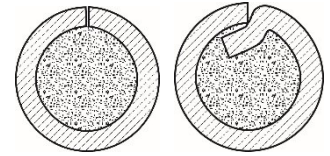


Hardsteel 55D

TU U 28.7-21459234-021:2008

Diameter: 2.0 – 4.0 mm
 Shielding: flux
 Structure: tubular, overlapping



General description

Flux-cored wire of **Hardsteel 55D** grade is designed for automatic and semi-automatic submerged-arc hardfacing of steel mill rolls and similar parts exposed to metal-to-metal friction, cyclic thermal load and corrosion. It is desirable to perform hardfacing using reversed polarity direct current.

Welding process properties

Recommended flux	- EFA-1
Weld formation	- good
Slag separation	- good
Deposit factor, g/A·h	- 14 – 18
Crack susceptibility	- moderate
Wire consumption, kg	- 1.05 – 1.20
Hardness of weld metal	- HRC 50 – 60

Operating conditions (submerged-arc)

Wire diameter, mm	Current, A	Voltage, V	Deposition rate, m/h
2.0	200 – 350	26 – 32	20 – 40
2.8	250 – 500	28 – 32	25 – 40
3.2	300 – 600	28 – 32	25 – 40
3.6	350 – 650	29 – 33	25 – 40

Properties of weld metal

The weld metal is resistant to friction wear at high temperatures up to 550°C. Impact resistance and cuttability are satisfactory.

Process features

The part surface must be pre-heated to 300-450°C. Perform hardfacing in three pads at most. When it is required to reconstruct a substantial thickness of worn metal, it is recommended to weld the intermediate weld pads with more ductile materials, and the working pad with Hardsteel 55D wire.

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

Application

Hardfacing of strip hot rolling mill rolls, pinch rolls, coiler rollers, etc. After thermal treatment, it provides secondary hardening of the weld metal with increase of high-temperature hardness and wear resistance, as well as thermal fatigue resistance.

