

## XP 81-RC (Seamless)

LOW TEMPERATURE



### CLASSIFICATIONS

| EN ISO 17632-A        | AWS A5.29       |
|-----------------------|-----------------|
| T 50 6 1Ni P M21 1 H5 | E81T1-Ni1M-J H4 |

### KEY FEATURES AND APPLICATIONS

- 1% Nickel seamless rutile flux cored wire, ideal for high-strength and low-temperature applications requiring a minimum yield strength of 500 MPa.
- Exceptional welding characteristics with minimal spatter.
- Typical diffusible hydrogen content is <3.0 ml 100 g. Guaranteed for the total processing time <4.0 ml 100 g.
- Excellent mechanical properties at subfreezing temperatures down to -60°C.
- Widespread usage across diverse industries, including structural steel fabrication, pipeline construction, naval architecture, pressure vessel manufacturing, offshore installations, mechanical engineering, heavy-duty transportation, and general metalworking.

### BASE MATERIALS

S355JR, S355J0, S355J2, S450J0, S355N-S460N, S355NL-S460NL, S355M-S460M, S355ML-S460ML, S460Q, S460QL, P355GH, P355NH, P420NH, P460NH, P355N-P460N, P355NH-P460NH, L245NB-L415NB, L245MB-L485MB, L360QB-L485QB

ASTM A 350 Gr. LF1; A 516 Gr. 65, 70; A 572 Gr. 42, 50, 60, 65; A 573 Gr. 65, 70; A 588 Gr. B, C, K; A 633 Gr. A, C, D, E; A 662 Gr. B, C; A678 Gr. B; A 707 Gr. L2; A 841 Gr. A, B, C; API 5 L X42, X52, X60, X65, X70, X52Q, X60Q, X65Q, X70Q

### CHEMICAL COMPOSITION OF ALL-WELD METAL %

|     | C | Mn  | Si   | P | S | Cr  | Ni  | Mo  | V    | Nb   | Cu  |
|-----|---|-----|------|---|---|-----|-----|-----|------|------|-----|
| MIN | - | -   | -    | - | - | -   | 0.6 | -   | -    | -    | -   |
| MAX | - | 1.4 | 0.80 | - | - | 0.2 | 1.2 | 0.2 | 0.08 | 0.05 | 0.3 |

Single values are maximum values according to EN ISO 17632

### MECHANICAL PROPERTIES OF ALL-WELD METAL - TYPICAL (MIN.) VALUES

| Yield Strength (MPa) | Tensile Strength (MPa) | Elongation (%) | Impact ISO-V (J) | Test Temperature |
|----------------------|------------------------|----------------|------------------|------------------|
| 560 (≥500)           | 610 (560 - 720)        | 25 (≥18)       | 90 (≥47)         | -60°C            |

Test data for mechanical properties are not guaranteed since actual as welded conditions depend on numerous variables

### OPERATING DATA

| Shielding Gases    | Polarity |
|--------------------|----------|
| EN ISO 14175 - M21 | DC+      |

### WELDING PARAMETERS

| Diameter (mm) | Current (A) | Voltage (V) |
|---------------|-------------|-------------|
| 1.2mm         | 180 - 300   | 22 - 32     |

### PACKAGING AND AVAILABLE SIZES

| Part Number | Diameter (mm) | Spool | Weight (kg) | Pallet Qty |
|-------------|---------------|-------|-------------|------------|
| XP15418     | 1.2           | BS300 | 16          | 64         |