



## FACTS AT A GLANCE

**Company:** Hyundai Engineering Company Limited

**Website:** [www.hec.co.kr](http://www.hec.co.kr)

**Description:** Hyundai Engineering has successfully continued to perform over 5,000 projects in domestic and overseas markets since its foundation in 1974. It has established itself in the field of processing plants, including oil and gas, LNG facilities, oil refinery and offshore facilities, as well as next-generation industry power and energy, environment, SOC, and new transportation systems. Hyundai Engineering is also recognized as a global leader with FEED/PMC competencies, contributing towards a higher value-added business.

**Industry:** Process Plant, Power & Energy, Industrial Plant, Infrastructure & Environmental

**Country:** Korea

## PRODUCTS USED

- SmartPlant® 3D
- SmartPlant Foundation
- SmartPlant Review
- SmartPlant Instrumentation
- SmartPlant Materials
- SmartPlant Reference Data
- SmartPlant Electrical
- SmartPlant P&ID

## KEY BENEFITS

- Easy customization to meet project requirements
- Enhanced design automation
- Integrated enterprise engineering environment

## HYUNDAI ENGINEERING ESTABLISHES SMARTPLANT® 3D AND SMARTPLANT REFERENCE DATA INTERFACE FOR NEW PIPING COMPONENTS

Longtime Intergraph® customer adds to comprehensive piping library to further enhance design automation

### IDENTIFYING GOALS

Hyundai Engineering Company Limited (HEC) is a world-class engineering company headquartered in South Korea. Founded in 1974, the company has demonstrated its status as a 'Global Premier Engineering Partner'. HEC continues to set global standards in the engineering industry with superior skills, outstanding talents, ingenious thinking, and challenging spirit. This has been crucial in HEC beating the competition for orders amid the economic downturn.

HEC has been a longtime Intergraph® customer and has been using SmartPlant® Enterprise solutions for many years. It first implemented SmartPlant 3D for a power plant pilot project back in 2008, and has since executed several real-world projects using Intergraph's next-generation 3D engineering design solution. As HEC continues to expand the use of SmartPlant 3D for its projects, the engineering company determined the need to add new piping components to its existing SmartPlant Reference Data library.

### OVERCOMING CHALLENGES

- Add new piping components required for project to library
- Ensure seamless integration with modeling application for new piping component to be reflected in the 3D model

### REALIZING RESULTS

SmartPlant Reference Data provides materials libraries at the corporate and project levels, enabling better standardization and change management. It is the software tool for maintaining catalog and pipe specifications for SmartPlant 3D, SmartPlant Materials, and other SmartPlant Enterprise solutions. SmartPlant Reference Data includes a comprehensive library of piping components but it also enables users to easily add to the library with new components as required.

For example, HEC needed to add a long welding neck flange into the library, which is connected to the pipe as a branch item. The Korean engineering company could do this easily by establishing a workflow process where a new item code would

be added in SmartPlant Reference Data if the component was not already in the library. This item would then be mapped for the appropriate SmartPlant 3D specifications and catalog value. A new 3D symbol would be created accordingly, enabling users to model with the new piping component directly in SmartPlant 3D. The 2D isometric symbol would also be created to generate the isometric drawing accurately, reflecting the new piping component.

This customization helps to further enhance SmartPlant 3D's design automation capabilities. The solution features powerful out-of-the-box functionality, but is also easy to configure to meet specific project needs. The seamless integration between SmartPlant 3D and SmartPlant Reference Data ensured that HEC could easily update the piping library to include new piping components as required for its project.

SmartPlant 3D is the world's first and only next-generation 3D plant design solution, employing a breakthrough engineering approach that is focused on rules, relationships, and automation. It provides all the capabilities needed to design a plant, and then keep it as-built throughout its life cycle. This innovative Intergraph solution captures new and existing engineering knowledge so that it can be saved and reused in the future, which is the key to success in today's competitive global economy. SmartPlant 3D is the most advanced and productive 3D plant design solution that effectively enables optimized design for increased safety, quality, and productivity, while shortening project schedules. Companies using SmartPlant 3D, including HEC, typically report a 30 percent improvement in overall engineering design productivity.

## MOVING FORWARD

HEC plans to continue using SmartPlant 3D and other SmartPlant Enterprise solutions for its engineering projects. It has recently implemented SmartPlant 3D for a chemical plant project that has over 10,000 pipelines. HEC will expand its use of SmartPlant Enterprise and also adopt laser scanning solutions to execute projects.



## ABOUT INTERGRAPH

Intergraph is the leading global provider of engineering and geospatial software that enables customers to visualize complex data. Businesses and governments in more than 60 countries rely on Intergraph's industry-specific software to organize vast amounts of data to make processes and infrastructure better, safer, and smarter. The company's software and services empower customers to build and operate more efficient plants and ships, create intelligent maps, and protect critical infrastructure and millions of people around the world.

Intergraph operates through two divisions: Process, Power & Marine (PP&M) and Security, Government & Infrastructure (SG&I). Intergraph PP&M provides enterprise engineering software for the design, construction, operation, and data management of plants, ships, and

offshore facilities. Intergraph SG&I provides geospatially powered solutions, including ERDAS technologies, to the public safety and security, defense and intelligence, government, transportation, photogrammetry, and utilities and communications industries. Intergraph Government Solutions (IGS) is a wholly owned subsidiary of Intergraph Corporation for the SG&I U.S. federal business.

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For more information, visit [www.intergraph.com](http://www.intergraph.com).

