



FACTS AT A GLANCE

Company: The Badger Company

Website: www.thebadgercompany.eu

Description: The Badger Company is a multidisciplinary, internationally-operating engineering office, offering execution of EPC services. The Badger Company is based on an integrated operation model consisting of the seamless cooperation between two offices, one in the Netherlands and the other in Romania, both operating as if being one office at a single location in the Netherlands.

Employees: 40

Industry: Petrochemicals, chemicals, oil & gas, food, and power generation

Country: The Netherlands, Romania

PRODUCTS USED:

- CADWorx® Plant Professional
- CADWorx fieldPipe™ Professional

KEY BENEFITS:

- Immediate time savings because no manual measurements were needed on-site
- Improved efficiency due to faster 3D modeling
- No additional training needed, engineers were able to start working immediately

THE BADGER COMPANY IMPROVES BROWNFIELD PROJECT EXECUTION WITH INTERGRAPH® CADWORX® AND CADWORX FIELDPIPE™ PROFESSIONAL

Dutch-Romanian engineering company employs CADWorx fieldPipe for accurate as-built 3D modelling



IDENTIFYING GOALS

The Badger Company is a multidisciplinary, internationally operating engineering office executing engineering and EPC(M) services. Operating within the international petrochemical, chemical, oil & gas, food, and power generation industries, the company provides professional engineering, contracting, and construction supervisory services for the process industries and energy markets.

The Badger Company's customer, an owner operator with a natural oil plant in Gouda, the Netherlands, was investigating the possibility of demolishing existing plants and building a new plant on the same brownfield site.

OVERCOMING CHALLENGES

The major challenge the customer faced was a lack of accurate plant documentation, because the only existing plot plan available was based on outdated Google Earth images. Due to this, there was no way of knowing if the new equipment and the reactor would fit in the intended space.

The Badger Company suggested that it executes a 3D laser scanning study of the existing premises to create a point cloud and from this an accurate 3D model for the customer. This could then be used to produce a number of up-to-date views of the plant.

The first task The Badger Company needed to perform was to specify the positions for the scanner to ensure the optimised capture of the plant in the fewest number of laser scans (point clouds). Data capture was performed with a Leica Geosystems laser scanner, and Leica TruView technology was used to view the resultant point cloud.

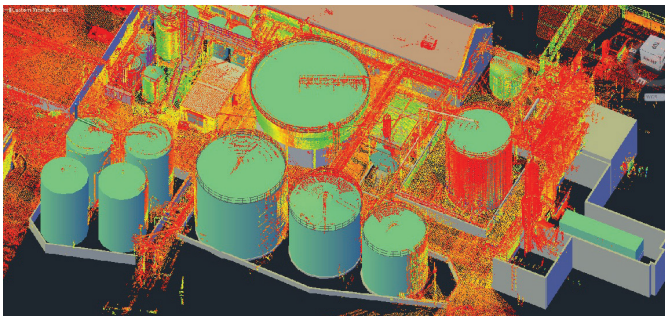
Once scanning was completed, to ensure that only relevant information was included and to optimize the file size, the different point clouds were first cleaned before being registered together in Leica Cyclone™ to create a single, unified high accuracy point cloud of the plant.

After this the point cloud was imported into Intergraph® CADWorx® fieldPipe™ Professional, where a simplistic but accurate 3D model of the existing plant and premises was created, and from which various views and 2D plot plans were generated. This enabled the owner of the plant to see clearly how and where the new additions to the facility could be made, and which parts of the existing facility had to be demolished or moved.

REALIZING RESULTS

During the project, The Badger Company successfully created a new, accurate 3D model of its customer's plant, without any existing documentation or plot plans. After the scanning of the premises and creation of the 3D model, the owner operator was able to safely plan the upgrade of the plant, and ensure that the new equipment would fit into the intended area.

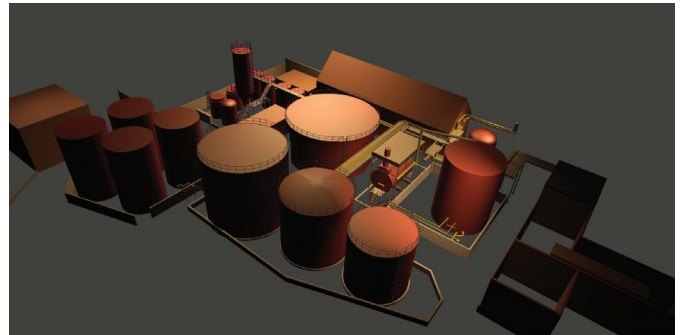
Intergraph CADWorx Solutions were chosen for the project due to their ease of use, efficiency, and scalability. Peter Klaassen, project manager at The Badger Company, stated “Intergraph CADWorx Plant Design Suite has proven to be faster and easier to use than other similar solutions, and its scalability enables you to pay only for the features you need. This was our first laser scanning project with CADWorx, and the integration between CADWorx Plant Professional and CADWorx fieldPipe Professional made it easy for us to get started with a new project – in fact, our engineers needed no additional training.”



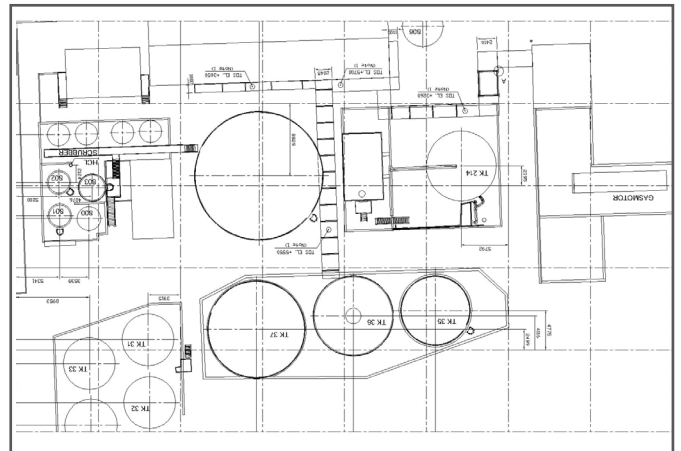
The CADWorx model is superimposed on top of the point cloud created by Leica Cyclone.

MOVING FORWARD

As a long-term user of Intergraph solutions, The Badger Company has already standardized to use CADWorx Plant Professional in all of its future projects. Other examples of projects done in CADWorx include tank terminals, bitumen refineries, biodiesel plants, blast furnaces, skids, and brownfield projects in chemical plants (such as new pumps, tanks, and equipment). The Badger Company sees that the addition of CADWorx fieldPipe Professional to its engineering toolset strengthens its service offering, enabling it to deliver projects at higher accuracy, quality and more cost-effectively.



A rendered view of the CADWorx 3D model is generated from the point cloud.



A 2D plot plan is generated from the CADWorx 3D model.

ABOUT INTERGRAPH

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