böhlerwelding
by voestalpine

# Phoenix Spezial D

Stick electrode, unalloyed, basic

## Classifications

| EN ISO 2560-A | EN ISO 2560-B | AWS A5.1 | AWS A5.1M |
|---|---|---|---|
| E 42 3 B 1 2 H10 | E 4916 AU | E7016 | E4916 |

## Characteristics and typical fields of application

Double covered basic electrode. Outstanding welding characte-ristics on AC and DC in all positions except the vertical down; stable arc, good radiographic soundness. Useable in handicraft and industry for field and workshop applications.

## Base materials

S235JRG2 - S355J2, boiler steels P235GH, P265GH, P295GH, P355GH;
Fine grained structural steels up to S355N;
Pipe steels St 35, St 35.8, L210 - L360NB, GS-52,
L290MB - L360MB; ASTM A27 and A36 Gr. all, A214, A242
Gr. 1-5, A266 Gr. 1, 2, 4, A283 Gr. A, B, C, D, A285 Gr. A, B, C, A299 Gr. A, B, A328, A366, A515 Gr. 60, 65, 70, A516 Gr. 55, A570 Gr. 30, 33, 36, 40, 45, A572 Gr. 42, 50, A606 Gr. all, A607 Gr. 45, A656 Gr. 50, 60, A668 Gr. A, B, A907 Gr. 30, 33, 36, 40, A841, A851 Gr. 1, 2, A935 Gr. 45, A936 Gr. 50; API 5 L Gr. B, X42-X56

## Typical analysis of all-weld metal (wt.-%)

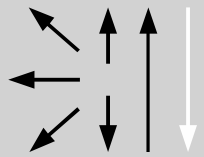
| | C | Si | Mn |
|---|---|---|---|
| wt-% | 0.06 | 0.65 | 1.05 |

## Mechanical properties of all-weld metal

| Heat-treatment | Yield strength $R_{p0.2}$ | Tensile strength $R_m$ | Elongation A ($L_0$=5$d_0$) | Impact work ISO-V KV J | |
|---|---|---|---|---|---|
| | MPa | MPa | % | +20 °C | –30 °C |
| aw | 420 | 550 | 22 | 80 | 50 |
| sr | 400 | 520 | 25 | 80 | 50 |

aw: as welded
sr: stress relieved 580 °C/2h / oven down to 300 °C / air

## Operating data



| Polarity: | Redrying: | ø (mm) | L mm | Amps A |
|---|---|---|---|---|
| DC ( + ) / AC | 250 – 300 °C / 2 h (482 – 572 °F). | 2.5 | 350 | 60 – 90 |
| | | 3.2 | 350 | 95 – 150 |
| | | 3.2 | 450 | 95 – 150 |
| | | 4.0 | 450 | 140 – 190 |
| | | 5.0 | 450 | 190 – 250 |

## Approvals

TÜV (10572), DB (10.132.42), ABS, DNV, GL, LR, CE