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# Straight to the future: Beton De Clercq relies on an innovative concrete pipe testing line

■ Mark Küppers, CPi worldwide, Germany

Quality assurance is a particularly important process in concrete pipe production. For checking and documenting finished part quality, Prinzing Pfeiffer offers a pipe testing line whose stations can be freely configured with one another. This means that tailored arrangements can always be taken into account during the conceptual design phase. In Beton De Clercq in Gent, Belgium, another concrete plant now relies on a pipe testing line from Prinzing Pfeiffer and can thus guarantee its customers receive a tested product with quality that meets very high requirements.

## Beton De Clercq has stood for quality products for more than 120 years

In 1898, Henri De Clercq founded the first concrete plant in Flanders in Bruges. Ten years later, a second plant was

opened in Gent. Beton De Clercq specialises in products for the collection, transport and treatment of water. The product range includes concrete pipes, inspection manholes, top elements, covers, sewer elements, house connection manholes, ditch elements and special designs. However, New Jersey barriers, low barriers, retaining and head walls are also produced in large quantities. Beton De Clercq is a family-owned company that offers the full range of high-quality products for road construction and excellent service.

Today, Beton De Clercq is run by Jean Paul Vancanneyt and his son Louis. With its two production sites in Gent and Bruges the company remains one of the most respected manufacturers of high-quality precast concrete elements for infrastructure projects in Belgium. While DN 300 - DN 600 pipes are produced in Gent, the portfolio in Bruges includes larger diameters from DN 700 to DN 1800.



*In Beton De Clercq in Gent, Belgium, another concrete plant relies on a pipe testing line from Prinzing Pfeiffer.*



*Louis Vancanneyt is operating the pipe testing line on a control panel.*

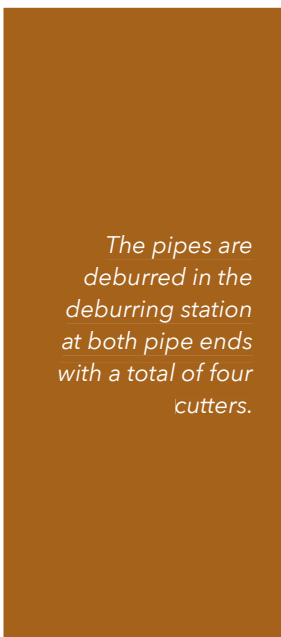


*The pipe testing line starts with the pipe deposition track and alignment station.*

**Only tested quality is assured quality**

The pipe testing line from Prinzing Pfeiffer consists of several stations through which the concrete pipes pass in cycles. In addition to the pipe deposition and alignment stations there is also a deburring station for grinding the inside and outside diameters of the bells and for finishing the spigot ends. This can be optionally extended with an additional milling cutter to produce a seal groove in the spigot end. This makes

it possible to produce a pipe with a subsequently installed gasket. The automatic leak test is carried out with a vacuum pipe testing device using the vacuum differential method. The pipe testing line has now been extended by a straightness measurement, which is being used for the first time in this way at Beton De Clercq. A pipe labelling device is used to identify the pipes in accordance with customer requirements. In addition to standards and production data, this also allows application of the company name or additional information.



*The pipes are deburred in the deburring station at both pipe ends with a total of four cutters.*





*The deburred concrete pipes are fed to the vacuum testing device in the next cycle.*

**Alignment station**

The pipe testing line at Beton De Clercq is designed for 2,500 mm (98 inch) long concrete pipes with the nominal sizes DN 300 - DN 600 produced in Gent. In all configurations, the pipe testing line starts with the pipe deposition conveyor. At Beton De Clercq, two concrete pipes to be tested are normally always placed on this conveyor by means of a fork-lift truck. A single pipe transport wagon is then used to transport the pipes individually and in synchronisation with the test line to the alignment station, where the pipes for the following stations are precisely aligned in position.

**Deburring station**

A quadruple pipe transport wagon is used for the cyclic transport of the pipes in the further area of the test line.

In the first step, the pipe is removed from the alignment station and transferred to the deburring station.

The pipe provided is deburred at both pipe ends in this station with a total of four cutters. The resulting concrete dust is extracted at both ends. A special feature of the deburring station at Beton De Clercq is the diamond-set milling heads, which works particularly precisely and is significantly more durable than classic milling heads.

**Vacuum pipe tester**

The deburred concrete pipes are fed to the vacuum testing device in the next cycle. Here, the pipes are sealed at both ends with pressed-on rubber mats and checked for



*Spigot end, the integrated gasket and straightness measurement in the last station of the test line.*



*Marking of a tested concrete pipe with the pipe marking device.*

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Numerous pipes can be buffered on the pipe deposition track after testing.



Beton De Clercq is now run by Jean Paul Vancanneyt and his son Louis.

leak-tightness using a vacuum differential pressure method. If the results are inconclusive, the pipe is tested a second time. During this second test, a water spraying device is used to detect any leaks on the inside of the pipe.

**Innovative amalgamation of pipe testing (round, straight measuring of S & S pipes) and marking in one station**

In the final station, three testing steps are carried out in sequence. The innovative non-contact laser measuring system first measures the diameter of the spigot end and simultaneously the integrated gasket which is embedded in the bell. The next step is straightness measurement, where the concrete pipe is examined for its curvature with the narrowest tolerances using a special measuring method.

Prinzing Pfeiffer, together with Beton De Clercq and Roel van Osnabrugge (Sales Representative Benelux), developed this forward-looking method of contactless pipe straightness measurement, the first of its kind worldwide.

In the last step, the now completely tested concrete pipe is marked with the pipe marking device. Using a special DOD inkjet printer, producers can configure and mark products with pre-set data and measurement results.

**Only inspected goods in stock**

The finished, tested and marked concrete pipes are transferred from the multiple pipe transport wagon to another single pipe transport wagon. This transports the pipes cyclically from the transfer station to the pipe deposition conveyor. The inspected pipes are deposited here and then removed from the conveyor by means of a fork-lift truck and transported to the external warehouse. Thanks to the length of the pipe deposition conveyor, numerous pipes can be buffered on the deposition conveyor after the inspection; continuous removal and permanent involvement of an employee are therefore not necessary.



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**FURTHER INFORMATION**



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