

Method for obtaining coating with high mechanical resistance on the inner surface of cylindrical metal products, comprising preparation of the inner surface and vacuum arc sputtering in a controlled atmosphere of reactive gases, in which zirconium in the form of cylindrical cathode – positioned centrally along the axis of cylindrical product – is used as coating material. Metal surface of product serves as the second electrode, and during the arc spraying process in low-voltage electric arc, zirconium reacts with reactive gas to form zirconium compounds on the inner surface of product that exhibit high adhesion and are resistant to thermal and mechanical stresses.