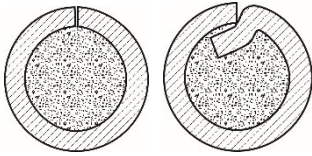


GRADE	CLASSIFICATION FEATURES	STRUCTURE TYPE
PP-Np-30H (Np-30Cr) TU U 28.7-21459234-021:2008	Diameter: 1.2 – 4.0 mm Shielding: open arc, flux, Ar, Ar + CO ₂ Structure: tubular, overlapping	

General description

Flux-cored wire of **PP-Np-30H** grade is designed for open-arc, submerged-arc or gas-shielded hardfacing of parts exposed to severe abrasive wear and corrosion along with moderate loads at normal or increased temperatures (up to 450°C). It is desirable to perform hardfacing down-hand, using reversed polarity direct current.

Welding process properties

Recommended flux	- EFA-1 , AN-20S/P, AN-26S/P
Weld formation	- good
Slag separation	- good
Deposit factor, g/A·h	- 10 – 16
Crack susceptibility	- moderate
Wire consumption, kg	- 1.05 – 1.2
Hardness of weld metall	- after hardfacing: HRC 44 – 54 - after annealing: HRC 26 – 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

Good abrasion resistance at temperatures up to 450°C. Impact resistance: satisfactory. The weld metall is corrosion-resistant in a steam and water environment. Satisfactorily cuttable.

Process features

Hardfacing of solid items requires pre-heating to 250-300°C.

Thermal treatment: annealing at 800-820°C, 3-hour holding, cooling at a rate of 30-40°C/h. Oil quenching at 1000-1050°C, tempering at 250-300°C, 2-hour holding, HRC 48 – 54.

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

Application

Hardfacing of cold-stamping dies, part sealing surfaces of general purpose industrial pipeline fittings operating at temperatures up to 450°C, hydraulic rams, tractor and excavator road wheels, conveyor parts, crankshaft journals, dies, etc. Can be used for sputtering (metallizing).

