

ABSTRACT

Disclosed herein is a method of manufacturing a plasma-resistant coating film. The method includes (1) forming a lower coating layer through a thermal spray process, on a base member, from a first rare earth metal compound powder including 90 to 99.9 wt% of first rare earth metal compound particles and 0.1 to 10 wt% of silica (SiO_2) particles, (2) processing the surface of the lower coating layer formed in step (1) to have an average surface roughness of 1 to 6 μm , and (3) forming an upper coating layer through a suspension plasma spray process, on the lower coating layer which is surface-treated in step (2), from second rare earth metal compound particles, to obtain a structurally dense and chemically stable plasma-resistant coating film with improved plasma resistance.

Figure 2