

1. Record Nr.	UNINA9911006593803321
Autore	Author) IAEA (Corporate
Titolo	Advances in Nuclear Power Process Heat Applications
Pubbl/distr/stampa	Lanham : , : International Atomic Energy Agency, , 2012 ©2012
ISBN	1-5231-3010-5 1-283-59422-6 9786613906670
Descrizione fisica	1 online resource (286 pages)
Altri autori (Persone)	Editor)IAEA (Corporate
Soggetti	Gas cooled reactors Nuclear power plants - Safety measures
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Cover -- FOREWORD -- CONTENTS -- 1. INTRODUCTION -- 1.1. OBJECTIVES -- 1.2. NUCLEAR PROCESS HEAT APPLICATIONS -- 1.3. SCOPE OF THE REPORT -- 2. PROCESS HEAT HIGH TEMPERAT R REACTOR CONCEPTS -- 2.1. DESIGN ASPECTS -- 2.2. NUUCLEAR HEAT SUPPLY SYSTEM (COUPLING) -- 2.3. SPECIFIC HTGR DESIGN PROPOSALS -- 3. PROCESS HEAT HTGR APPLICATIONS -- 3.1. NUCLEAR HYDROGEN PRODUCTION -- 3.2. NUCLEAR DESALINATION -- 3.3. OTHER APPLICATIONS -- 4. SAFETY AND ENVIRONMENTAL CONSIDERATIONS -- 4.1. SAFETY ISSUES OF NUCLEAR HYDROGEN PRODUCTION -- 4.2. SAFETY ISSUES FOR DESALINATION SYSTEM -- 4.3. COUPLING SCHEMES AND CONTAMINATION OF END PRODUCTS FOR HYDROGEN PRODUCTION -- 4.4. COUPLING SCHEMES AND CONTAMINATION OF END PRODUCTS IN DESALINATION SYSTEM -- 4.5. ENVIRONMENTAL ISSUES OF DESALINATION -- 5. CONCLUSIONS AND RECOMMENDATIONS -- APPENDIX I. NUCLEAR HYDROGEN PRODUCTION IN CHINA -- APPENDIX II. NUCLEAR COAL GASIFICATION RESEARCH IN GERMANY -- APPENDIX III. NUCLEAR REACTOR -- APPENDIX IV. THERMODYNAMIC PROPERTIES OF PLANT MATERIALS -- APPENDIX V. ARGENTINA PHYSICO-CHEMICAL STUDIES ON THE THERMOCHEMICAL REACTION PROCESSES FOR HYDROGEN

Sommario/riassunto

Following an IAEA coordinated research project, this publication compiles the findings of research and development activities related to practical nuclear process heat applications. An overview of current progress on high temperature gas cooled reactors coupling schemes for different process heat applications, such as hydrogen production and desalination, is included. The associated safety aspects are also highlighted. The summary report documents the results and conclusions of the project.

---