. Wait at least one minute, then open the mould.
8. Clean the mould with a soft brush and a scraper; never use a wire brush.

Welds KALWELD Complies with IEEE 837 and UL 467 , welds KALWELD have passed freeze testing (10 cycles), thermal cycling (25 cycles) and a 20 kA short-circuit test at the Power and Water University of Technology (Shahid Abbaspour) (reports 95/4221 and 95/4220, 1395/12/24).

Result
Approved by

Full illustrated guide, safety notes and troubleshooting: exothermic welding instructions KALWELD at www.kalot.ir

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