

Invention relates to the field of electric arc surfacing and can be used in strengthening and restoring components of rolling-mill equipment in ferrous metallurgy and heavy engineering. Method for high-speed electric arc surfacing of high-carbon steels and cast iron involves surfacing with preheating and additional heating, followed by post-surfacing heat treatment, performed using narrow beads, the width of which is determined according to the expression:

$B_B = (1,0 \div 1,1) \cdot 10^4 \frac{UD_E}{V}$, where B_B is the bead width, mm; U is the arc voltage, B; D_E is the electrode diameter, mm; V is the surfacing rate, mm/h. Method ensures high-quality formation of the surfacing metal layer, improves crack resistance, corrosion resistance, and wear resistance.