

# OK AristoRod 13.12

OK AristoRod 13.12 is a 1.1Cr-0.5Mo-alloyed, bare, solid wire for the GMAW of creep-resistant steels of the same composition, like those used for pipes in pressure vessels and boilers with a service temperature of up to 450°C. OK AristoRod 13.12 is treated with ESAB's unique Advanced Surface Characteristics (ASC) technology, taking MAG welding operations to new levels of performance and all-round efficiency, especially in robotic and mechanised welding. Characteristic features include excellent start properties; trouble-free feeding at high wire speeds and lengthy feed distances; a very stable arc at high welding currents; extremely low levels of spatter; low fume emission; reduced contact tip wear and improved protection against corrosion of the wire.

|  |   |
|--|---|
| <b>Classifications Wire Electrode:</b> | SFA/AWS A5.28:ER80S-G, EN ISO 21952-A:G CrMo1Si,<br>EN ISO 21952-B:G 55M 1CM3, GOST 2246:08X CM A |
| <b>Approvals:</b>                      | NAKS/HAKC 1.2MM, VdTÜV 10089  |

Approvals are based on factory location. Please contact ESAB for more information.

|                    |                                |
|--------------------|--------------------------------|
| <b>Alloy Type:</b> | Low Alloyed (1 % Cr, 0.5 % Mo) |
|--------------------|--------------------------------|

## Typical Tensile Properties

| Condition                                  | Yield Strength | Tensile Strength | Elongation |
|--|----------------|------------------|------------|
| <b>EN 80Ar/20CO2 (M21)</b>                 |                |                  |            |
| Q.T. 940+730°C 15h                         | 320 MPa        | 460 MPa          | 35 %       |
| As welded                                  | 670 MPa        | 785 MPa          | 18 %       |
| Stress relieved 0.5 hr 700 °C              | 450 MPa        | 580 MPa          | 24 %       |
| <b>EN 80Ar/20CO2 (M21) Tested at 450°C</b> |                |                  |            |
| Q.T.+ 940+730°C 15h                        | 210 MPa        | 410 MPa          | 25 %       |
| As welded+                                 | 605 MPa        | 760 MPa          | 15 %       |
| Stress relieved 0.5 hr 700 °C              | 390 MPa        | 500 MPa          | 17 %       |

## Typical Charpy V-Notch Properties

| Condition                     | Testing Temperature | Impact Value |
|-------------------------------|---------------------|--------------|
| <b>EN 80Ar/20CO2 (M21)</b>    |                     |              |
| As welded                     | 20 °C               | 40 J         |
| As welded                     | 0 °C                | 30 J         |
| As welded                     | -20 °C              | 25 J         |
| PWHT 700°C 0.5h               | -40 °C              | 25 J         |
| Q.T. 940+730°C 15h            | 20 °C               | 115 J        |
| Q.T. 940+730°C 15h            | 0 °C                | 60 J         |
| Q.T. 940+730°C 15h            | -20 °C              | 30 J         |
| Stress relieved 0.5 hr 700 °C | 20 °C               | 80 J         |
| Stress relieved 0.5 hr 700 °C | 0 °C                | 40 J         |
| Stress relieved 0.5 hr 700 °C | -20 °C              | 30 J         |