
International Standard



6847

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Covered electrodes for manual metal arc welding — Deposition of a weld metal pad for chemical analysis

Électrodes enrobées pour soudage manuel à l'arc — Exécution d'un dépôt de métal fondu en vue de l'analyse chimique

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Foreword

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International Standard ISO 6847 was prepared by Technical Committee ISO/TC 44, *Welding and allied processes*.

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Covered electrodes for manual metal arc welding — Deposition of a weld metal pad for chemical analysis

1 Scope and field of application

This International Standard defines the procedure to be used for depositing weld metal by fusing covered metal electrodes with diameters ranging from 1,6 to 6,3 mm, and specifies the procedure for the chemical analysis of the weld pad thus obtained, whatever the nature of the deposited metal.

This analysis may be carried out either on chips taken by milling or using spectrographic methods.

The method of deposition specified in this International Standard shall be referred to in case of dispute.

NOTE — It may possibly be extended to electrodes with diameters greater than 6,3 mm.

2 Backing plate

2.1 Nature

The backing plate shall be made from steel having a composition similar to that of the deposited metal or from a weldable carbon-manganese structural steel with a carbon content of less than 0,20 % (*m/m*).

2.2 Dimensions

The minimum dimensions of the backing plate are given in table 1.

Table 1

Electrode diameter mm	Plate size (min.) mm
1,6 — 2 — 2,5 — 3,2 — 4 — 5	55 × 55 × 10
6,3	65 × 65 × 10

2.3 Surface condition

The surface of the backing plate onto which the weld metal is to be deposited shall be previously cleaned by grinding in order to remove any remaining rust, scale, grease or paint.

3 Conditions of deposition

3.1 Type of current and polarity

The weld metal shall be deposited using the type of current (and, if appropriate, the polarity) indicated by the manufacturer for the electrodes concerned.

If the manufacturer leaves the choice between alternating current (a.c.) and direct current (d.c.), alternating current shall be chosen.

3.2 Welding position

The weld metal shall be deposited in the flat position.

3.3 Welding equipment

The welding equipment shall have characteristics in conformity with the instructions for use of the electrodes. The open-circuit voltage of a.c. welding equipment shall not be less than that specified by the manufacturer when the electrodes are used on a.c.

3.4 Electrode melting

If the electrodes have to be dried, baking shall be carried out in accordance with the method specified by the manufacturer.

The electrode shall be entirely melted except for the usual stub of 40 to 50 mm, including the bare section.

The arc length shall always be maintained as short as possible inasmuch as it remains stable without visible extinguishing. The width of each bead shall range from 1,5 to 2,5 times the diameter of the electrode core. It shall be obtained without weaving, at normal welding speed.

The current intensity shall be equal to the mean value recommended for welding in the flat position or, if not specified, it shall correspond to 70 % of the maximum current value indicated by the manufacturer.