BILFINGER TEBODIN DESIGNS TWENCE-GROLSCH WASTE HEAT CONNECTION

Energy producer and waste incinerator company Twence has been a loyal customer of Bilfinger Tebodin for many years. A few years ago, Twence approached a team of energy experts in Schiedam to think about the technical feasibility of various projects in the field of energy efficiency and energy exchange. "We were looking for companies to conduct a feasibility study on heat supply trajectories and we chose to work with Bilfinger Tebodin," says Harry Hegeman, project manager at Twence. "We have worked on several projects with Bilfinger Tebodin since 2010 and they prove to be a valuable partner. The company has a lot of experience in heat supply trajectories and the fact that there are multiple disciplines within Bilfinger Tebodin leads to that they have a lot of in-house knowledge."

The business case for supplying heat to third parties soon turned out to be interesting enough to develop further. In an internal multidisciplinary project team consisting of the Pipelines, Energy and Cost Estimating departments, various scenarios were investigated for the supply of steam. The Energy department carried out the conceptual technical design process and Pipelines designed the pipeline route and distribution network. After steam supply proved to be not feasible in this particular study to some third parties, the focus shifted to heat supply to Grolsch, a beer brewery in the Netherlands.

GROLSCH AND TWENCE

"On request of both Grolsch and Twence, various options for the application of residual heat at Grolsch have been investigated more widely," says Izak Boot, Energy Consultant and Utility Engineer within Bilfinger Tebodin. "For this, several technical solutions were developed with an indication of the total investment costs. Based on this study, it proved feasible to supply hot water to Grolsch."

> Based on study: it proved feasible to supply hot water to Grolsch

Twence and Grolsch asked Bilfinger Tebodin to perform a concept design based on the scenario for supplying hot water via an underground pipeline to Grolsch. "For this purpose we have developed the Process Flow Diagram with mass and energy balance of the entire waste heat system for several load cases", says Izak Boot. This, together with several multidisciplinary design deliverables and starting points, was validated with the most recent process data to have the design fit for purpose.

SUPPLY AGREEMENT

In April 2020, the heat supply agreement between Twence and Grolsch was signed. "We are excited to have worked on this project during the orientation phase since it is a great example of the energy transition within Dutch industry", according to Izak Boot.

For more information on this project, please contact: **Izak Boot**
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