



Unveiling the memorial plaque, with the Test Building (under construction) in the background

Towards promotion of decommissioning

Research Management Building of Naraha Remote Technology Development Center completed

The Research Management Building of the Naraha Remote Technology Development Center constructed by JAEA has recently been completed, and on October 19, 2015, an opening ceremony was held and attended by Prime Minister Shinzo Abe. Prime Minister Abe (**photo on the bottom left**) delivered a congratulatory address, stating “I firmly believe that the completion of the Center will trigger further revitalization of Fukushima Prefecture and Naraha Town”.



The Naraha Remote Technology Development Center is a facility to take charge of the development and demonstration test of remote control equipment and devices, which are part of technology development towards decommissioning of Fukushima Daiichi Nuclear Power Station (hereinafter “1F”), Tokyo Electric Power Company (TEPCO). The Center consists of the Research Management Building equipped with state-of-the-art virtual reality (VR)

systems used for training workers and the Test Building. The latter is used for carrying out, 1) demonstration tests for the decommissioning, including demonstrations for repairing sections from which cooling water is leaking in the lower part of the nuclear reactor containment vessel, and 2) development / demonstration of remote control equipment (for example, robots).

The Research Management Building is completed and currently in partial operation, while the Test Building is still under construction. On completion of the Test Building in spring 2016, the entire Center will be in full operation.

Outline of the Naraha Remote Technology Development Center is described below.

Tasks towards decommissioning

At 1F, the fuel assemblies in the reactor are melted and solidified with other reactor materials, forming so-called “fuel debris”. The greatest challenge in the decommissioning task is to safely extract and store the fuel debris. Prior to extracting the debris, some preparatory operations are performed, including 1) investigation of the situation inside the reactor, 2) decontamination where necessary, and 3) repair of sections from which cooling water is leaking in the lower part of the nuclear reactor containment vessel. However, the radiation level in such working environment is too high for workers to enter the site, so the development of remote control equipment (for example, robots) becomes necessary.

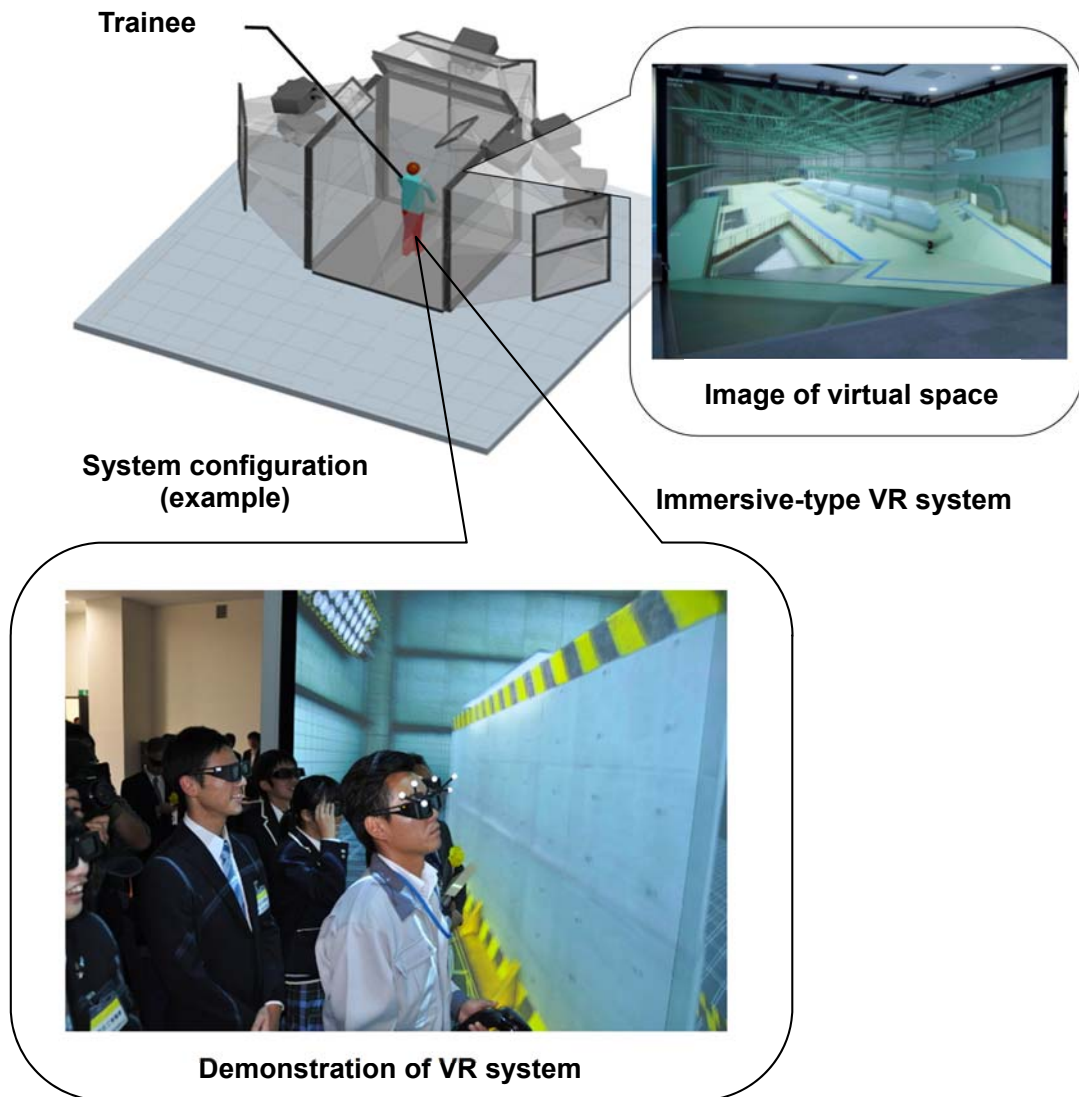
The facility to undertake development and demonstration test of such equipment is the Naraha Remote Technology Development Center. The Center consists of the recently completed four-story Research Management Building and the Test Building which looks like a large gymnasium.



* The photos were taken in October 2015.

Research Management Building for training workers

VR systems will be installed in the recently completed Research Management Building. The VR systems allow users to feel as if they are actually in a simulated space. Through this, workers will be able to formulate an ideal work plan by checking the route and time of travel required for the work and estimating the expected amount of radiation exposure. Additionally, by simulating the work many times in advance, work at the actual site can progress efficiently while ensuring safety.



Test Building for development and demonstration of robots

After the opening ceremony, a demonstration of a scorpion-type robot that was developed by the International Research Institute for Nuclear Decommissioning (IRID) and Toshiba Co. for



investigating inside the reactor containment vessel (**photo on the left**) was carried out.

At the Test Building that will be completed next year, JAEA plans to test operation of robots to check their functions and to train operators in gaining the skills in operating them, by simulating the work environment of

the buildings of 1F at real scale and by precisely monitoring the movement of robots using motion capture.

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