

Abstract

A barrier film which has uniform thickness and excellent adhesiveness to
5 the base material and superbly functions to protect a platinum film can be
formed on the inner wall surface of a moisture-generating reactor at ease and at
a low cost.

The moisture-generating reactor in which hydrogen and oxygen are
reacted to generate moisture without high temperature combustion is made of
10 an alloy containing aluminum. A principally aluminum oxide (Al_2O_3)-composed
barrier film is formed by applying an aluminum selective oxidation treatment on
the inner wall surface of the moisture-generating reactor, and thereafter a
platinum film is stacked on and stuck to the barrier film so that a platinum coating
catalyst layer is formed.

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