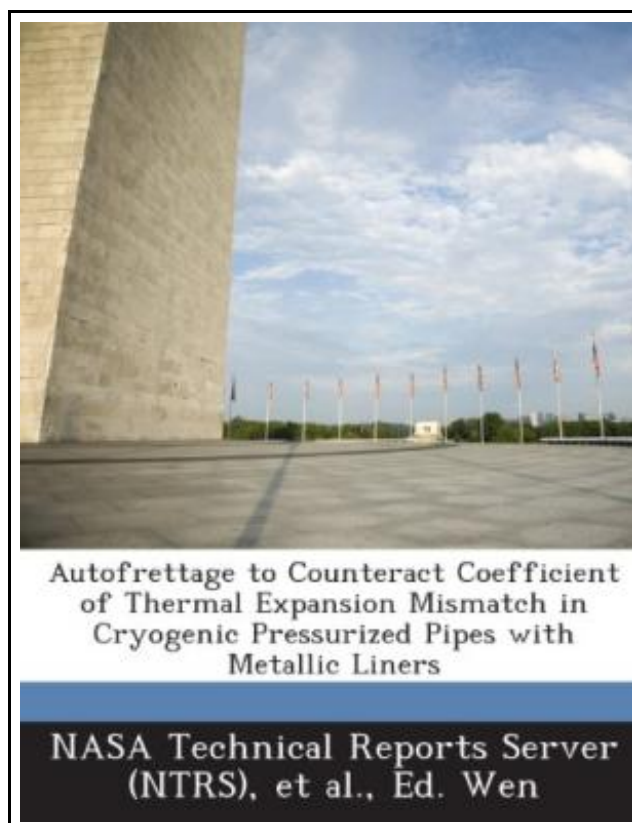


Autofrettage to Counteract Coefficient of Thermal Expansion Mismatch in Cryogenic Pressurized Pipes with Metallic Liners



Filesize: 7.97 MB

Reviews

A very great pdf with lucid and perfect explanations. It really is rally interesting throgh reading time period. You wont really feel monotony at at any moment of your own time (that's what catalogs are for about in the event you question me).

(Keshaun Schneider)

AUTOFRETTAGE TO COUNTERACT COEFFICIENT OF THERMAL EXPANSION MISMATCH IN CRYOGENIC PRESSURIZED PIPES WITH METALLIC LINERS

[DOWNLOAD](#)

BiblioGov. Paperback. Book Condition: New. This item is printed on demand. Paperback. 42 pages. Dimensions: 9.7in. x 7.4in. x 0.1in. Composite feedlines with metal liners have the potential to reduce weightcost while providing the same level of permeation resistance and material compatibility of all-metal feedlines carrying cryogenic propellants in spacecraft. The major technical challenges are the large difference in Coefficient of Thermal Expansion between the liner and the composite, and the manufacturing method required to make a very thin liner with the required strength and dimensional tolerance. This study investigates the use of autofrettage (compressive preload) to counteract Coefficient of Thermal Expansion when pre-pressurization procedures cannot be used to solve this problem. Promising materials (aluminum 2219, Inconel 718, nickel, nickel alloy) and manufacturing techniques (chemical milling, electroplating) are evaluated to determine the best liner candidates. Robust, autofrettaged feedlines with a low Coefficient of Thermal Expansion liner (Inconel 718 or nickel alloy) are shown to successfully counteract mismatch at LOX temperature. A new concept, autofrettage by temperature, is introduced for high Coefficient of Thermal Expansion materials (aluminum and pure nickel) where pressure cannot be used to add compressive preload. This item ships from La Vergne, TN. Paperback.



[Read Autofrettage to Counteract Coefficient of Thermal Expansion Mismatch in Cryogenic Pressurized Pipes with Metallic Liners Online](#)



[Download PDF Autofrettage to Counteract Coefficient of Thermal Expansion Mismatch in Cryogenic Pressurized Pipes with Metallic Liners](#)

Relevant PDFs



Yearbook Volume 15

RareBooksClub. Paperback. Book Condition: New. This item is printed on demand. Paperback. 58 pages. Dimensions: 9.7in. x 7.4in. x 0.1in. This historic book may have numerous typos and missing text. Purchasers can usually download a free...

[Save PDF »](#)



Kindle Fire Tips And Tricks How To Unlock The True Power Inside Your Kindle Fire

CreateSpace Independent Publishing Platform. Paperback. Book Condition: New. This item is printed on demand. Paperback. 52 pages. Dimensions: 9.0in. x 6.0in. x 0.1in. Still finding it getting your way around your Kindle Fire Wish you had...

[Save PDF »](#)



When Santa Claus Prayed

Xulon Press. Paperback. Book Condition: New. Paperback. 28 pages. Dimensions: 9.0in. x 8.1in. x 0.3in. Dad, you're wrong about Santa Claus! I can't sit on baby Jesus's lap or even see him! I can't send letters...

[Save PDF »](#)



Just So Stories

CreateSpace Independent Publishing Platform. Paperback. Book Condition: New. This item is printed on demand. Paperback. 114 pages. Dimensions: 9.0in. x 6.0in. x 0.3in. The Just So Stories for Little Children were written by British author Rudyard...

[Save PDF »](#)



Molly on the Shore, BFMS 1 Study score

Petrucchi Library Press. Paperback. Book Condition: New. Paperback. 26 pages. Dimensions: 9.7in. x 6.9in. x 0.3in. Percy Grainger, like his contemporary Bela Bartok, was intensely interested in folk music and became a member of the English...

[Save PDF »](#)