A student of Soma High School experiencing robot operation

Naraha Center for Remote Control Technology Development opened "Robot Operation Training Program"

Students of Fukushima Prefectural Taira Technical High School and Soma High School experienced practical training.

In order to contribute to the human resource development related to robots in the project, "Fukushima Innovation Coast Framework"[*1], the Naraha Center for Remote Control Technology Development (Naraha Center), Japan Atomic Energy Agency (JAEA), opened a "Robot Operation Training Program" this year for educational institutions and private enterprises.

Recently, 40 first-year students of the Faculty of Control Engineering, Fukushima Prefectural Taira Technical High School (Taira Technical High School) and 41 second-year students of the General Course/Science and Mathematics Course, Fukushima Prefectural Soma High School (Soma High School) participated in the program. At the Naraha Center, the students experienced the practical trainings on virtual reality (VR) system, robot simulator and operation of crawler-type robots. This is a report on the training by the students.

Let's start the training

High school students listening to the lecture on overview.

At the beginning, a lecture on the overview was presented by the JAEA staff. The presenter explained that in order to promote the decommissioning of the Fukushima Daiichi Nuclear Power Station (1F) smoothly and safely, the utilization of remote-control instruments such as robots is essential. The staff also explained that the Naraha Center is a facility where the development and demonstration tests of such remote-control instruments can be performed, and the facility is open to the public such as private enterprises and universities.

After that, the students moved to the training on VR system where they were able to experience a simulation space as if they were in the 1F reactor building. Since the VR system can be utilized for planning of works and trainings for workers, it contributes to the optimization of the decommissioning works and the reduction of radiation exposure for workers.

The students were surprised by experiencing the environment inside the reactor building with a mysterious sensation.

Let's experience robot operation

Next, the students experienced the practical training on the operation of crawler-type robots in the large facility, "Test Building".

At the beginning, every student learned how to operate robots using the simulator. Then, they challenged the operation of real robots in the test field.

Students of Taira Technical High School experiencing practical training.

Since there are lots of narrow areas, obstacles and steps in the reactor building, advanced technology is required to move robots by remote-control. The scope that can be seen only with the image of the camera loaded on the robot is extremely narrow. Therefore, some students first struggled to let the robot go straight or rotate. Even so, the reporter was impressed that the young students were able to immediately learn how to operate robots.

On that day, media reporters also visited there, and observed with interests the practical trainings by the students. When a media reporter interviewed the students, they pleasantly and clearly answered what they had learned in the training.

After the practical training

After finishing the practical training, Mr. Ryota Nakatsuka of Soma High School expressed his impression, “I think the VR system is a state-of-the-art technology, so we cannot experience it in daily life. So, the training this time is a valuable experience for me. Also, I was able to learn that the test study on simulators and real robot operation are conducted in such a large facility. This was really good experience for me.” When the reporter asked a question, “Is there anything you learned in this practical training?”, he answered, “I am living in Fukushima Prefecture. So, it is important to know about the 1F reactors and the decommissioning. I think that it is necessary to express my obtained knowledge in some way and convey it to various people. I would like to start with my family and then tell my friends.”

(Note)

[*1] Fukushima Innovation Coast Framework

A national project aiming to reconstruct new industrial bases in Hamadori District, Fukushima Prefecture, in order to recover the industries that had been lost by the Great East Japan Earthquake and the Nuclear Disaster. In this project, the fields such as decommissioning, robots, energy, and agriculture/forestry/fishery products are specifically promoted. The project also works on the industrial clusters, human resource development, expansion of exchange population, etc.

In the human resource development that will bear the realization of the “Fukushima Innovation Coast Framework”, the Soma High School has been designated as a training school in the top leader field since 2018. The Taira Technical High School has also been designated as that in the industrial field since 2018.

TOPICS Fukushima No. 93
Fukushima Administrative Department Sector of Fukushima Research and Development
Japan Atomic Energy Agency (JAEA)
Address: 8F Taira Central Building, 7-1 Aza-Omachi, Taira, Iwaki-shi, Fukushima 970-8026, Japan
Phone: +81-246-35-7650 Fax: +81-246-24-4031
Website: https://fukushima.jaea.go.jp/en/