

Processing method of steel sleeve of a pump shaft gland seal involves forming a wear-resistant surface layer on the sleeve using the electric spark alloying method with a tool electrode at discharge energy levels of 0.036–6.8 J, applying a metal-polymer material to the resulting surface followed by its polymerization, and mechanical finishing of the applied metal-polymer material to ensure the specified surface roughness of the coating. In this process, graphite is used as the electrode material in electric spark alloying, while a reinforced polymer material is used as the metal-polymer material. After polymerization, the surface layer of the formed coating is milled to a depth determined using a coefficient K equal to the R_z roughness of the surface layer formed by electric spark alloying using graphite as the electrode tool.