

GRADE

CLASSIFICATION FEATURES

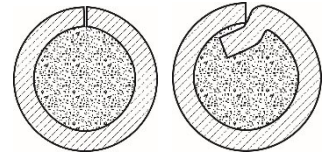
STRUCTURE TYPE

PP-Np-18

(PP-Np-18CrMnSi)

TU U 28.7-21459234-021:2008

Diameter: 1.2 – 4.0 mm
 Shielding: flux, Ar, CO₂, Ar + CO₂
 Structure: tubular, overlapping



General description

Flux-cored wire of **PP-Np-18** grade is designed for automatic and semi-automatic submerged-arc or gas-shielded hardfacing of carbon steel parts exposed to metal-to-metal friction. It is desirable to perform hardfacing down-hand, using reversed polarity direct current.

Welding process properties

Recommended flux grade	- EFA-1, AN-348A, AN-60
Weld formation	- good
Slag separation	- excellent
Deposit factor, g/A·h	- 10 – 15
Crack susceptibility	- moderate
Wire consumption, kg	- 1.05 – 1.15
Hardness of weld metall	- HRC 15 – 32

Operating conditions (submerged arc)

Wire diameter, mm	Current, A	Voltage, V	Deposition rate, m/h
1.6	150 – 230	27 – 30	8 – 15
2.0	180 – 280	29 – 31	10 – 18
2.4	220 – 320	30 – 32	13 – 20
2.8	260 – 380	31 – 33	14 – 22
3.2	300 – 430	32 – 34	15 – 25

Properties of weld metall

Wear resistance: high under the recommended operating conditions. Impact resistance: improved. Can be machined 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 200-300°C. The wire can be made in a version for CO₂ or Ar + CO₂-shielded deposit welding.

Wire diameters up to 2.2 mm can be supplied on metal spools K-300 (15 kg).

Application

Hardfacing of tracked vehicle idlers, road wheels, crane wheels, roller table rollers, roller spindles, shaft seats, resizing of carbon steel parts, etc.

