

PERSONAL INFORMATION



Tonio PINNA

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Sex Male | Date of birth 26/09/1957 | Nationality Italian

POSITION

Senior Researcher at the Italian National Agency for New Technologies, Energy and Sustainable Economic Development

TYPE OF BUSINESS

Risk and safety analysis in nuclear fusion

WORK EXPERIENCE

- 2017-today Coordinator of reliability, availability, maintainability, inspectability (RAMI) activities in the “DEMO Oriented Neutron Source-DONES” Eurofusion Working Package (WP).
- 2015-today Coordinator of the ENEA activities in the “Safety and Environment” Eurofusion WP for DEMO.
- 2017-today Effective member of the ENEA patent commission.
- 2014-2016 ENEA Project Manager for the “F4E/Kraftanlagen Heidelberg GmbH (KAH)” contract on Functional Analysis, Failure Mode and Effect Analysis (FMEA), Hazard and Operability (HAZOP) study, RAMI analyses, issuing of the safety report and design of the control system for the preliminary design of the Water Detritiation System of ITER.
- 2010-2013 ENEA Project Manager for “ITER/KAH” Contract on HAZOP studies and RAMI analyses for the atmosphere detritiation systems of the ITER plant, i.e.: Tokamak Complex, Hot Cell and Glove Box Detritiation Systems.
- 1998-2006 Technical manager for the collection and detailed analysis of data related to operating experience gained in fusion laboratories, e.g. JET, TLK, ASDEX, TFTR and DIII-D.
- 1995-2013 Technical manager for the development of the “Fusion Component Failure Rate Database”. In 2011-2013 as Project Manager for the related F4E contract F4E-OPE-079.
- 2008-2012 Project Manager for ITER contract on the Identification of Safety Important Classified (SIC) components and Operating Limits and Conditions (OLC) for all the systems of ITER plant.
- 1993-today Other relevant activities carried out as ENEA technical manager:
 - Preliminary Safety Reports for IFMIF systems and the European HCLL and HCPB TBMs.
 - RAMI guidelines for DEMO and identification of availability targets for specific systems.
 - Accident sequences identification, probabilistic safety assessment and check of design solutions for all ITER systems. Development of a dedicated software tool to perform FMEAs.
 - Occupational Radiation Exposure (ORE) assessments for ITER, Power Plant Conceptual Studies (PPCS), DEMO and IFMIF. Development of a dedicated software tool to analyze and collect data on ORE.
 - Studies on “Accident during maintenance”, “Post accident recovery actions” and “Concerns on tritium confinement and atmosphere detritiation systems” for ITER.
 - Deterministic evaluation of accident sequences and validation of computer codes used in accident analysis.
- 1991-1993 Development of CAD (Computer Aided Design) applications for plant automation and robotics.
- 1985-1990 Project activities in design and construction of plant facilities for treatment and conditioning of solid and liquid radioactive waste produced in the nuclear fuel cycle.
- 2014-2018 HAZOP studies as team leader for the Biomass Power Plant of Widmerpool at Nottingham (England), the Biomass Power Generation Plant of Finale Emilia (Italy), for the combined Geothermic and Biomass Power Generation Plant Cornia 2 of Larderello (Italy), for the existing Cogeneration Plant with methane gas engines and turbines of Trigno Energy srl., for the new biomass thermal power plant of S. Agata di Puglia (Italy).

ADDITIONAL INFORMATION

Publications

More than 80 Publications in the fields of Nuclear Safety and RAMI studies.

Memberships

European Task Member of the “International Energy Agency Agreement on the Environmental, Safety and Economic Aspects of Fusion Power (IEA ESE)” – Task 5

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