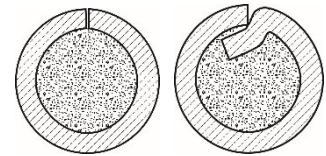


**GRADE**
**CLASSIFICATION FEATURES**
**STRUCTURE TYPE**
**PP-Sv-12N**

TUU 25.9-21459234-022:2015  
AWS A5.29 E81T1-Ni1

Diameter: 1.2 – 4.0 mm  
Shielding: open arc  
Structure: tubular, overlapping  
Core type: basic


**General description**

Flux-cored wire of **PP-Sv-12N** grade is designed for installation and factory open arc welding of critical metal structures made of low-carbon and low-alloy steels and exposed to low temperatures. It is desirable to weld on metal over 3 mm thick using reversed polarity direct current.

**Welding process properties**

- Steady arcing in a wide range of conditions.
- Good weld formation, minor spattering, easy slag separation.
- Wire consumption ratio  $K_C = 1.05 \sim 1.1$ .

**Operating conditions (open arc)**


Wire diameter, mm	Current, A	Voltage, V	Wire stick-out, mm
1.6	180 – 250	18 – 25	20 – 40
2.0	180 – 320	19 – 26	20 – 40
2.2	200 – 350	19 – 27	20 – 40
2.4	220 – 360	19 – 28	20 – 40

**Typical chemical composition and mechanical properties of the weld metal**

C	Mn	Si	Cr	Ni	Al	Zr	S	P
0.1 ... 0.2	0.8...1.2	max 0.35	max 0.2	0.7...1.1	0.5...1.0	max 0.1	max 0.020	max 0.020

Ultimate tensile strength, UTS, MPa	Yield point, $\sigma_Y$ , MPa	Tensile strain, $\delta$ , %	Impact toughness, KCV, $\alpha_{notch}$ , J/cm <sup>2</sup> , at t°C			
			+ 20	- 20	- 30	- 40
480 – 650	min 440	min 18	min 90	min 50	min 35	-

**Process features**

- Avoid directing the arc into the root of fillet welds.
- Complete the weld by smooth interruption of the arc.
- Welding positions for  $\varnothing 1.2 - 4.0$  mm: 
- Wire diameters up to 2.2 mm can be supplied on metal spools K-300 (15 kg).

**Application**

Welding of various machinery assemblies, vessels, tanks, process pipelines, construction metal structures, ship superstructures, etc.

