



## Flanged Connection Numbering

### SPP&ID & PDS data integration

#### Customer Benefits

- Improved ability to operate and maintain flanged connections
- Delivery without taking production systems offline
- Execution aligned with key plant shutdown



Unique identifying flanged connection number

#### Our Services

Consulting, analysis and advice, custom automation technology development, specialist technical services (SmartPlant P&ID, SmartPlant Review and PDS).

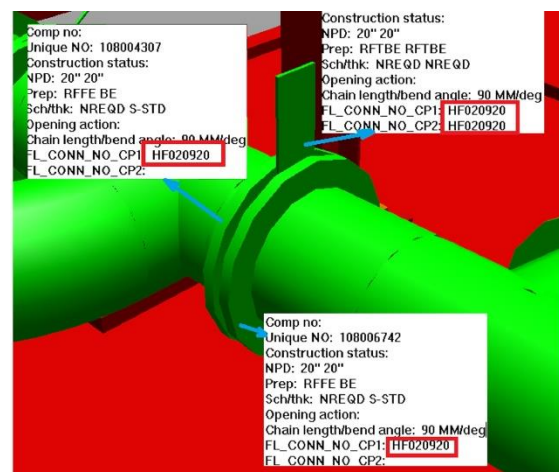
#### The Client

Our customer is a refining and marketing company, with a production focus on premium-quality, lower-emission traffic fuels. The company produces a comprehensive range of major petroleum products and is the world's leading supplier of renewable diesel. The company had net sales of EUR 17.5 billion in 2013, employs around 5,000 people and is listed on the NASDAQ OMX Helsinki.

#### Project Challenge

The customer's plant maintenance department identified a technical requirement to be able to uniquely number all flanged connections across their facility. In particular, the requirement was that pairs of flanges should be assigned a single unique identifying flanged connection number in a specified format. In addition, the same unique number should also be applied in cases where pairs of flanges mated with "through-bolted" items such as spectacle blinds.

The as-built PDS 3D model in use did not contain any flanged connection numbers, and the application software contains no standard mechanism for automatically assigning unique numbers in this way; manual assignment of numbers was considered to be impractical. The company approached our team to analyse the problem, and provide a solution for the automated assignment of the required flanged connection numbers across the model.



Through bolted connection number



## Our Solution

Our experts received the customer's existing PDS 3D model, performed an analysis of the problem, and proposed a solution to the company involving a mostly automated process with a small amount of manual work to address certain specific cases. Our team provided advice to the customer including the best method for storing the connection numbers in the PDS database, recommendations regarding the numbering method, and a strategy for mitigating any problems that may be encountered due to data quality.

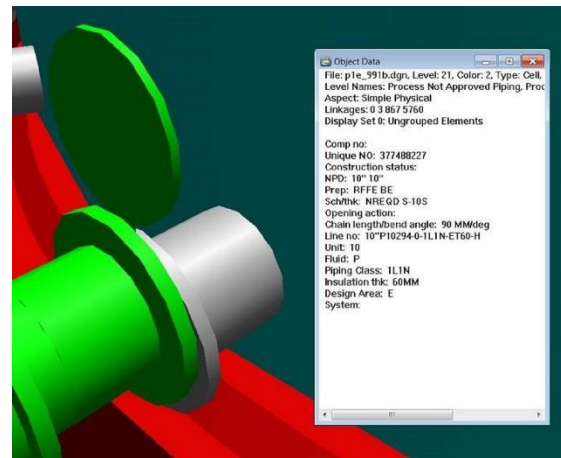
Once approval to proceed was obtained, we executed the work using in-house automation and expertise, assigning unique flanged connection identifiers to approximately 35,000 flanges, including the following specific types:

- PDS equipment model piping nozzles
- PDS piping model components, instruments and specialty items, including through-bolted flanged ends

Our team delivered the results of the work to the customer in database script files, which were able to be seamlessly incorporated into the company's operational environment. In addition, we provided

a detailed summary of the connections identified, the numbers assigned, and an analysis of any problematic connections encountered while undertaking the task.

We completed the work as agreed within a short, pre-defined window of time during which the company was not making any changes to the target PDS environment, minimizing impact upon operations.



Diagnostic analysis for quality assurance

If a SmartPlant P&ID & PDS data integration is a service that you need, [contact us](#) today for a quotation.

