IP-EUROTRANS Internal Training Course ITC5:

“FUELS AND STRUCTURAL REACTOR MATERIALS”

Date: 26th - 29th November 2007

Organizer: Prof. Ing. Giuseppe Forasassi

Place: Department of Mechanical, Nuclear and Production Engineering
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Preliminary programme:

• Day 1: Monday 26th November 2007

  09:00 Welcome (Profs. G. Forasassi, E. Vitale Pisa Eng. Faculty Dean, and M. Giot, ENEN).
  09:30 Course organization and program (Prof. G. Forasassi, Pisa Univ.).
  09:50 ADS concept and IP-EUROTRANS (DM1-Design and DM3-AFTRA Tech. Domains) and ELSY introduction. Presentation of experimental ADS MYRRHA and European Facility for Industrial Transmuter (EFIT) (Dr. Didier De Bruyn, SCK•CEN).
  10:40 Coffee break
  11:00 ADS core layout, possible geometries, structures, matrices, solutions analysis (Dr. Didier De Bruyn, SCK•CEN).
  12:30 Lunch
  14:00 Introduction to physical problems and design of sub critical systems cores: open questions (Prof. P. Ravetto, Polit. Univ. of Torino).
  15:30 Coffee break
  16:00 Isotopic composition and design of ADS cores for minor actinides and long life radioactive wastes transmutation, studies and tests (Dr M. Carta, ENEA Casaccia Centre).
  17.30 Day 1 lectures end.
  18:00 Welcome reception.
• **Day 2: Tuesday 27\textsuperscript{th} November 2007**

  09:00 Innovative fuels for LMR and LWR Gen IV systems. (Dr Fortunato Vettraino, ENEA Bologna Centre)

  10:30 Coffee break

  11:00 Structural materials behaviour under fast n fluxes, in Pb & Pb-Bi environments: experience and open questions (Prof. S. Lanza, Pisa Univ.).

  12:30 Lunch

  14:00 Structural materials behaviour under fast n fluxes, in Pb & Pb-Bi environments: experience and open questions (Dr G. Benamati, ENEA Brasimone Centre).

  15:30 Coffee break

  16:00 T-Hydraulics and CFD codes analyses of complex systems in HLM flows.

    (Profs. F. Oriolo, W. Ambrosini, Pisa Univ.).

  17:30 Day 2 lectures end.

• **Day 3: Wednesday 28\textsuperscript{th} November 2007**

  09:00 Student presentation 1

  09:30 Student presentation 2

  10:00 Student presentation 3

  10:30 Coffee break

  10:50 Student presentation 4

  11:20 Student presentation 5

  11:50 1\textsuperscript{st} Seminar: ADS nuclear and materials test experience (Dr. M. Carta, ENEA Casaccia Centre).

  12:50 Lunch

  14:00 2\textsuperscript{nd} Seminar: Coolant – structure interaction in HLM reactors in normal/accidental conditions (Prof. D. Aquaro, Pisa Univ.).

  15:00 Student presentation 6

  15:30 Student presentation 7

  16:00 Coffee break

  16:20 Student presentation 8

  16:50 Student presentation 9

  17:20 Student presentation 10
19.30 Workshop Dinner

- **Day 4: Thursday 29th September**

  09:00 General discussion: Panel discussion with participation of Lectures and Experts
  10:00 Course evaluation by students
  10:30 Coffee break
  11:00 Examination of students (whenever required)
  12:30 Adjourn

**WHO SHOULD ATTEND?**

This course, the 5th of a series of ten courses organised over a period of 4 years, is primarily designed for PhD students and Postdocs involved in the IP EUROTRANS, and accessible as well to those involved in Research projects (EC and national) related to IV Gen Reactors. The number of participants is limited to about 20 participants (the course will be held for a minimum student number of 10).

An active participation in general of the attendees is required. Therefore, when applying, the participants should submit a short abstract (15 to 20 lines) of a presentation related to their previous work and curriculum (at this stage). A small grant, distributed by the organization, will help the students whose presentation has been selected by the organizer, to finance their accommodation expenditures.

**HOW TO APPLY?**

Please fill in the attached application form and send it electronically to:

Mrs. Nadia NOWACKI  
Seminar Organization Secretariat  
The European Nuclear Education Network Association (ENEN)  
Commissariat à l’Energie Atomique / Saclay  
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**DEADLINE FOR APPLICATION:**

Application should be mailed before 1st November 2007. Applicants will be informed of their acceptance on 12th November, the latest.
APPLICATION FORM

Name:
First Name:

Date and place of birth:

Institution:

Present status (PhD student, assistant...)

Link with IP-EUROTRANS, or another project:

Address for further contacts:

Arrival and departure dates:

Title of proposed presentation:

Annex: abstract of the proposed presentation