

GRADE

CLASSIFICATION FEATURES

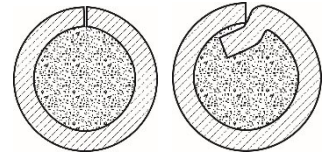
STRUCTURE TYPE

PP-Np-20H

(Np-20Cr)

TU U 28.7-21459234-021:2008

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



General description

Flux-cored wire of **PP-Np-20H** grade is designed for submerged-arc, unshielded, or gas-shielded hardfacing of parts exposed to metal-to-metal friction, heating up to 450°C, and chemically active environment. It is desirable to perform hardfacing down-hand, using reversed polarity direct current.

Welding process properties

Recommended flux	- EFA-1 , AN-26S/P, AN-20S/P
Weld formation	- good
Slag separation	- good up to 400°C
Deposit factor, g/A·h	- 10 – 15
Crack susceptibility	- moderate
Wire consumption per, kg	- 1.05 – 1.15
Hardness of weld metall	- HRC 42 – 50

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

The weld metall is abrasion-resistant at high temperatures. Impact resistance: good. Satisfactory cuttability.

Process features

Hardfacing is preceded by pre-heating the part to 350-450°C and followed by slow cooling at a rate of 40-60°C/h. 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, etc. Can be used for sputtering (metallizing).

