

Invention relates to the hidden arc welding and it can be used in production of welded structures of metals and alloys, in particular, made of low-alloy steels. The method of hidden arc welding the area of the flows of gas exchange between fusion zone, which includes molten metal and molten flux, and environment is limited with the help of a fixed jacket, and the space between the grains of flux is saturated by shielding gaseous substance. The connection of the jacket with the surface of welded joint forms a cavity, in which following processes begin and are carried out: arcing, melting of base and filler metals, melting of flux, and the aforementioned substance is accumulated in the cavity, the substance being the mixture of the products of evaporation of molten metal and slag, dissociation of the components of flux, chemical reactions between the metal and the slag, between the components of flux, and slag. Jacket has the shape of a funnel, wide part of which is elongated along the direction of motion of welding head, longitudinal section of which is asymmetrical and has the steeply dipping wall in major portion and the sloping wall in the tail section. The dimensions of jacket are connected with the dimensions of metallic and slag baths. Improved protection of arc and molten metal is achieved.