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Mazdoor Kisan Shakti Sangathan
“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”
Jawaharlal Nehru
“Step Out From the Old to the New”

Indian Standard
RESISTANCE SPOT WELDING — MALE ELECTRODE CAPS

ICS 25.16.10
NATIONAL FOREWORD

This Indian Standard which is identical with ISO 5830 : 1984 'Resistance spot welding — Male electrode caps' issued by the International Organization for Standardization (ISO) was adopted by the Bureau of Indian Standards on the recommendations of the Welding General Sectional Committee and approval of the Metallurgical Engineering Division Council.

In this adopted standard, some terminology and conventions are, however, not identical to those used in Indian Standards. Attention is especially drawn to the following:

a) Wherever the words 'International Standards' appear referring to this standard, they should be read as Indian 'Standard'.

b) Comma (,) has been used as a decimal marker while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appears to certain International Standards for which Indian Standards also exist. The corresponding Indian Standards which are to be substituted in their place are listed below along with their degree of equivalence for the editions indicated:

<table>
<thead>
<tr>
<th>International Standard</th>
<th>Corresponding Indian Standard</th>
<th>Degree of Equivalence</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO 1089</td>
<td>Not available</td>
<td>—</td>
</tr>
<tr>
<td>ISO 1302</td>
<td>IS 10718 : 1978 Method of dimensioning and tolerancing cones on drawings</td>
<td>Technically equivalent</td>
</tr>
<tr>
<td>ISO 5182</td>
<td>IS 4972 : 1968 Resistance spot welding electrodes</td>
<td>Partially equivalent</td>
</tr>
</tbody>
</table>

In reporting the results of a test or analysis made in accordance with the standards, if the final value, observed or calculated is to be rounded off, it shall be done in accordance with IS 2 : 1960 'Rules for rounding off numerical values (revised)'.

Indian Standard
RESISTANCE SPOT WELDING —
MALE ELECTRODE CAPS

1 Scope and field of application
This International Standard specifies the dimensions and tolerances for male electrode caps for resistance spot welding when a female taper (see ISO 1089) is used to fix the electrode adaptor (see ISO 5629).

It only applies to electrode caps for which the electrode force $F_{\text{max}}$ given for the diameter $d_1$, does not exceed 4,0 kN.

2 References
ISO 1089, Electrode taper fits for spot welding equipment — Dimensions.
ISO 1302, Technical drawings — Method of indicating surface texture on drawings.
ISO 5182, Materials for resistance welding electrodes and ancillary equipment.
ISO 5829, Resistance spot welding electrode adaptors, female taper 1 : 10.

3 Dimensions
The dimensions shall be those given in the figures and the table.

4 Designation
Electrode caps covered by this International Standard shall be designated by noting in order:

a) the reference to this International Standard;

b) the external diameter, $d_1$;

c) the length, $l_1$.

Example:
Designation for a male electrode cap for spot welding type L, external diameter $d_1 = 16$ mm and length $l_1 = 25$ mm.

Male electrode cap ISO 5830 - L 16 × 25

5 Material
The material shall conform to code A 2/2 of ISO 5182.

6 Marking
The packing shall be marked with the designation laid down in clause 4, but excluding the identity block, for example:

ISO 5830 - L 16 × 25
NOTE — For types M and N, all the other dimensions are the same as for type L.

**Figure — Male electrode cap**

**Table — Dimensions**

<table>
<thead>
<tr>
<th>Linear dimensions in millimetres</th>
<th>Electrode force $F_{\text{max}}$ (kN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$d_1$ h11 $d_2$ $d_3$ $d_4$ $l_1$ $l_2$ $l_3$ e $f$ $r_1$ $r_2$ $\alpha$</td>
<td></td>
</tr>
<tr>
<td>16 6 11.8 8 25 10 6 4 10 40 6 30°</td>
<td>4.00</td>
</tr>
</tbody>
</table>

1) $d_3$ is a gauge dimension at the taper reference line.
Bureau of Indian Standards

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This Indian Standard has been developed from Doc : No. MTD 11(4365).

Amendments Issued Since Publication

<table>
<thead>
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<th>Amend No.</th>
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