# Thermanit LW

Covered electrode, high-alloyed, austenitic stainless, heat resistant

## Classifications

**EN ISO 3581-A**

E 25 4 R 1 2

## Characteristics and typical fields of application

Rutile coated electrode of E 25 4 R type for welding heat resistant steels and cast steel grades. Corrosion resistantance similar to matching or similar Mo-free 25Cr(Ni) steels. Resistant to scaling in air and oxidizing combustion gases up to 1100ºC. Good resistance in sulphureous combustion gases at elevated temperatures. Scaling resistant up to 1100ºC.

## Base materials

1.4340 GX40CrNi27-4, 1.4713 X10CrAl7, 1.4724 X10CrAl13, 1.4742 X10CrAlSi18, 1.4745 GX40CrSi23, 1.4746 X8CrTi25, 1.4762 X10CrAlSi25, 1.4776 GX40CrSi29, 1.4821 X15CrNiSi25-4, 1.4822 GX40CrNi24-5, 1.4823 GX40CrNiSi27-4
AISI 327, 442, 446, ASTM A 297 HC
UNS S44200, 44600, J92605, J93005, J92605

## Typical analysis

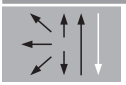
| | C | Si | Mn | Cr | Ni |
|---|---|---|---|---|---|
| wt.-% | 0.06 | 1.0 | 0.8 | 26.0 | 5.0 |

## Mechanical properties of all-weld metal - typical values (min. values)

| Condition | Yield strength $R_{p0.2}$ | Tensile strength $R_m$ | Elongation A ($L_0$=5$d_0$) | Hardness |
|---|---|---|---|---|
| | MPa | MPa | % | HB |
| u | 570 (≥ 400) | 750 (≥ 600) | 18 (≥ 15) | 180 |

u untreated, as-welded

## Operating data



| Polarity | DC+ / AC | Dimension mm | Current A |
|---|---|---|---|
| Electrode identification | - | 2.5 × 300 | 50 – 80 |
| | | 3.2 × 350 | 60 – 110 |

The suggested preheating temperature for base materials of matching composition is 100 – 300ºC, depending on the composition and material thickness. Post-weld heat treatment can be performed at 980 – 1050ºC followed by air cooling.
Heat resistant steels generally do not require any preheating or post-weld heat treatment. For base materials being sensitive to embrittlement, the interpass temperature should not exceed 300ºC.

## Approvals

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