

A NEW HARDFACING PROCESS

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Abstract

A new patented process for applying hardfacing is described. The Conforma Clad™ process represents an economical alternative to current spraying processes such as flame, plasma and D-gun without many of the inherent limitations of the spray methods. The Conforma Clad™ process combines the advantages of ease of application, high materials conservation, excellent edge and thickness control of coatings with a wide choice of coating materials and a broad spectrum of hardness-toughness combinations. Low coating porosities are achieved with exceptionally high bond strengths.

The process involves the fabrication of a flexible cloth containing the hardfacing powder. The cloth is applied to the workpiece with a special adhesive and finally brazed to the substrate by passage through a furnace. This technique permits the coating of intricate multiple surfaces, including vertical faces, in a single operation. Actual hardware coated by the Conforma Clad™ process is shown, together with typical microstructures of hardfaced components. The results of coating strength and abrasion testing are also presented.

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