GRADE	CLASSIFICATION FEATURES	STRUCTURE TYPE

PP-AN1

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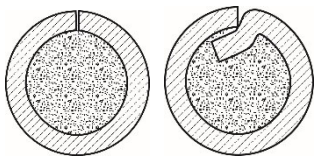
AWS A5.20 E71T-1

Diameter: 1.2 – 4.0 mm
Shielding: open arc
Structure: tubular, overlapping
Core type: rutile-organic



General description

Flux-cored wire of **PP-AN1** grade is designed for open arc welding of low-carbon and low-alloy steel structures. It is used for down-hand welding of steel over 5 mm thick in an installation or open-air shop environment. It can be used for repair hardfacing of worn parts or weld-up of casting flaws.
It is desirable to weld using reversed polarity direct current.

Welding process properties

- Steady arcing, fine-droplet metal transfer, good weld formation, deep weld penetration in the base metal.
- Uniform slag coverage of the weld and easy slag separation.
- Wire consumption ratio K_C = 1.1 ~ 1.2.

Operating welding conditions

Wire diameter, mm	Current, A	Voltage, V	Wire stick-out, mm
2.4	200 – 300	25 – 28	15 – 35
2.8	220 – 320	26 – 31	15 – 40
3.0	240 – 340	27 – 30	20 – 40
3.2	260 – 360	27 – 30	20 – 40

Typical chemical composition and mechanical properties of the weld metal

C	Mn	Si	S	P
0.06 ... 0.1	0.6…1.0	max 0.15	max 0.04	max 0.04

Ultimate tensile strength, UTS, MPa	Yield point, σ_Y, MPa	Tensile strain, δ, %	Impact toughness, KCV, α_{notch}, J/cm², at t°C		
			+ 20	- 20	- 40
460 – 550	-	min 16	min 80	-	-

Process features

- Avoid directing the arc into the root of fillet welds.
- Complete the weld by smooth interruption of the arc.
- Welding positions for Ø 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 general purpose metal structures, process vessels and pipelines, assemblies of agricultural machinery, railway equipment, etc.

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