

Tsuruga Summer Institute on Nuclear Energy 2009

— Report —



敦賀「原子力」 夏の大学 2009

優秀学生を
海外原子力研修
(仏国)に派遣!!

Tsuruga Summer Institute on Nuclear Energy 2009

期間：平成21年8月24日(月)～28日(金)

**場所：福井県若狭湾エネルギー研究センター、
国際原子力情報・研修センター(JAEA)、
関西電力美浜発電所、日本原電敦賀発電所**

集え!若人!

深めよう原子力 広げよう友達の輪

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August 2009

Organized by

National University Corporation University of Fukui

Independent Administrative Entity Japan Atomic Energy Agency

Wakasawan Energy Research Center

1. Date: August 24, 2009 (Mon) –August 28, 2009 (Fri)

2. Students: Total 38 students

- From Fukui Prefecture: 18 students from Fukui University
4 students from Fukui University of Technology
- From Kansai and Chubu Areas: 6 students from Kyoto University
2 students from Nagoya University
2 students from Kanazawa University
- From Tokyo Area: 3 students from Tokyo Institute of Technology
3 students from Tokyo Metropolitan University

3. Contents

(1) “Lectures”

- The current state of LWR nuclear fuel-cycle (Pulthermal) and its prospect (KEPCO)
- Safety of LWR Measure, and Resolution/Measures against Degradation Events and Public Acceptance of LWR – by Continuous Public Opinion Research (INSS)
- The Results of Sodium Technology Development in France and its Future Tasks (CEA)
- Concept of FBR” (Fukui University)

(2) “Exercises”

- Simulator Operation
- Sodium Handling Technology
- Nondestructive Testing Technology

(3) “Topics”

- English Discussion: Should Japan promote nuclear energy more?”
- Discussion with engineers and researchers of MONJU: Qs and As, and discussions concerning overall MONJU

(4) “Site Tours”

- FBR “MONJU”
- “Mihama NPP” (KEPCO)
- “Tsuruga No. 3 & 4 units (APWR construction field) ” and “Exhibition Hall”
- Decommissioning Center “Fugen”
- Wakasa-wan Energy Research Center

(5) Open Lecture: 5 Open Lectures (205 participants including 86 students)

- Expectation from Fukui Univ. toward “MONJU”
Speaker: Dr. TAKEDA (Univ. of Fukui)
- MONJU Restart and its Future Use Project
Speaker: Mr. ICHIMIYA (JAEA)
- Status of results of 35 years of French FBR PHENIX operation and application to the future”

Speaker: Mr. GUIDEZ (CEA)

- Efforts of Manufacturers for NPP Construction Project

Speaker: Mr. KUBOTA (TOSHIBA)

- Trends of FR Development Strategy and Sodium Technology Development Progress in US

Speaker: Dr. KELLY (Sandia National Laboratories)

4. Summary

“Tsuruga Summer Institute on Nuclear Energy 2009”, the 4th in the series, has 38 students from 7 universities throughout Japan. Although the number of participants slightly declined, “Tsuruga Summer Institute on Nuclear Energy” seems to become familiar among the students as a meaningful educational activity.

Training programs consist of lectures, exercises, practices and site tours as usual. Their contents make the best use of Tsuruga characteristics, and include topics consisting of “English Discussion” with foreign researchers, which are popular among students, and “Discussion with MONJU engineers”. “Lecture for Opening to the Public” was held on the final day.

A French researcher gave an English lecture as a new attempt to contribute to fostering nuclear engineers and researchers from international standpoint this year. Research Institute of Nuclear Engineering which opened last April inside Fukui University supported FBR lectures and Open Lectures.

According to the overall questionnaire, 34 out of 37 students answered “Satisfied (20 students answered “Excellent” and 14 students answered “Very good”)”. We suppose this institute was well-received in.

Tsuruga Summer Institute on Nuclear Energy 2009, which aims to better communication among students, also greatly contributed to not only increasing knowledge on nuclear power but enhancing the network of human resources between universities.

According to the questionnaires of each lecture and training:

What is the “most impressive” and “most useful” plan in the TSINE 2009?

1. English Discussion (17 students answered)
2. Discussion with MONJU researchers and technicians (10 students answered)

We reaffirmed that students greatly wanted these TSINE characteristic programs, which they cannot experience at school.

As for “English Discussion”, we tried to introduce a new type of debate “Should Japan promote nuclear energy more?” This debate seemed to be more difficult for the students who are not familiar with English because this debate required higher level English speaking skills to persuade the other members.

However, around half of the students answered English Discussion was “most impressive” or “most useful” plan in the TSINE 2009” , we assume that the students could understand our intention that English is indispensable for the people who want to become international engineers and researchers.

As for “MONJU Discussion”, some handouts were given the students before the discussion, based on the opinions of the 2008’s students. Therefore questions concerning technical matters greatly increased than last year. It seemed helpful to clear up the questions and doubts on “MONJU”.

As for Lectures, 4 lectures only for TSIN students, open lectures for the public were held. According to the survey, large number of students evaluated “5: very useful” to any lectures. 205 participants including university students from Fukui Prefecture and Kansai area joined the open lecture.

As for comprehension test, which is carried out to check the improvement, students got remarkable achievement. Before lectures: 29 points, After lectures: 87.3 points

We are proud of the results of these answers.

5. Pictures



【Opening Ceremony】



【Lecture】



**【Lecture-1】
Mr. TAKABATA
(KEPCO)**



**【Lecture -2】
Mr. FUJIMURA
(INSS)**



**【Lecture -2】
Ms. KITADA
(INSS)**



**【Lecture -3】
Dr. C. Latge
(CEA)**



**【Lecture -4】
Mr. MOCHIZUKI
(FUKUI Univ.)**



【Topics-1】 English Discussion (Discussion & Presentation)



【Topics-2】 English Discussion (Discussion & Presentation)





**【Exercise I】
【Simulator Operation】**



**【Exercise II】
【Sodium Handling】**



**【Exercise III】
【In Service Inspection】**



**【Site Tour-1】
KEPCO Mihama NPP**



**【Site Tour-2】
JEPSCO Tsuruga NPP Unit #3 & #4**



**【Site Tour-3】
Decommissioning Center
“Fugen”**



**【Site Tour-4】
Prototype FBR “MONJU”**



**【Site Tour-5】
Wakasa-wan Energy
Research Center**



【Friendship Event】 Reception & BBQ



【Lecture for Opening to the Public】



**【Open Lecture I】
Dr. TAKEDA
(FUKUI Univ.)**



**【Open Lecture II】
Mr. ICHIMIYA (JAEA)**



**【Open Lecture III】
Mr. GUIDEZ
(CEA)**



**【Open Lecture IV】
Mr. KUBOTA
(TOSHIBA)**



**【Open Lecture V】
Dr. KELLY (SNL)**



【Closing Ceremony】



【Group Photo】