

The invention relates to galvanostegic, in particular to electrolytic application of function coatings on aluminium and alloys thereof which may be used as catalysts in chemical industry, grounding electrodes in the electrochemical protection of metal structures, in purification of gaseous emissions of automobile transport. A method for the electrolytic application of manganese dioxide coating on aluminium and alloys thereof, characterizing in that preliminarily surface of aluminium and alloys thereof is increased by anode processing in the pulse mode where pulse duration is of $5 \cdot 10^{-3}$ - $5 \cdot 10^{-4}$ s, spacing interval is of $1 \cdot 10^{-2}$ - $2 \cdot 10^{-2}$ s, at current density of 20-50 A/dm² and temperature of 40-50°C during 15-25 minutes while mixing, in the electrolyte containing sodium chloride, sodium perchlorate, sodium nitrate at the following ratio of components (g/l):

sodium chloride	10-15
sodium perchlorate	5-10
sodium nitrate	2-5

Thereafter oxidizing in anode and sparking mode is performed by direct current of density of 5-15 A/dm² at final voltage of 90-150 V during 30-60 minutes in mixing and temperature of 20-25°C from the aqueous electrolyte containing potassium hydroxide, permanganate at the following ratio of components (g/l):

potassium hydroxide	1-50
potassium permanganate	16-240.

The applied method allows to obtain solidly bonded, catalytic active coating with manganese dioxide (82-95%) on preliminarily increased by 3-5 times carrier surface from aluminium and alloys thereof.