



### Beam electrodes of new construction

For welding of thick-walled elements, cutting and surfacing it is expedient to use electrodes of large diameter (6 mm and more). Lately however the electrodes more than 6 mm are not produced and moreover such electrodes are in shortage.

It is proposed to use the beam electrodes of new construction allowing to use electro-safety electrode holders. Beam electrode is formed of single electrodes of required sort and type into configuration of any section depending on the kind of work.

#### Advantages:

- increasing the productivity in 2 - 5 times;
- saving of electrodes to 5 %;
- saving of electrical power. For example, when welding with beam electrode on square equivalent to unary electrode on diameter of 8 mm the welding current 240 A is required, and when welding with unary electrode on diameter of 8 mm the current is 450A;
- the higher quality of joint;
- lowering the zones of thermal influence;
- possibility to use welding consumables at welding and surfacing;
- possibility to use electrode end for welding and surfacing;
- using the welders of lower skill category for the welding work.

Beam electrodes can be used for restoration of worn elements of metallurgical equipment, rolls, of pusher-type furnace, slag pans, moulds, sluice gates, crane rails etc., as well as for sealing of surface defects of sheets, slabs with deep cleanup of surface defects and others.

Manufacturing of beam electrodes of new construction does not require the special equipment. One worker per one shift can produce 100 kg of beam electrodes.

Beam electrode of new construction was tested at PC Alchevskij Iron and Steel Works and is recommended to introduction.

Legal assistance – patent of Ukraine «Beam Electrode».