Fire Risk Analysis

15-16th October 2014, Otwock-Świerk, Poland

Announcement and Call for papers

Scope of the seminar

The general aim of fire risk analysis is to identify and characterize the fire risks of concern and provide information for fire risk management decisions.

The most important steps in the fire risk analysis process are identifying the objectives of the risk assessment, the measures that will be used to express risk, and how the risk measures will be presented or communicated for decision making purposes.

Available methods to estimate the potential impact of fire can be divided into two categories: risk-based and hazard-based. Both types of methods estimate the potential consequences of possible events. Risk-based methods also analyse the likelihood of scenarios occurring, whereas the goal of hazard-based methods is to determine the expected outcome of a specific fire scenario. The risk-based methods require reliability data for fire frequencies, components and systems (e.g. for fire detecting and firefighting systems) which could be derived from plant specific experience or can be of generic data sources.

The 47th ESReDA Seminar will cover all these aspects of fire related risk analyses from deterministic hazard analyses and consequence analyses up to probabilistic fire risk analyses, where the areas range from chemical, nuclear and energy industry, to transport and to structures.

The following topics are intended to be addressed in the frame of the seminar:

- Methods for determination and evaluation of fire hazards in facilities and buildings,
- Fire prevention measures,
- Methods for fire risk analyses,
- Active measures for fire detection and firefighting,
- Data generation for fire specific,
- The national existing standards and regulations for fire protection,
- Fire protection in the field of renewable power generation plants,
- Fire risk assessment of chemical process installation and storage facilities
- Computer simulations of fire events sequences.

The 47th ESReDA seminar will be a forum for exploring these topics. We aim to discuss theories, concepts, and experiences with fire risk analyses in various sectors and to identify future needs in safety research and training. This seminar will bring together scientists, engineers and specialists on safety analysis, decisions makers in the field of fire risk analysis, safety risk managers and training specialists in order to present and discuss innovative methodologies and practical applications related to fire risk analysis.

Target groups and domains of application

Papers for the seminar are invited from various stakeholders (industrialists, regulators, safety boards, universities, R&D organisations, engineering contractors and consultants, training specialists) and could address different sectors:

- Energy sector: nuclear, fossil, hydro, wind power plants and networks,
- Process industry: oil and gas, chemical and petrochemical facilities,
- Transport (rail, road, air and maritime): supply and distribution network, operation,
- Aerospace industry,
- Public sector and government.

Seminar organisation

- **Location**:
  National Centre for Nuclear Research (NCBJ), Otwock-Świerk, Poland
- **Organization**:
  The Seminar is jointly organised by ESReDA and NCBJ

Chairman of the Seminar

- **Henrik Kortner** – ESReDA President, Senior Principal Engineer, Safetec Nordic AS
- **Tomasz Jackowski** – Head of Nuclear Energy Division, NCBJ

Technical Programme Committee (TPC)

- **Micaela Demichela** – Politecnico di Torino, Italy (micaela.demichela@polito.it)
  ** Technical Programme Committee chairman*
- **Mieczysław Borysiewicz** – National Centre for Nuclear Research, Poland
- **Hartmut Schmaltz** – AREVA GmbH, Germany
- **Marina Röwekamp** – Gesellschaft für Reaktorsicherheit, Germany
- **Heinz-Peter Berg** – Bundesamt für Strahlenschutz, Germany
- **Ryszard Grosset** – High School of Management and Law, previously ex-rector of The Main School of Fire Services, Poland

Local Organization Committee

- **Mieczysław Borysiewicz** – NCBJ, Poland (mieczyslaw.borysiewicz@ncbj.gov.pl)
  ** Local Organizing Committee chairman*
- **Karol Kowal** – NCBJ, Poland (k.kowal@ncbj.gov.pl)
- **Sławomir Potempski** – NCBJ, Poland (slawomir.potempski@ncbj.gov.pl)

Relevant dates

Authors wishing to present a paper are invited to submit an abstract by e-mail to Micaela Demichela at: micaela.demichela@polito.it. People wanting to present a poster can contact her as well according to the following schedule:

- Submission of abstracts: **before 27th June 2014**,
- Notification to the authors: **by 11th of July 2014**,
- Full submission of camera ready papers: **5th of September 2014**,
- Date of seminar: **15th and 16th October 2014**.

The abstracts should state in 400 words and address:

- Objectives of the paper,
- Relevance for the Seminar,
- Novelty,
- Methods and findings.

The working language of the seminar is English. Guidance for authors and speakers can be downloaded from the ESReDA website: http://www.esreda.org/

Registration and Seminar Fee

Registration will be accepted until 1st of October 2014. A registration form and information package for the venue will be made available on the ESReDA website.

- One speaker per accepted paper is exempted.
- ESReDA members' fees (3 participants/member) are taken in charge by the Seminar.
- The registration fees are 300 € to be paid by bank transfer to ESReDA account:

  Holder : ESReDA – "47th Seminar"
  Bank : BNP Paribas Fortis Bank, Boulevard Jamar 1 D, 1060 Bruxelles, Belgique
  IBAN : BE69 0012 3728 1678
  BIC : GEBABEBB

National Centre for Nuclear Research (NCBJ)

National Centre for Nuclear Research (NCBJ) with approximately 1,000 employees is one of the largest research institutes in Poland. The new Institute started operations on September 1, 2011 in result of a Polish Government decision to merge POLATOM Institute for Atomic Energy (IAE) and Sołtan Institute for Nuclear Studies (IPJ). The nuclear centre operates in Świerk near Warsaw since 1955. NCBJ large research facilities include the MARIA 30MW research nuclear reactor. The Centre's strategic tasks include:

- to support Polish nuclear power programme;
- to conduct basic research in physics in collaboration with world leading laboratories;
- to construct high-tech devices (mainly accelerators and detectors) for research, industry and medicine.

In eighties the first efforts had been devoted to the nuclear risk assessment and emergency management of nuclear power stations including preoperational deterministic and probabilistic safety assessment of the NPP which was planned to be operated.

Since 2002, when existing in the frame of NCBJ Centre of Excellence for Management of Health and Environmental Hazards (MANHAZ) was established, these activities have been expanded into the realm of hazards analysis and its applications to conventional plants of high risk of major industrial accident risk. The main achievements in this field have been:

- Development of methods, models, computer programs and databases for assessing health and environmental risks related to major accidents of stationary nuclear and chemical processing installations and other facilities connected with the use and/or transportation of dangerous substances (by road, railways and pipelines).

- Development of standalone computer codes and real-time computer-aided emergency decision support systems for complex technical facilities (nuclear power plants, chemical process installations, pipelines etc.), and for industrial areas.
- Preparation of guidelines and training materials for assessment of risk from industrial installations, and for Security Vulnerability Analysis.

Now, with the advent of the new national nuclear programme the activities of the new established, Nuclear Energy Department of NCBJ, in the area of SRA, assessment and management of risk, relevant for nuclear installations have got new forms and significant spin.

It in particular concerns:

- Methods for SRA of complex systems, suitable for HPC, including MC, MCMC and Bayesian techniques.
- Risk Informed Decision Making.
- Participation in relevant EU programmes for maturing methods and uses of PSA, e.g. Advanced Safety Assessment Methodologies: Extended PSA (FP7) and NUGENIA: AREA 1- Plant Safety and Risk.
- Supporting National Atomic Energy Agency on PSA methods and uses.

For more information about NCBJ please visit the website: http://www.ncbj.gov.pl/

European Safety, Reliability & Data Association (ESReDA)

European Safety, Reliability & Data Association (ESReDA) is an European Association established in 1992 to promote research, application and training in Reliability, Availability, Maintainability and Safety (RAMS). The Association provides a forum for the exchange of information, data and current research in Safety and Reliability.

ESReDA membership is open to organisations, privates or governmental institutes, industry researchers and consultants, who are active in the field of Safety and Reliability.

Membership fees are currently 1000 EURO for organisations and 500 EURO for universities and individual members. Special sponsoring or associate membership is also available.

For more information on ESReDA, contact:

ESReDA General Secretary, Mohammad Raza, ALSTOM Power,
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Mobile: +41795925653

ESReDA address: European Safety, Reliability & Data Association, an International Non-Profit Scientific Association under the Belgium law (June 27, 1921, Title III). Headquarter: ESReDA, rue Gachard 88 Bte 14, B-1050 Bruxelles, Belgium, Siret:E00005802.
Any interested party is welcome to contribute to ESReDA project groups.

http://www.esreda.org

ESReDA Project Group on Fire Risk Analysis

This ESReDA project group was founded in 2006 to work on how to disseminate results obtained in event investigations of high-risk events (accident and near-misses). The project group has organised the 36th ESReDA Seminar "Lessons learned from accident investigations" at EDP in Coimbra in 2009. This Project Group is continuing from the work done by the ESReDA Working Group on Accident Investigation.