EDRC Trains Students Using Honeywell’s Simulation Solution.

Case Story

“Honeywell is a well-known provider of process industry training simulation technology across the globe. We recognized they are delivering most of the simulators for Korean EPCs, and we wanted to utilize the best solution for our engineering training program.”

– Engineering Development Research Center (EDRC) of Seoul National University

Benefits

By employing Honeywell’s state-of-the-art UniSim® operator training simulation (OTS) technology, EDRC can improve the competency of plant personnel and help prepare them faster through realistic training experiences.

A dynamic plant simulation system allows users to accelerate knowledge transfer by consolidating an entire lifetime of experience into a concise training curriculum.

In EDRC’s case, the use of advanced simulation can:

- Improve understanding of general plant theory and concepts
- Increase knowledge of plant systems and functions, and interaction with other systems
- Enhance understanding of plant control theory and operation
- Improve operating experience, confidence, and accuracy in normal and abnormal plant operations
- Provide practice following specific operating procedures

Background

Seoul National University (SNU) is ranked the No. 1 national research university located in Seoul, the capital of Korea. The institution was founded in its current form in 1946 and comprises 16 colleges, one graduate school, and 10 professional schools. It is recognized as the most prestigious university in the country.

SNU’s Engineering Development Research Center (EDRC) is a national engineering center, and was established in June 2014 with the support of the Korean Ministry of Trade, Industry and Energy (MOTIE). The center’s goal is to foster high-quality engineers who will be groomed and trained as lead process engineers for the Korean engineering industry. EDRC is working closely with Korean engineering companies to upgrade their competitiveness in the global market.

The EDRC is training a new generation of plant personnel at the frontier of engineering with professional knowledge of the industrial process. The center has a variety of engineering related member companies nationwide including the top 10 companies to systematically develop their own industry-oriented custom education program.
Challenges
In the near future, many seasoned staff members at industrial plants will retire, while the process industries in emerging economies will continue to face critical skill shortages.

The performance and productivity of any manufacturing facility relies on its personnel and their ability to perform jobs safely in a skilled and knowledgeable manner.

The challenge of training the next generation of key employees, such as plant engineers and operators, is being met by the deployment of new tools and processes supported by Honeywell’s UniSim® Competency Suite products.

Solution
EDRC has achieved many of its key objectives by partnering with Honeywell to implement the industry’s most advanced training simulator technology.

EDRC uses a Honeywell Experion® Orion-based demo system as part of an overall training program to help achieve operations/engineering competency. The Experion Orion console employs sophisticated display technology that brings the plant control room and assets to life.

EDRC’s training simulation system is based on the Naphtha Hydro-treating (NHT) process, which is common in the refining and petrochemical industries. EDRC staff are able to utilize the system to deliver more efficient training with in-depth curriculum and hands-on exercises.

With the simulation solution, instructors can provide a training experience whereby the student manipulates the Experion Orion console directly to become proficient in process operations. This approach enables the trainee to gain experience in an exceptionally realistic environment, which helps to develop best practice behaviors, accelerate skills acquisitions and increase knowledge transfer effectiveness.