

ABSTRACT

ELECTROSLAG WELDING METHOD AND ELECTROSLAG WELDING
APPARATUS

Welding is performed while keeping the depth of a slag bath at a predetermined depth in electroslag welding using a slidable backing plate, so that it is possible to secure good penetration and prevent mechanical properties of weld metal from being degraded. An electroslag welding apparatus 100 includes: a welding torch 4 having a contact tip 5 that feeds electric power to a welding wire 6; a slidable backing plate 2; a travelling carriage 16 having the welding torch 4 and the slidable backing plate 2; a travelling carriage controlling device 17; a molten slag bath detector 13; a flux feeding device 14; and a flux feed controlling device 15. In order to make a length L_d of the welding wire 6 from the tip of the contact tip 5 to the molten slag bath 7 equal to the predetermined length, the flux feed controlling device 15 controls the feeding of a flux. The travelling carriage controlling device 17 controls a travelling speed of the travelling carriage 16 so that a predetermined relation between a welding current 8 and a reference current value is satisfied. Welding is performed while keeping a depth of the slag bath at a predetermined depth L_s .

FIG. 1