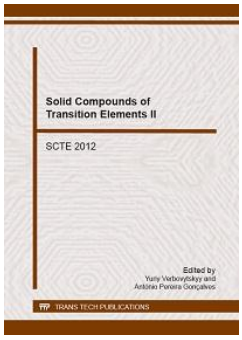
## IST/CTN – Biblioteca

**AVISO!**

**Todas as publicações abaixo descritas encontram-se na Biblioteca disponíveis em PAPEL e versão Digital (PDF).**

# Publicações Oferecidas




**L-12337**
**Q-QESC**
**VER.1**

**Solid Compounds of Transition Elements II**

| | |
|---|---|
| **ISBN-13:** | 978-3-03785-519-5 |
| **Year:** | 2013 |
| **Title:** | Solid Compounds of Transition Elements II |
| **Authors/Editors:** | Yuriy Verbovytskyy and António Pereira Gonçalves |
| **Published in:** | Solid State Phenomena, Volume 194 |
| **Category:** | Selected, peer reviewed papers from the 18th International Conference on Solid Compounds of Transtition Elements (SCTE 2012), March 31 - April 5, 2012, Lisbon, Portugal |
| **Pages:** | 310 |
| **Edition:** | softcover |
| **Description:** | This collection covers processes and synthesis, crystal chemistry, phase equilibria, thermodynamics, magnetic and electrical properties, theory, electronic structure, chemical bonding and applications of intermetallic compounds, pnictides, chalcogenides, oxides, halides and other solid compounds containing transition elements. It provides an excellent overview of recent advances in topics relevant to solid compounds with transition elements, and will constitute an excellent reference source for scientists and other working in this field. |

TÉCNICO LISBOA


**L-12336**
**EP**
**PIN.1**

## 100 dias que abalaram o regime :

Autores: Costa, Alexandre Alves | Pinto, Artur,--coord. | Universidade de Lisboa | Universidade Técnica de Lisboa
Publicado por : Tinta-da-China, (Lisboa :)
Detalhes físicos: 151 p. : il. ; 21 cm
ISBN: 978-989-671-117-7.

IAEA.org International Atomic Energy Agency

## Reference Data Series


### Energy, Electricity and Nuclear Power Estimates for the Period up to 2050 2012 Edition

**Reference Data Series 1**

Subject Classification: 0701-Nuclear power planning and economics

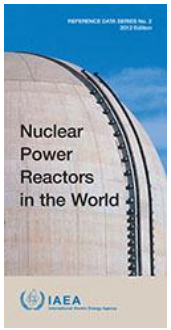
IAEA-RDS-1/32

(ISBN:978-92-0-133510-4)

***http://www-pub.iaea.org/MTCD/Publications/PDF/IAEA-RDS-1-32_web.pdf***

DESCRIPTION

The 32nd edition of the annual Reference Data Series No.1 contains estimates of energy, electricity and nuclear power trends up to the year 2050, using a variety of sources, such as the IAEA's Power Reactor Information System and data prepared by the United Nations.




### Nuclear Power Reactors in the World 2012 Edition

**Reference Data Series 2**

Subject Classification: 0700-Nuclear powerIAEA-RDS-2/32

(ISBN:978-92-0-132310-1)79 pp.;4 figures;

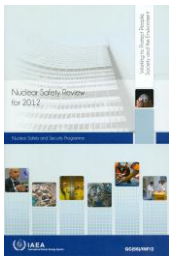
***http://www-pub.iaea.org/MTCD/Publications/PDF/RDS2-32_web.pdf***

DESCRIPTION

This is the 32nd edition of Reference Data Series No. 2, which presents the most recent reactor data available to the IAEA. It contains summarized information as of the end of 2011 on power reactors that are in operation, under construction and shut down, and performance data on reactors operating in IAEA Member States, as reported to the IAEA. The information is collected through designated national correspondents in the Member States and the data are used to maintain the IAEA's Power Reactor Information System.

## Topical Reviews

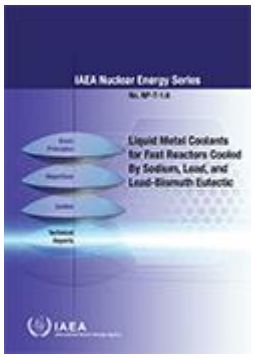
### Nuclear Safety Review



### Nuclear Safety Review for 2012

Published annually in mid-year, this analytical overview covers issues and trends in nuclear, radiation, transport, and radioactive waste safety. More detailed accounts of safety-related events and issues worldwide are provided in a supporting document.
***http://www.iaea.org/About/Policy/GC/GC56/GC56InfDocuments/English/gc56inf-2_en.pdf***

## IAEA Nuclear Energy Series




# Liquid Metal Coolants for Fast Reactors (Reactors Cooled by Sodium, Lead and Lead-bismuth Eutectic)

***IAEA Nuclear Energy Series NP-T-1.6***

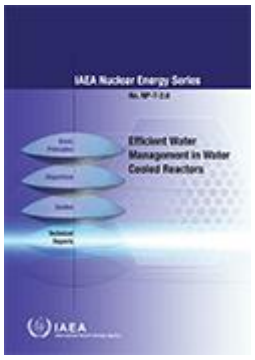
Subject Classification: 0703-Reactor technology

STI/PUB/1567(ISBN:978-92-0-131810-7) 82 pp.;25 figures;

***http://www-pub.iaea.org/MTCD/Publications/PDF/P1567_web.pdf***

DESCRIPTION

The choice of the coolant is one of the main technical issues concerning fast reactors design, since it determines design approach as well as safety, technical and economic characteristics of the system. This publication provides a comprehensive summary of the status of the liquid metal coolant technology development for fast reactors, with regard to basic data and main technological challenges. It starts with historical remarks on the nuclear power development, provides a complete survey of physical and chemical properties of liquid metals and discusses the coolant quality control and thermal-hydraulics studies for both sodium and lead alloys systems. Other chapters elaborate on radioactivity of coolants and describe past experiences as well as current projects. Finally, design objectives, main research and technology development challenges of innovative fast reactor concepts, currently under investigation in Russia, having sodium, lead-bismuth eutectic, and lead as coolant, as well as the status of the respective research and development activities are summarized.




# Efficient Water Management in Water Cooled Reactors

***IAEA Nuclear Energy Series NP-T-2.6***

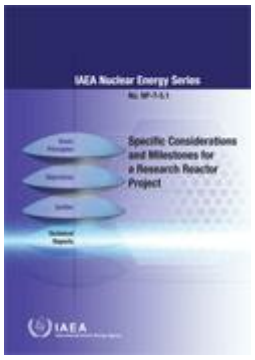
Subject Classification: 0703-Reactor technology

STI/PUB/1569 (ISBN:978-92-0-132610-2) 116 pp.;76 figures;

***http://www-pub.iaea.org/MTCD/Publications/PDF/P1569_web.pdf***

DESCRIPTION

In an effort to illustrate the sustainability of nuclear power, this publication discusses current practices on water requirements in nuclear power plants, possible future trends in design of water cooled reactors and the technologies employed. It analyses best practices and strategies for lower water withdrawal rates and presents the trade-off between production of electricity and water use and consumption, hence types of cooling systems to be selected. The book thus aims at enhancing the understanding of the issues related to water use, consumption, and management in a big picture.




# Specific Considerations and Milestones for a Research Reactor Project

**IAEA Nuclear Energy Series NP-T-5.1**

Subject Classification: 0701-Nuclear power planning and economics

STI/PUB/1549(ISBN:978-92-0-127610-0)91 pp.;8 figures;

***http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1549_web.pdf***

DESCRIPTION

A research reactor is an extraordinary tool that can contribute to a country's scientific resources, improve health care, and help to increase industrial and agricultural productivity, if it is appropriately conceived, managed and supported. This requires a strong policy and technical infrastructure, and management of long term financial liabilities. This publication sets out the four phases for a research reactor project with their associated milestones; starting with a careful assessment of the need for the research reactor, the issues it raises and the measures to address them. The publication provides a framework for self-assessment of readiness for a research reactor project and the resource requirements that it will impose. The guidance provided in this publication, will be helpful for decision makers from governments, operating organizations and regulatory bodies as well as project sponsors and planners.

## IAEA Safety Standards Series


# Volcanic Hazards in Site Evaluation for Nuclear Installations

***IAEA Safety Standards Series SSG-21***

Subject Classification: 0603-Nuclear power plants
STI/PUB/1552(ISBN:978-92-0-128110-4)106 pp.;2 figures;

***http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1552_web.pdf***

DESCRIPTION

This publication provides comprehensive and updated guidance for site evaluation in relation to volcanic hazards. It includes recommendations on assessing the volcanic hazards at a nuclear installation site, in order to identify and characterize, in a comprehensive manner, all potentially hazardous phenomena that may be associated with future volcanic events. It describes how some of these volcanic phenomena may affect the acceptability of the selected site, resulting in exclusion of a site or determining the corresponding design basis parameters for the installation. This Safety Guide is applicable to both existing and new sites, and a graded approach is recommended to cater for all types of nuclear installations. Contents: 1. Introduction; 2. Overview of volcanic hazard assessment; 3. General recommendations; 4. Necessary information and investigations (database); 5. Screening of volcanic hazards; 6. Site specific volcanic hazard assessment; 7. Nuclear installations other than nuclear power plants; 8. Monitoring and preparation for response; 9. Management system for volcanic hazard assessment; Annex I: Volcanic hazard scenarios; Annex II: Worldwide sources of information.


## Use of a Graded Approach in the Application of the Safety Requirements for Research Reactors

***IAEA Safety Standards Series SSG-22***

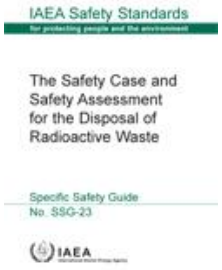
Subject Classification: 0604-Research reactors

STI/PUB/1547(ISBN:978-92-0-127310-9) 74 pp.;

***http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1547_web.pdf***

DESCRIPTION

This publication provides recommendations on the appropriate manner to comply with the Safety Requirements for research reactors, IAEA Safety Standards Series No. NS-R-4, utilizing a graded approach. It is intended for use by operating organizations, regulatory bodies and other organizations involved in the design, construction and operation of research reactors. Contents: 1. Introduction; 2. Basic elements of the approach to grading; 3. Regulatory supervision; 4. Management and verification of safety; 5. Site evaluation; 6. Design; 7. Operation; 8. Decommissioning; Annex: Example of steps in the graded approach for packaging of radioactive material.




## The Safety Case and Safety Assessment for the Disposal of Radioactive Waste

***IAEA Safety Standards Series SSG-23***

Subject Classification: 0611-Radioactive waste management

STI/PUB/1553(ISBN:978-92-0-128310-8)120 pp.;5 figures;

***http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1553_web.pdf***

DESCRIPTION

This Safety Guide provides guidance and recommendations on meeting the safety requirements in respect of the safety case and supporting safety assessment for the disposal of radioactive waste. The safety case and supporting safety assessment provide the basis for demonstration of safety and for licensing of radioactive waste disposal facilities and assist and guide decisions on siting, design and operations. The safety case is also the main basis on which dialogue with interested parties is conducted and on which confidence in the safety of the disposal facility is developed. This Safety Guide is relevant for operating organizations preparing the safety case as well as for the regulatory body responsible for developing the regulations and regulatory guidance that determine the basis and scope of the safety case. Contents: 1. Introduction; 2. Demonstrating the safety of radioactive waste disposal; 3. Safety principles and safety requirements; 4. The safety case for disposal of radioactive waste; 5. Radiological impact assessment for the period after closure; 6. Specific issues; 7. Documentation and use of the safety case; 8. Regulatory review process.


## Safety in the Utilization and Modification of Research Reactors

***IAEA Safety Standards Series SSG-24***

Subject Classification: 0604-Research reactors

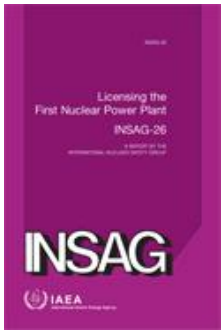
STI/PUB/1559(ISBN:978-92-0-129110-3)68 pp.;

***http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1552_web.pdf***

DESCRIPTION

This Safety Guide is a revision of Safety Series No. 35-G2 on safety in the utilization and modification of research reactors. It provides recommendations on meeting the requirements for the categorization, safety assessment and approval of research reactor experiments and modification projects. Specific safety considerations in different phases of utilization and modification projects are covered, including the pre-implementation, implementation and post-implementation phases. Guidance is also provided on the operational safety of experiments, including in the handling, dismantling, post-irradiation examination and disposal of experimental devices. Examples of the application of the safety categorization process for experiments and modification projects and of the content of the safety analysis report for an experiment are also provided. Contents: 1. Introduction; 2. Management system for the utilization and modification of a research reactor; 3. Categorization, safety assessment and approval of an experiment or modification; 4. Safety considerations for the design of an experiment or modification; 5. Pre-implementation phase of a modification or utilization project; 6. Implementation phase of a modification or utilization project; 7. Post-implementation phase of a utilization or modification project; 8. Operational safety of experiments at a research reactor; 9. Safety considerations in the handling, dismantling, post-irradiation examination and disposal of experimental devices; 10. Safety aspects of out-of-reactor-core installations; Annex I: Example of a checklist for the categorization of an experiment or modification at a research reactor; Annex II: Example of the content of the safety analysis report for an experiment at a research reactor; Annex III: Examples of reasons for a modification at a research reactor.

## INSAG Series




## Safety in the Utilization and Modification of Research Reactors

***IAEA Safety Standards Series SSG-24***

Subject Classification: 0604-Research reactors

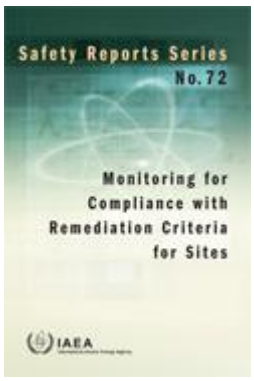
STI/PUB/1559(ISBN:978-92-0-129110-3)68 pp.;

***http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1552_web.pdf***

DESCRIPTION

A robust national nuclear safety infrastructure is essential for the deployment of the first nuclear power plant. A major challenge in this process is the development of an effective legal and governmental framework for safety, including an independent regulatory body. This publication supplements existing guidance in the IAEA safety standards on the development of an effective safety infrastructure and provides further assistance to new entrant regulatory bodies on the key challenges they will face throughout the life cycle of the first nuclear power plant. The publication focuses on the phases of a nuclear power deployment programme from the granting of a licence for construction to granting the licence for commissioning and operation.

## Safety Reports Series




### Monitoring for Compliance with Remediation Criteria for Sites

***Safety Reports Series 72***

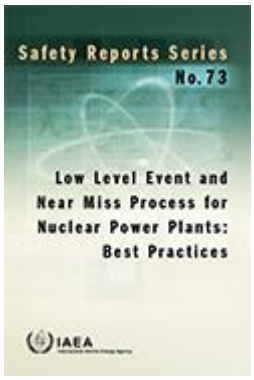
Subject Classification: 0600-Nuclear and Radiological Safety

STI/PUB/1551(ISBN:978-92-0-127910-1)190 pp.;49 figures;

***http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1551_web.pdf***

DESCRIPTION

This Safety Report provides detailed and practical advice to operators and regulators on the development and implementation of monitoring strategies in order to demonstrate compliance with radiological criteria for release of sites for unrestricted or restricted use. The publication complements the IAEA Safety Report on monitoring for compliance with exemption and clearance levels, which applies to clearance of bulk material from regulatory control.




### Low Level Event and Near Miss Process for Nuclear Power Plants: Best Practices

***Safety Reports Series 73***

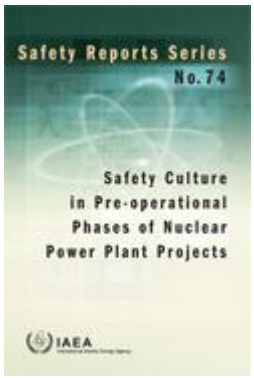
Subject Classification: 0603-Nuclear power plants

STI/PUB/1545(ISBN:978-92-0-126610-1)86 pp.;13 figures;

***http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1551_web.pdf***

DESCRIPTION

This publication provides nuclear power plant operators and regulatory organizations with a best practice overview of the development, implementation and continuous improvement of low level events and near misses processes. Use of guidance and best practices, as described in this publication, will help the relevant organizations in recognizing emerging adverse trends by analysing lower level events and near misses. Correcting such adverse trends proactively mayl prevent occurrence of significant events and, thereby, enhance the safety and reliability of nuclear power plants.




## Safety Culture in Pre-operational Phases of Nuclear Power Plant Projects

***Safety Reports Series 74***

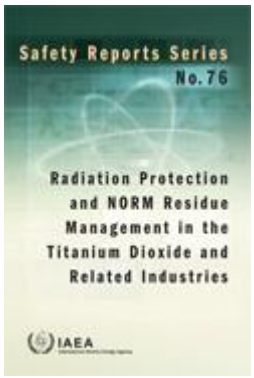
Subject Classification: 0600-Nuclear and Radiological Safety

STI/PUB/1555(ISBN:978-92-0-128710-6)69 pp.;6 figures;

***http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1555_web.pdf***

DESCRIPTION

An abundance of information exists on safety culture related to the operational phases of nuclear power plants; however, pre-operational phases present unique challenges. This publication focuses on safety culture during pre-operational phases that span the interval from before a decision to launch a nuclear power programme to first fuel load. It provides safety culture insights and focuses on eight generic issues: safety culture understanding; multicultural aspects; leadership; competencies and resource competition; management systems; learning and feedback; cultural assessments; and communication. Each issue is discussed in terms of: specific challenges; desired state; approaches and methods; and examples and resources. This publication will be of interest to newcomers and experienced individuals faced with the opportunities and challenges inherent in safety culture programmes aimed at pre-operational activities.




## Radiation Protection and NORM Residue Management in the Titanium Dioxide and Related Industries

***Safety Reports Series 76***

Subject Classification: 0611-Radioactive waste management

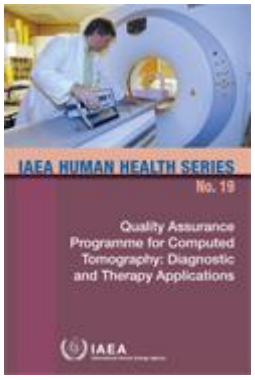
STI/PUB/1568(ISBN:978-92-0-132110-7)105 pp.;

***http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1568_web.pdf***

DESCRIPTION

This Safety Report is a compilation of detailed information on the processes and materials involved in the titanium dioxide and related industries and on the radiological considerations that need to be taken into account by the regulatory body when determining the nature and extent of radiation protection measures. It has been developed as part of the IAEA's programme on the application of its safety standards in the field of radiation, transport and waste safety. The information provided will assist in the implementation of a graded approach to regulation, in terms of which the application of the requirements of the safety standards is commensurate with the characteristics of the practice or source and with the magnitude and likelihood of the exposures. Although aimed primarily at the titanium dioxide industry, this publication is also relevant to industries involved in the mining and beneficiation of mineral sands for the extraction of heavy minerals such as zircon, monazite and ilmenite.

## IAEA Human Health Series




### Quality Assurance Programme for Computed Tomography: Diagnostic and Therapy Applications

***IAEA Human Health Series 19***

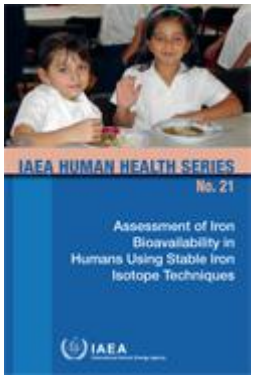
Subject Classification: 0103-Medical physics (including dosimetry)

STI/PUB/1557(ISBN:978-92-0-128910-0)171 pp.;43 figures;

***http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1557_web.pdf***

DESCRIPTION

This publication presents a harmonized approach to quality assurance in the field of computed tomography applied to both diagnostics and therapy. It gives a careful analysis of the principles and specific instructions that can be used for a quality assurance programme for optimal performance and reduced patient dose in diagnostic radiology. In some cases, radiotherapy programmes are making a transition from 2-D to 3-D radiotherapy, a complex process which critically depends on accurate treatment planning. In this respect, the authors also provide detailed information about the elements needed for quality assurance testing, including those relating to accurate patient characterization as needed for radiotherapy treatment planning.




### Assessment of Iron Bioavailability in Humans Using Stable Iron Isotope Techniques

***IAEA Human Health Series 21***

Subject Classification: 0100-Life Sciences

STI/PUB/1544(ISBN:978-92-0-126510-4)78 pp.;14 figures;

***http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1544_web.pdf***

DESCRIPTION

This publication on the assessment of iron bioavailability was developed as part of the IAEA's continuing efforts to transfer knowledge and technology in the use of stable isotope techniques in nutrition. It provides information on the theoretical background and practical application of state of the art methodology to measure human iron absorption and dietary iron bioavailability using stable (non-radioactive) isotopes. These techniques can be used to guide fortification and food based strategies to combat iron deficiency, which remains unacceptably high among infants, children and women of childbearing age in developing countries.


## Nuclear Cardiology: Guidance and Recommendations for Implementation in Developing Countries

***IAEA Human Health Series 23***

Subject Classification: 0100-Life Sciences

STI/PUB/1566(ISBN:978-92-0-131710-0)108 pp.;27 figures;

***http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1566_web.pdf***

DESCRIPTION

This publication, which accompanies Human Health Series No. 18, 'Nuclear Cardiology: Its Role in Cost Effective Care', discusses non-invasive imaging modalities with emphasis on myocardial perfusion imaging (MPI). MPI is one of the most complex nuclear techniques and by far the most widely used for non-invasive detection of coronary artery disease. The book covers all aspects of this modality, from clinical indications to reporting. Chapters describe clinical scenarios; provide examples of good strategies and recommendations of good practice. The aim of the publication is to help strengthen current nuclear cardiology practices, in order that they meet accepted standards and that providers can deliver better quality services to the population. Target readers are nuclear medicine physicians, cardiologists and cardiac surgeons, but also all other clinical specialists involved in managing and treating cardiac diseases and particularly coronary artery diseases.

IAEA Radiation Technology Reports


## Development of Novel Adsorbents and Membranes by Radiation-Induced Grafting for Selective Separation in Environmental and Industrial Applications

***IAEA Radiation Technology Reports No. 3***

Subject Classification: 0500-Industrial Applications

STI/PUB/1572(ISBN:978-92-0-134010-8)278 pp.;285 figures;

***http://www-pub.iaea.org/MTCD/Publications/PDF/P1572_web.pdf***

DESCRIPTION

This publication summarizes the results of a coordinated research project on the development of novel adsorbents and membranes by radiation-induced grafting for selective separation purposes. Radiation-induced grafting is a technique that uses readily available, low cost synthetic and natural polymers to prepare novel materials for use where the requirements for bulk properties and surface properties cannot be readily met using a single polymeric material. The objective of the coordinated research project was to use gamma rays, electron beams and swift heavy ions to graft various monomers onto natural and synthetic polymers for the development of novel adsorbents and membranes for environmental and industrial applications. The publication provides a summary of the project results and includes reports by the participants.