



HYDROGENICS EUROPE, BELGIUM

Key Facts

Company: Hydrogenics

Website: www.hydrogenics.com

Industry: Energy, machinery

Country: Belgium

Products Used:

- Intergraph Smart® P&ID

Key Benefits:

- Improved engineering data quality due to an automated, bidirectional interface between P&IDs and the ERP system
- Enhanced efficiency and time savings due to centralized access for engineering information
- Capturing basic engineering data in the early stages of process design
- Rule-based P&IDs to improve document consistency
- Automated tagging allowing customized nomenclature of P&ID
- Automated generation of maintenance project structure in ERP for service department

HYDROGENICS EUROPE IMPROVES ENGINEERING DATA QUALITY WITH INTERGRAPH SMART® P&ID

IDENTIFYING GOALS

Hydrogenics is a worldwide leader in designing, manufacturing, building and installing industrial and commercial hydrogen systems around the globe with over 60 years of experience. The company was searching for a solution to replace its existing in-house P&ID solution and to find a way to improve the quality of engineering information whilst making it accessible in the ERP system without unnecessary manual work. Hydrogenics was already using IFS as an in-house ERP system, and needed a solution that would be linked with IFS, database driven, customizable, and easy to use once implemented.

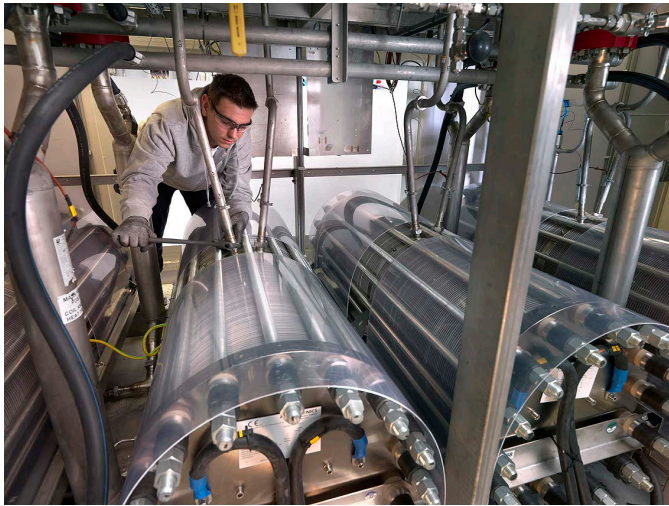
OVERCOMING CHALLENGES

One of the main challenges Hydrogenics was looking to mitigate was the complexity and increasing scope expansion of its project deliveries and the effect of it on the quality of engineering information. The company needed a way to organize engineering information in a manner that would enable them to communicate with their customers in a standardized manner, making sure that all the necessary information was up-to-date and available for all the departments in the company.

After the initial decision to choose Intergraph Smart® P&ID as the replacement of Autodesk's AutoCAD®, the project scope was discussed. This was challenging, as it was the first time that an interface would be developed between IFS and Smart P&ID. Originally, it was decided that the information exchanged between the two systems would include only objects and properties as well as pipe and functional relations. During the project execution, it became clear to both companies that also part relations would need to be added to the system.

Due to this, Hydrogenics was looking for a database driven engineering solution. In addition, the structure of the database needed to be similar to IFS so that the customization need would be minimal. The key idea was to have a solution





Installation of HySTAT® Cell Stacks

that would both bring information together from different departments, and also make it available to all relevant parties.

REALIZING RESULTS

After the first introduction to Smart P&ID, Hydrogenics was convinced that the solution would easily mitigate its challenges and that the customization would be only a matter of mapping properties and basic data. After this, Hexagon PPM built a customized interface between the ERP system and Smart P&ID, enabling Hydrogenics to capture all engineering data entered in Smart P&ID, such as process specifications and instrument data, and to store it in the existing ERP system.

This made the information available to all departments and the bidirectional interface removed the need to manually touch data, eliminating human error. The centralized access and storage of engineering information enhanced efficiency,

as the field service engineers have no trouble accessing the correct information and require less support from the engineering department to perform their daily tasks.

During implementation, Hexagon PPM suggested Hydrogenics create its company standards, so that in the future it would have full freedom to customize the implementation and enable the standard to develop.

Ultimately, the project was finalized after a testing and debugging period where both companies worked together to share feedback and finalize the interface. Currently, the interface migrates process parameters, functional relations, pipe system relations, part relations of all items on the project P&IDs, which include 600-plus items and another 6000-plus properties on average.

MOVING FORWARD

Jan Vaes, Director Technology at Hydrogenics Europe said, “We are pleased with our decision, and expect to improve the quality of our documentation with less effort than before with Smart P&ID and the customized interface with our ERP system. The implementation of Hexagon PPM software allows us to keep all our information in one place and available to all departments, enabling us to focus on our customers rather than our documents.”

Six process design engineers are currently working with Smart P&ID benefitting of the bidirectional data exchange between Smart P&ID and the ERP system to keep the master data set sound. The solution is used in approximately 20 projects in a yearly basis.

ABOUT HEXAGON

Hexagon is a global leader in digital solutions that create Autonomous Connected Ecosystems (ACE). Our industry-specific solutions create smart digital realities that improve productivity and quality across manufacturing, infrastructure, safety and mobility applications.

Hexagon's PPM division empowers its clients to transform unstructured information into a smart digital asset to visualize, build and manage structures and facilities of all complexities, ensuring safe and efficient operation throughout the entire lifecycle.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 20,000 employees in 50 countries and net sales of approximately 3.8bn EUR. Learn more at [hexagon.com](https://www.hexagon.com) and follow us @HexagonAB.