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## Diligent market analysis as basis for the decision to invest in manhole production technology

In autumn 2014, the Dutch firm of Fassaert Beton BV commissioned a plant for producing wet-cast manhole components. Besides manhole bases, the company also produces immaculate, high-quality manhole covers by wet-casting. Fassaert Beton BV carried out the preparation for the investment decision, particularly the choice of the production technology for custom-made monolithic manhole bases, with utmost care and with the consequent involvement of the owners and management. By opting for the Perfect manhole production system from Schlüsselbauer Technology, the company – which was founded in 1910 – has paved the way for the successful development of its range of manhole components.



The innovative Perfect manhole system was presented at Fassaert Beton BV in autumn 2014 as part of a launch event lasting several days.



The first products with integrated seals – of impeccable quality – leave the manhole factory.

■ Christian Weinberger, Schlüsselbauer Technology GmbH & Co KG, Austria ■

At its Westdorpe site, located close to the Belgian border about one hundred kilometres south-west of Rotterdam, in addition to manhole components, Fassaert Beton BV also manufactures precast anchorage and foundation systems, wall and beam ele-

ments, road construction products, drains and channels, special items such as street furniture and other architectural concrete elements. Fassaert Beton BV is part of the family-run De Hoop Group, with several establishments across the Netherlands. On commissioning the new manhole component manufacturing system, the company took the opportunity to invite numerous cus-

tomers and other interested parties to visit its Westdorpe factory. The production of manhole bases with individual pipe connections and channel configurations in an industrial setting attracted keen interest, particularly from representatives of local authorities and planning offices.

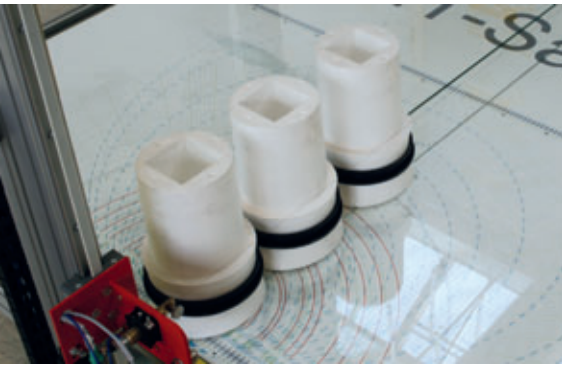
The use of pourable concrete was not a new challenge for staff at Fassaert Beton



Fassaert Beton BV now has a flexible production facility for cast concrete production.



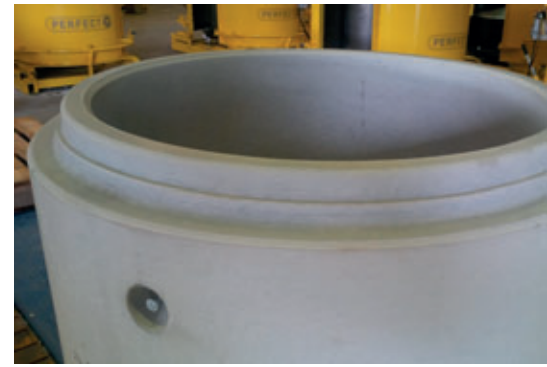
The negatives of the required channel components are accurately cut from EPS preforms using hot wire cutters.



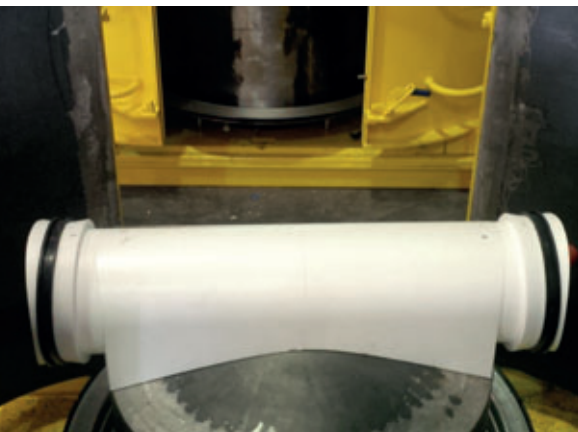
*Mouldings with preassembled seals simplify the production of watertight pipe connections, which are solidly anchored in the concrete.*



*The height of the pre-cast components can be easily adapted in the wet cast moulds.*



*Transport anchors cast in the manhole wall ensure safe handling of the monolithic manhole bases as far as the construction site.*



*Complete negative channels are then used for subsequent casting with pourable concrete in the steel formwork – the berm slope of 15% typical in the Netherlands can be seen here.*



*Immaculate concrete surfaces, including the spigot end.*

BV. Being used to meeting the requirements for architectural concrete components, the company has many years of experience in relevant concrete production and processing. The first manhole bases manufactured using the Perfect production system are therefore characterised by impressively high quality both inside and outside. The use of EPS preforms has proved advantageous in relation to surface quality, especially in the channel. As well as product quality, the sustainability and costs of the materials used to manufacture the channel forms played a key part in the deliberations of managers at Fassaert Beton BV when choosing the production technology. It is the stated goal of the company's management to further expand its strong market position by focusing on product quality and production costs.

In the Perfect production system, channel and pipe connection pieces made from EPS are accurately cut from standardised preforms using hot wire cutting machines and then glued together by hand. The workers are helped by position lasers that allow quality control to be carried out at the same time. The negative channels produced in this way are placed in steel moulds, which are filled with pourable concrete. A berm slope of 15%, which is typical for sewage systems in the Netherlands, is already taken into account when producing the channel negative. Another positive aspect of the Perfect production system for Fassaert Beton BV lies in the use of integrated seals. These are preassembled on the EPS support elements and solidly anchored in the surrounding concrete in one pour. The large variety of components in the product range of Fassaert Beton BV pre-

sented another challenge which the Perfect production system was ideally placed to meet. Monolithic concrete manhole bases have to be produced in different heights and wall thicknesses, with nominal widths of DN800, DN1000 and DN1200. The use of EPS preforms and their recycling after demoulding ensures a resource-efficient production, thanks to the optimised use of material for the preformed EPS-parts. No additional coatings are used except for concrete release agents.

This was a key aspect for decision-makers at Fassaert Beton BV when choosing the production technology solution from Schlüsselbauer Technology, as well as questions of economy and component quality. The Perfect production system is now used by more than 30 companies worldwide. Monolithic, custom-made concrete manhole bases are now the accepted state of the art across Europe. ■

**FURTHER INFORMATION**

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