Title (en)

METHOD FOR VACUUM-COATING WITH A PHOTO-SEMICONDUCTING LAYER AND USE OF SAID METHOD

Title (de)

VERFAHREN ZUM VAKUUMBESCHICHTEN MIT EINER PHOTOHALBLEITENDEN SCHICHT UND ANWENDUNG DES VERFAHRENS

Title (fr)

PROCEDE POUR REVETIR SOUS VIDE AU MOYEN D'UNE COUCHE PHOTO-SEMI-CONDUCTRICE, ET APPLICATIONS DU PROCEDE

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Application

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Abstract (en)

[origin: WO2006034739A2] The invention relates to a method for vacuum-coating an object with a photo-semiconducting layer. Said method is characterized by the following steps: adjusting the temperature of the surface-near area of the object to a value in the range of from -40 °C to +250 °C prior to coating; operating a reactive pulsed magnetron sputter process with at least one electrically conducting target containing titanium as the main component in a working gas containing at least one inert gas and oxygen; controlling the process in accordance with the purpose of application of the coated object in such a manner as to ensure formation of mainly titanium oxide in a defined ratio of the atomic composition of the layer of titanium to oxygen such as 1: (2+x), whereby x ranges from -0.5 to +0.3; adjusting such a ratio of the rates of ionized and neutral particles during layer formation that a portion of at least 5 percent of titanium oxide is formed as a crystalline modification thereof and that the parameters of the sputter process are selected in such a manner that the surface temperature of the object does not exceed a maximum temperature of 300 °C.

IPC 8 full level

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