

CASTI HANDBOOK OF CLADDING TECHNOLOGY

2nd Edition

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PREFACE

Cladding technology refers to the application of a relatively thin layer of an alloy (as the cladding) onto a substrate or backing material.

In many cases the cladding is selected for its resistance to corrosion. A wide range of alloys can be clad, including stainless steels and nickel base alloys to rare metals such as zirconium and tantalum.

The backing material is normally selected to meet the necessary mechanical requirements (strength and toughness). The backing material is often a grade of carbon or low alloy steel, other metals may be used.

A key feature of clad products is that the backing material is often significantly cheaper than the cladding alloy, so that clad products can offer substantial cost savings over the use of solid alloy products.

The authors have been personally involved in the use of corrosion-resistant alloy cladding of carbon steel for various applications in the oil and gas industry for more than 10 years. This experience prompted them to write this book covering wider aspects of clad products including the different means of manufacturing them, their properties, and their applications in various industries. The substantial use of clad pipe in the oil and gas sector merits particular mention, and so Chapter 9 of the book is devoted entirely to project experience in that industry.

The principal units of measurements used are metric with imperial conversions. Where appropriate, figures are expressed in nominal imperial units with actual size metric conversion.

Alloys are identified principally by UNS numbers and abbreviated terms are listed in the Appendix 1.

Liane Smith
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