1. Record Nr. UNISA996213874203316

Titolo	Proceedings of the Ninth International Symposium on Environmental Degradation of Materials in Nuclear Power Systems--Water Reactors : [Newport Beach, California, August 1-5, 1999] / / sponsored by the Minerals, Metals and Materials Society, American Nuclear Society, National Association of Corrosion Engineers International ; edited by Steve Bruemmer, Peter Ford, Gary Was
Pubbl/distr/stampa	Warrendale, Pennsylvania : , : Minerals, Metals & Materials Society, , [1999] ©1999
ISBN	1-118-78777-3 1-118-78761-7 1-118-78795-1
Descrizione fisica	1 online resource (1252 p.)
Altri autori (Persone)	BruemmerS. M FordF. P (F. Peter) WasGary S <1953-> (Gary Steven)
Disciplina	621.48 621.4834
Soggetti	Nuclear power plants - Corrosion Water cooled reactors - Corrosion Nuclear power plants - Materials - Effect of radiation on
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Cover; Title Page; Copyright Page; FOREWORD; TABLE OF CONTENTS; PWR Primary-1: Mechanisms; An Overview of Internal Oxidation as a Possible Explanation of Intergranular Stress Corrosion Cracking of Alloy 600 in PWRs; Methodology to Understand the Mechanisms of PWSCC; Hydrogen Effects on PWR SCC Mechanisms in Monocrystalline and Polycrystalline Alloy 600; Insights into Environmental Degradation Mechanisms from Analytical Transmission Electron Microscopy of SCC Cracks; Measurement of the Fundamental Parameters for the Film-Rupture/Oxidation Mechanism-The Effect of Chromium Comparison of Hydrogen Effects on Alloy 600 and 690Comments on a

Proposed Mechanism of Internal Oxidation for Alloy 600 as Applied to Low Potential SCC; Internal Oxidation and Embrittlement of Alloy 600; PWR Primary-2: Chemistry and Failure Analysis; The Effect of Primary Coolant Zinc Additions on the SCC Behaviour of Alloy 600 and 690; PWSCC of Alloy 600: A Parametric Study of Surface Film Effects; Modelling of Stress Corrosion Crack Initiation on Alloy 600 in Primary Water of PWRs; Effect of Water Chemistry on Environmentally Assisted Cracking in Alloy in Simulated PWR Environments
Unique Primary Side Initiated Degradation in the Vicinity of the Upper Roll Transition in Once Through Steam Generators from Oconee Unit 1PWR Primary-3: Hydrogen Effects & Microstructure; On the Possibility of Forming Ordered Ni2Cr in Alloy 690; Hydrogen Embrittlement of PH 13-08 Mo Stainless Steel in PWR Environment Effect of Microstructure; The Effect of Special Grain Boundaries on IGSCC of Ni-16Cr-9Fe-xC; Fracture Behavior of Nickel-Based Alloys in Water; Hydrogen-Assisted Failure of Alloys X-750 and 625 under Slow Strain-Rate Conditions
An Experimental Study of the Hydrogen Embrittlement of Alloy 718 in PWR Primary WaterA Study of Corrosion Mechanisms and Kinetics of Alloy 718 in PWR Primary Water; Stress Corrosion Crack Propagation Rate of Alloy 600 in the Primary Water of PWR: Influence of a Cold Worked Layer; PWR Primary-4: Crack Growth & Creep; Stress Corrosion Crack Growth Rate Measurements in Alloys 600 and 182 in Primary Water Loops Under Constant Load; Initial Results on the Stress Corrosion Cracking Monitoring of Alloy 600 in High Temperature Water Using Acoustic Emission
Stress Corrosion Crack Propagation Rates in Reactor Vessel Head Penetrations in Alloy 600Stress Corrosion Life Assessment of Alloy 600 PWR Components; Influence of Chromium Content and Microstructure on Creep and PWSCC Resistance of Nickel Base Alloys; A Simplified Model for SCC Initiation Susceptibility in Alloy 600, with the Influence of Cold Work Layer and Strength Characteristics; Creep of Nickel Base Alloys in High Temperature Water; An Investigation of Alloy 182 Stress Corrosion Cracking in Simulated PWR Environment; BWR-1: Cracking Response
Characteristics of Crack Propagation Through SCC under BWR Conditions in Stainless Steels Stabilized with Titanium or Niobium

Sommario/riassunto

This collection presents an exchange of ideas among scientists and engineers about the economic and safety concerns surrounding environmentally induced materials problems which lead to nuclear power plant outages. Scientists and engineers concerned with the environmental degradation processes (corrosion, mechanical, and radiation effects) present their latest results on such topics as life extension/relicensing and materials problems associated with spent fuel storage and radioactive waste disposal. This collection will be of interest to utility engineers, reactor vendor engineers, plant archi