Description

Al-Cu, Al-Steel and Cu-Stainless Steel transition pieces have been produced by explosion welding process both by cutting down from large-sized bimetal plates and individually. The thickness of cladding layers normally is in the range from 1 to 10 mm, whereas the thickness of base layer is unlimited. The mentioned combinations of materials are the most essential in the electrical engineering. These transition pieces normally are used in electrodes assembling of electrolysis equipment in manufacturing the pure aluminium and cathode copper.

Innovative Aspect and Main Advantages

The developed explosion welding technology is the non-alternative process for production of high-current electrical transition pieces and provides a very good quality with metallic bond interface between such distinctly dissimilar materials like: aluminium and copper, copper and stainless steel, aluminium-mild steel as well as between any other combinations of materials.

Areas of Application

Metallurgy and electrical engineering

Stage of Development

Ready to be manufactured and delivered upon application

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Aluminium busbar explosion clad with a copper plate at the site of the sectional contact connection to a different electric conductors

Aluminium-Steel bimetal transition piece made by explosion cladding and used for electron-beam welding of electrolytic-cell anode (see below)

Finished reduction anodes for aluminium electrolysers

Cu-Stainless Steel electrical contact suspensions and workshop with cathode copper electrolysers