

GRADE
CLASSIFICATION FEATURES
STRUCTURE TYPE

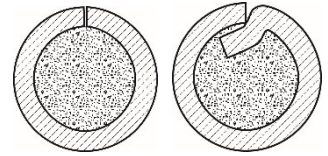
PP-Sv-04H19N11M3

(Sv-04Cr19Ni11Mo3)

TUU 25.9-21459234-022:2015

AWS A5.9/A5.9M:2006: ER316

Diameter: 2.0 – 4.0 mm
 Shielding: Ar, Ar + CO₂, flux
 Structure: tubular, overlapping
 Core type: rutile



General description

Flux-cored wire of **PP-Sv-04H19N11M3** grade is designed for gas-shielded or submerged-arc welding of chromium-nickel steel that imposes requirements regarding the weld metal resistance to intergranular corrosion, as well as hardfacing of intermediate anti-corrosion coating layers in nuclear power and chemical mechanical engineering. It is desirable to weld using reversed polarity direct current.

Welding process properties

- The weld metal ensures high resistance to intergranular corrosion.
- Good weld formation, low spattering, easy slag separation.
- Wire consumption ratio $K_C = 1.05 \sim 1.15$.

Operating conditions (submerged-arc)

Wire diameter, mm	Current, A	Voltage, V	Wire stick-out, mm
2.0	160 – 300	29 – 31	15 – 25
2.2	160 – 300	30 – 32	15 – 25
2.4	200 – 350	30 – 32	20 – 30
2.8	200 – 350	30 – 33	20 – 30

Typical chemical composition and mechanical properties of the weld metal

C	Mn	Si	Cr	Ni	Mo	S	P
max 0.06	1.0...2.0	max 0.8	18.0...20.0	10.0...12.0	2.0...3.0	max 0.020	max 0.025

Ultimate tensile strength, UTS, MPa	Yield point, σ_y , MPa	Tensile strain, δ , %	Impact toughness, KCV, α_{notch} , J/cm ² , at t°C		
			+ 20	- 20	- 40
570	min 400	min 30	min 40	min 40	min 40

Process features

- The wire can be made in a version for hardfacing with the arc submerged in flux of **EFA-1**, AN-26S, AN-20S grades.

- Welding positions for $\varnothing 2.0$ mm: $\varnothing 2.2 - 4.0$ mm:
- Wire diameters up to 2.2 mm can be supplied on metal spools K-300 (15 kg).

Application

Welding of chromium-nickel steel assemblies and parts of various machinery, tanks, and pipelines exposed to high humidity, aggressive liquids and gases, and/or a corrosive environment.

