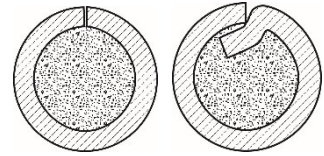


Hardsteel 50

TU U 28.7-21459234-021:2008

Diameter: 1.6 – 4.0 mm
 Shielding: flux
 Structure: tubular, overlapping



General description

Flux-cored wire of **Hardsteel 50** grade is designed for automatic and semi-automatic submerged-arc hardfacing of parts exposed to metal-to-metal friction, cyclic thermal load and high relative pressure. It is desirable to perform hardfacing using reversed polarity direct current.

Welding process properties

Recommended flux	- EFA-1, AN-26S/P, AN-20S/P
Weld formation	- good
Slag separation	- good
Deposit factor, g/A·h	- 15 – 22
Crack susceptibility	- increased
Wire consumption, kg	- 1.05
Hardness of weld metal	- HRC 46 – 54

Operating conditions (submerged-arc)

Wire diameter, mm	Current, A	Voltage, V	Wire stick-out, mm
2.0	180 – 260	27 – 30	12 – 18
2.8	250 – 350	29 – 32	18 – 23
3.2	300 – 400	30 – 33	20 – 25
3.6	340 – 450	31 – 34	20 – 25

Properties of weld metal

The weld metal shows excellent friction wear resistance when exposed to increased temperatures.
 Impact resistance: good. Satisfactory cuttability.

Process features

The part surface must be pre-heated to 350-400°C. Hardfacing must be followed by medium-temperature tempering (400°C/1h) with subsequent slow cooling at a rate of 40-60°C/h. With additional alloying, **Hardsteel 50** wire is an improved equivalent of PP-Np-35V9H3SF wire.

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

Application

Hardfacing of pipe-, section- and sheet-rolling mill rolls, hot-stamping dies, metal hot-cutting blades, etc.

