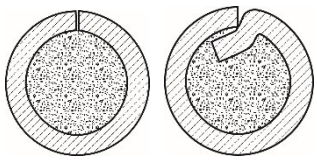
GRADE	CLASSIFICATION FEATURES	STRUCTURE TYPE

PP-Np-15

TU U 28.7-21459234-021:2008

Diameter: 1.6 – 4.0 mm
Shielding: self-shielding
Structure: tubular, overlapping



General description

Self-shielding flux-cored wire of **PP-Np-15** grade is designed for automatic and semi-automatic open-arc hardfacing of carbon steel parts exposed to metal-to-metal friction. It is desirable to perform hardfacing down-hand or in the inclined position, using reversed polarity direct current.

Welding process properties

Weld formation	- good
Slag separation	- good
Deposit factor, g/A·h	- 12 – 20
Crack susceptibility	- low
Wire consumption, kg	- 1.1 – 1.2
Hardness of weld metall	- **HRC 30 – 40 (HB 280 – 380)**

Operating conditions

Wire diameter, mm	Current, A	Voltage, V	Deposition rate, m/h	Wire stick-out, mm
1.6	140 – 250	24 – 27	10 – 15	30 – 40
2.0	180 – 280	24 – 28	15 – 18	30 – 40
2.4	220 – 320	25 – 28	13 – 20	30 – 40
2.8	260 – 380	25 – 29	14 – 22	30 – 40

Properties of weld metall

Impact wear resistance: moderate; increased wear resistance with metal-to-metal friction. 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 250-350 °C.
Wire diameters up to 2.2 mm can be supplied on metal spools K-300 (15 kg).

Application

Hardfacing and repair of damaged and worn rail track sections (rail joint ends, slipping ruts, tongues and other parts of railway switches), tram rails and other parts exposed to heavy contact loads.