



Working in harmony

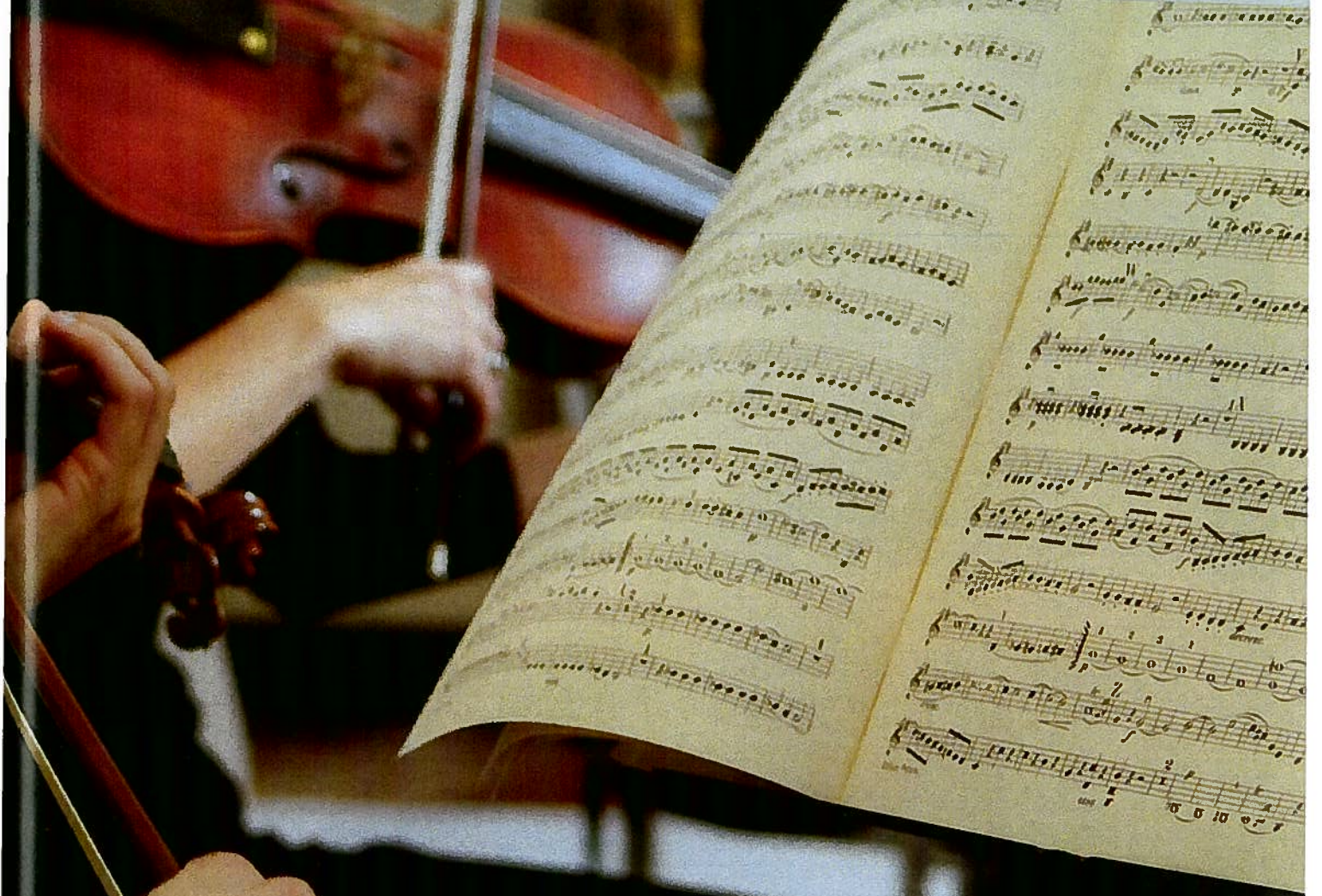
De Smet S.A. Engineers & Contractors (DSEC) serves two primary markets: the sugar and bioethanol industry, and the edible oil and biodiesel industry. For the sugar and bioethanol industry, DSEC performs its own process detail engineering.

With the growing demand for alternative fuels, DSEC faces the challenge of completing turnkey projects in a limited amount of time and with a predefined budget, which requires flexibility and precise planning.

To reduce erection costs and construction time, piping work is preassembled. The assembly work is sometimes completed a great distance from the actual plant site. To meet

these challenges, DSEC selected the SmartPlant Enterprise portfolio of solutions.

Intergraph's SmartPlant Enterprise solution offers a powerful portfolio of best-in-class plant automation applications, which may be deployed individually or as a flexible, integrated enterprise solution, allowing an organisation to successfully unleash the untapped value that is often restricted by silo centric communication and execution. The modular architecture of this plant design software provides scalability, enabling clients to start small and grow in harmony with their specific business needs to create substantial return on investment while reducing risk.



David Joffrion,
Intergraph, USA, describes
how De Smet S.A. Engineers
& Contractors, Belgium,
helped to provide an
alternative fuels solution.

Boosting productivity

DSEC selected several products from the SmartPlant Enterprise suite for their project needs, including:

- SmartPlant 3D for an optimised design, increased productivity and shortened project schedules. SmartPlant 3D provides both engineering procurement and construction companies and owners/operators with a competitive edge by:
 - ♦ Integrating plant engineering data enterprise wide: SmartPlant 3D integrates with complementary tools, creating an optimal workflow throughout the enterprise.
 - ♦ Providing unparalleled ease of use, which reduces the learning curve and increases productivity.
 - ♦ Shortening project schedules by enabling streamlined design processes.
 - ♦ Enabling global, concurrent engineering, allowing contractors to manage and execute projects worldwide.
 - ♦ Capturing 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.
 - ♦ Preserving the value of plant engineering information and enabling.

- SmartPlant Process and Instrumentation Design, an asset centric, rule driven engineering solution that can help to efficiently create and improve plant configurations, helps to design and configure plant processes using design rules that enforce engineering and customer standards. It allows operators to configure the plant accurately and make the right decision early on in the design cycle, increasing the efficiency of downstream design activities such as control system design and piping. SmartPlant P&ID plays a key role in design, construction, commissioning, and operations, enabling plant owners to plan more carefully for maintenance, operational tasks, and expansions or modifications. In addition, the SmartPlant P&ID data can be leveraged to plant operation critical systems, such as safety with HAZOP analysis (SmartPlant Process Safety), control systems (SmartPlant Instrumentation), and process optimisation with FALCONEER.
- SmartPlant Basic Integrator, which provides a simplified, cheaper solution for customers requiring only basic integration, without workflow and advanced collaboration functionality.
- SmartPlant Review, ideal for the visualisation and engineering animation specialist who uses the software daily, or the occasional user who needs to review designs and use the 3D model as a graphical interface to access project data linked to the model. For additional functionality, SmartPlant Review offers six optional modules for construction and schedule review, simulation and visual effects, photo realistic rendering, customisation resources, enterprise wide collaborative review, and on-site drawing generation.
- SmartPlant Explorer, in order to view, navigate, query, and report on live PDS®, SmartPlant Instrumentation, and SmartPlant P&ID design data, all through an integrated web based environment, without the need to deploy the associated authoring tools to each desktop. SmartPlant Explorer offers a common, configurable, and unified interface to present design data in the context of customer needs. The software essentially creates a simple and easily accessible website that enables people to directly access multiple existing plant databases around the world without any risk of accidental modification. The software supports the entire plant life cycle with reliable and usable information.

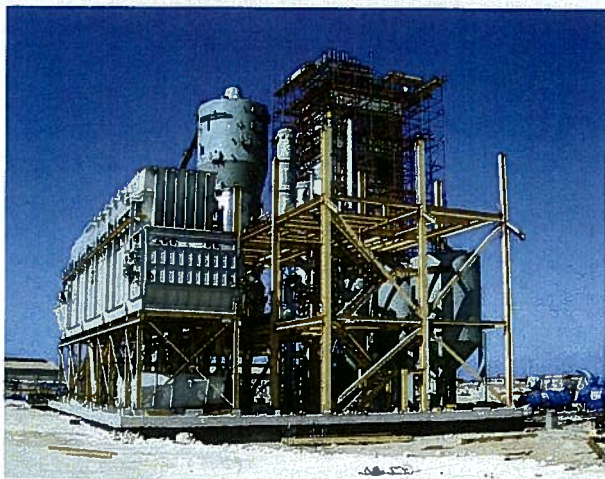


Figure 1. 2200 tpd soya bean crushing plant.

The company's primary objective was to improve productivity using software that was easy to use and that could easily import data from subcontractors. DSEC wanted reliable software that would be supported in the future. The ability to share the software outside the company's main office was also important.

DSEC implemented SmartPlant P&ID four years ago to use for schematics. That was followed by the implementation of SmartPlant 3D to improve productivity and offer the ability to integrate with third party products.

SmartPlant P&ID is knowledge driven engineering software for creating intelligent piping and instrumentation diagrams (P&IDs). SmartPlant 3D is a complementary, full suite solution that provides all of the capabilities needed to design a plant, and then keep it as-built throughout its life cycle.

Selection

Using SmartPlant Enterprise, DSEC manages several projects currently in production, including some 650 pieces of equipment and 3500 pipelines distributed among 15 main process buildings. All implemented licenses are used on a daily basis and distributed concurrently.

Intergraph solutions are commonly used for DSEC tasks related to structure, equipment, piping and drawings for these integrations. SmartPlant P&ID is mainly used in the production process for schematics and the output of equipment lists. SmartPlant 3D is used in DSEC's production, as well as for new project evaluation and quotations.

Bernard Nokerman, Project Manager, DSEC, said it is too early to have measurable results of how the Intergraph solutions have benefited the company because the company is still in the learning curve process, but he is confident the company will meet its objectives in terms of productivity improvements. In the future, he expects faster startup on projects based on currently developed backgrounds, including equipment models, specifications and working procedures.

Implementation

Once DSEC was ready to begin the implementation process, it looked to Intergraph services. Intergraph France was closely involved in the startup process, including training and piping specification creation.

No data migration was required, since DSEC started on a clean slate. Internal knowledge was used for data development, with only a few subcontractors' models directly imported. The time it took to begin initial production with Intergraph software was very brief. DSEC wanted to get started with projects quickly, so the software was used out of the box without any customisation.

Employee training was completed in a matter of days and the company received strong assistance from Intergraph personnel who performed training and setup.

The future

DSEC plans to evaluate SmartPlant Instrumentation for future usage. Depending on its workload, the company may also expand the number of users.

DSEC expects to use SmartPlant Enterprise's work sharing capabilities where needed. The next step will be to improve and set up the collaboration process between the company's civil works and structural departments and related external engineering subcontractors with a relay to the workshops. 