

TECHNOLOGY FOR PROTECTING THE HEATED ELEMENTS OF THERMAL POWER PLANTS FROM ABRASIVE WEAR AND GAS CORROSION

Areas of Application

The technology is to be used for applying the alloyed arc-sprayed coatings made of Fe-Cr-B-Al-Mg powder wires on the surfaces of furnace-wall tubes and economizer pipes of thermal power plants to effectively protect them from abrasive wear and gas corrosion at an operating temperature of up to 600 °C

Specification

Maximum spraying capacity	
Aluminum, kg/h	10.0
Zinc, kg/h	30.0
Powder wire, kg/h	12.0
Operating air pressure, Pa	0.5–0.6
Air consumption, m ³ /min	1.5
Power consumption, kW	16.0

Advantages

The technology for using special powder wires enables to obtain protective coatings that match the plasma-sprayed ones in terms of quality and to double the service life of protected pipes

Stage of Development. Suggestions for Commercialization

IRL7, TRL8

Application of electric-arc coatings under works contract or transfer of license for the use of technology; manufacture of equipment and materials for works

IPR Protection

IPR2, IPR3

Contact Information

Zynovii T. Nazarchuk, Karpenko Physico-Mechanical Institute of the NAS of Ukraine;
+38 032 263 30 88, e-mail: pminasu@ipm.lviv.ua

