

The IERE China Forum

Program(session2):Huge electric power development

Experiences of operation and maintenance of advanced power plants

Title:

Development of the transportable-plasma-spraying-equipment

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Abstract :

In order to reduce maintenance cost of thermal power stations, the transportable-plasma-spraying-equipment was developed jointly by The Chugoku Electric Power Co., Inc. and Aero Plasma Corporation.

Thermal spraying is a technology in which powdered ceramic or metal is melted and sprayed onto the surface of a material to form a coat. Thereby, it can improve resistance to abrasion, heat and corrosion easily. Plasma spraying, one of thermal spraying, has an advantage to be able to spray ceramic with high melted temperature, because of its high spraying temperature .

Ceramic spraying is carried out at the factory, because plasma spraying equipments are too large and heavy to carry. For this reason, transportable-plasma-spraying-equipment has been developed. The spraying gun has been improved to use the heat of plasma effectively. As a result, plasma spraying which has high abrasion resistance can be carried out with low output. Transportable-plasma-spraying-equipment has been developed by the advantage of low output. This equipment can be carried by 2ton truck, and it can spray with low output which is 15kW. For this reason, the newly developed plasma spraying is available for the parts or equipments of thermal power stations which can't be removed or which form is complicated.