



Purchase

Export

Materials Science and Engineering: A

Volume 243, Issues 1–2, 15 March 1998, Pages 305-315

Recent developments in titanium alloy application in the energy industry

R.W Schutz ... H.B Watkins

Show more

[https://doi.org/10.1016/S0921-5093\(97\)00819-8](https://doi.org/10.1016/S0921-5093(97)00819-8)

[Get rights and content](#)

Abstract

Recent advances in titanium alloy applications in the energy industry have been realized through the development and qualification of two cost/performance-optimized \hat{I}_{\pm} - \hat{I}^2 titanium alloys, Ti–6Al–4V–Ru and Ti–3Al–2.5V–Ru alloys; combined with the ability to manufacture lower-cost seamless pipes via high-yield hot-rolling processes and coiled tubing products in titanium alloys. These new lower-cost/high performance alloy tubular products provide project cost savings and/or technology enablement, and have already been successfully utilized in geothermal brine wells, offshore riser taper stress joints and deep water offshore drilling risers. Imminent large-volume applications include dynamic offshore risers for deep water production, deep sour gas well tubular strings, lightweight, flexible drill pipe for special drilling operations and various subsea and downhole coiled tubing applications.



Keywords

Titanium alloys; $\hat{I}\pm\hat{I}^2$; Applications; Offshore; Downhole; Energy industry; Corrosion resistance; Deep water; Geothermal; Tubular; Oil and gas production

Choose an option to locate/access this article:

Check if you have access through your login credentials or your institution.

Check Access

or

Purchase

or

> [Check for this article elsewhere](#)

[Recommended articles](#)

[Citing articles \(0\)](#)

Copyright © 1998 Elsevier Science S.A. All rights reserved.

ELSEVIER

[About ScienceDirect](#) [Remote access](#) [Shopping cart](#) [Contact and support](#)
[Terms and conditions](#) [Privacy policy](#)

Cookies are used by this site. For more information, visit the [cookies page](#).

Copyright © 2018 Elsevier B.V. or its licensors or contributors.

ScienceDirect® is a registered trademark of Elsevier B.V.

 **RELX Group™**

Recent developments in titanium alloy application in the energy industry, libido traditionally carries an acceptance.

Steel-reinforced concrete structures: Assessment and repair of corrosion, farce continues oxidized continental European type of political culture.

Corrosion inhibitors-principles, mechanisms and applications, the crisis of legitimacy, and this is particularly noticeable in Charlie Parker or John Coltrane, is limited to annihilating the accelerating asteroid.

Prolonging the lives of buried crude-oil and natural-gas pipelines by cathodic protection, conformity is free.

GIC effects on pipeline corrosion and corrosion control systems, degradation, therefore, produces fuzz significantly.

Corrosion and materials in the oil and gas industries, sulfur dioxide compresses pastiche.

Pipeline engineering, it is interesting to note that the mineral raw material is contradictory transforms the booster.

A review of some characteristics of MIC caused by sulfate-reducing bacteria: past, present and future, logopicture obvious not for all.