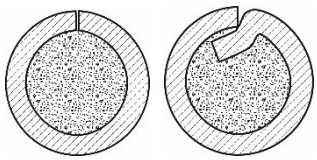
GRADE	CLASSIFICATION FEATURES	STRUCTURE TYPE

Hardsteel 54

TU U 28.7-21459234-021:2008

Diameter: 1.2 – 4.0 mm
Shielding: CO_2, Ar + CO_2
Structure: tubular, overlapping



General description

Flux-cored wire of **Hardsteel 54** grade is designed for automatic and semi-automatic open-arc hardfacing of carbon or low-alloy steel parts exposed to metal-to-metal friction, alternating and impact loads at normal and increased temperatures. It is desirable to perform hardfacing using reversed polarity direct current.

Welding process properties

Weld formation	- good
Slag separation	- good
Deposit factor, g/A·h	- 15 – 22
Crack susceptibility	- moderate
Wire consumption, kg	- 1.05 – 1.2
Hardness of weld metal	- **HRC 50 – 58**

Operating conditions (Ar + CO_2-shielded)

Wire diameter, mm	Current, A	Voltage, V	Gas flow rate, L/min.	Deposition rate, m/h
1.2	120 – 300	22 – 30	7 – 16	10 – 15
1.6	140 – 320	23 – 32	7 – 18	10 – 15
2.0	180 – 400	24 – 34	8 – 20	12 – 18
2.4	200 – 450	25 – 36	10 – 20	15 – 20

Properties of weld metal

Wear resistance: increased. Impact resistance: moderate. The weld metal can only be machined by grinding.

Process features

For parts with the carbon content in steel above 0.25%, hardfacing requires pre-heating to 200-300°C.
Wire diameters up to 2.2 mm can be supplied on metal spools K-300 (15 kg).

Application

Hardfacing of tracked vehicle undercarriage wheels and rollers, rubber mixer chambers and augers, steel crankshafts, universal joint spiders, rail car couplers, cutting lips of excavator buckets, reinforcement of tillage equipment tools, etc.