

GRADE

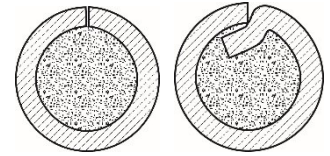
CLASSIFICATION FEATURES

STRUCTURE TYPE

PP-AN180MN

TU U 28.7-21459234-021:2008

Diameter: 1.2 – 4.0 mm
 Shielding: open arc, CO₂
 Structure: tubular, overlapping



General description

Flux-cored wire of **PP-AN180MN** grade is designed for carbon dioxide (CO₂) shielded or open arc machine hardfacing of steel parts and assemblies exposed to metal-to-metal friction. It is desirable to perform hardfacing down-hand, using reversed polarity direct current.

Welding process properties

Weld formation	- good
Slag separation	- good
Deposit factor, g/A·h	- 10 – 15
Crack susceptibility	- low
Wire consumption, kg	- 1.1 – 1.15
Hardness of weld metal	- HRC 24 – 34 (HB 240 – 320)

Operating conditions (CO₂-shielded)

Wire diameter, mm	Current, A	Voltage, V	Gas flow rate, L/min.	Deposition rate, m/h
1.2	70 – 150	23 – 27	4 – 7	7 – 14
1.6	150 – 230	24 – 28	6 – 10	8 – 15
2.4	220 – 320	25 – 32	10 – 14	13 – 20
2.8	260 – 380	25 – 32	12 – 16	14 – 22

Properties of weld metal

Wear resistance: high under the recommended operating conditions. Impact resistance: improved. Well-machinable with cutting tools.

Process features

Hardfacing does not require the parts to be pre-heated if carbon content in the base metal does not exceed 0.25%. With the carbon content above 0.25%, it is desirable to pre-heat the part to 250-300°C. The wire can be made in a version for Ar + CO₂-shielded hardfacing. Wire diameters up to 2.2 mm can be supplied on metal spools K-300 (15 kg).

Application

Reconditioning of railway vehicle parts and assemblies, shafts, axles, bushings, rail joint ends, tongues, rail car couplers, parts of agricultural equipment, etc.

