

MT-318

1.4576

MIG/TIG welding wire of stabilized austenitic chrome nickel molybdenum – steel, for welding stainless austenitic steels suitable for working temperatures up to +400°C.

Standard designation

| | |
|------------------|------------------|
| Material No. | 1.4576 |
| AWS/ASME SFA-5.9 | ~ER 318 |
| EN ISO 14343-A | G/W 19 12 3 NbSi |

Main base metals

Stainless austenitic chrome nickel molybdenum – steel/cast steel e.g.

| | | | |
|--------|----------------------|--------|--------------------|
| 1.4571 | X 6 CrNiMoTi 17 12 2 | 1.4404 | X 2 CrNiMo 17 13 2 |
| 1.4573 | X 10 CrNiMoTi 18 12 | 1.4404 | G-X 2 CrNiMo 18 10 |
| 1.4580 | X 6 CrNiMoNb 17 12 2 | 1.4435 | X 2 CrNiMo 18 14 3 |
| 1.4581 | G-X 5 CrNiMoNb 18 10 | 1.4401 | X 5 CrNiMo 17 12 2 |
| 1.4583 | X 10 CrNiMoNb 18 12 | 1.4408 | G-X 6 CrNiMo 18 10 |
| 1.4420 | X 5 CrNiMo 18 11 | 1.4436 | X 5 CrNiMo 17 13 3 |

Mechanical properties of all – weld – metal (typical values)

| Welding process | | | TIG | MIG | |
|---------------------|-------------------|------|-----------|-----------|--------|
| Gas shield | | | I1 | M 11 | |
| Thermal treatment | | | untreated | untreated | |
| Test temperature | | | +20°C | +20°C | -196°C |
| | | [°C] | | | |
| 0,2%-yield strength | R _{p0,2} | MPa | ≥295 | ≥295 | |
| Tensile strength | R _m | MPa | ≥550 | ≥550 | |
| Elongation | A ₅ | [%] | ≥25 | ≥25 | |
| Impact strength | A _v | [J] | LNB | LNB | LNB |

Average chemical composition of all - weld – metal (%)

| C | Si | Mn | Cr | Mo | Ni | (Nb+Ta) |
|------|----------|---------|-----------|---------|-----------|------------------|
| 0,08 | 0,65-1,2 | 1,0-2,5 | 18,0-20,0 | 2,5-3,0 | 11,0-14,0 | 10x % C max. 1,0 |

Structure

Austenite with deltaferrite

Gas types applicable TIG Gas types applicable MIG

I1
M 11, M 12 and M 21

Approvals

TÜV, DB, CE

TIG rod diameters, unit weights

| Diameter [mm] | Length [mm] | Kg per box |
|---------------|-------------|------------|
| 1,00 | 1000 | 10,0 |
| 1,20 | 1000 | 10,0 |
| 1,60 | 1000 | 10,0 |
| 2,00 | 1000 | 10,0 |
| 2,40 | 1000 | 10,0 |
| 3,20 | 1000 | 10,0 |
| 4,00 | 1000 | 10,0 |
| 5,00 | 1000 | 10,0 |

MIG welding wires

Diameter 0,8mm 1,0mm 1,2mm 1,6mm

Welding positions MIG acc.to EN ISO 6947 Welding positions TIG acc.to EN ISO 6947

PA, PB, PF, PG
PA, PB, PC, PF, PE

Current/Polarity TIG

= -

Current/Polarity MIG

= +