

PRESS RELEASE

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ALIANCYS AND EURORESINS SUPPORT VERSTEDEN TO DEVELOP COMPOSITE FIREWATER SOLUTIONS FOR A2 MOTORWAY ROAD TUNNEL

Versteden has successfully completed the installation of a 4.2 km firewater system for the new A2 motorway multi-level road tunnel in Maastricht. This means a reliable availability of firewater for potential fire situations inside the tunnel. Aliancys and Euroresins have supported Versteden in this development with novel Atlac® resin systems.

The A2 motorway is the most important North-South road connection in the Netherlands, carrying a very heavy traffic load. In Maastricht (Netherlands) the A2 motorway originally passed the town above ground, cutting the city in half. Because of the limited space available and the need to have local traffic cross the motorway, speed limits were only 50 km per hour causing major traffic delays in rush hours. Consequently, noise and exhaust gases were of great annoyance to the residents living nearby, and were having a negative effect on the environment.



Photo by Aron Nijs

NEW TUNNEL CONSTRUCTION

In 2008 it was decided by the Dutch government to construct a completely new tunnel (King Willem-Alexander tunnel) at the location of the existing motorway. This is the first two-layer tunnel in the Netherlands with the top level designated for local traffic, and the lower level used for transit traffic.

On top of the tunnel a new green corridor will be created, improving quality of living for local residents in Maastricht. The new 2.3 km tunnel will allow to safely process a large amount of traffic at both levels, and consequently reduce the impact of the traffic on the environment.



Source: A2 Maastricht

The tunnel was commissioned by the Dutch National Body of Roads and Waterways (Rijkswaterstaat), and constructed by Ballast Nedam and Strukton. The tunnel construction was completed in 2015, traffic has been going through since December 2016.

RELIABLE FIREWATER SYSTEM

For the unlikely situation of a tunnel fire or a major traffic incident, a reliable firewater system had to be installed as safety precaution. Tunnel fire regulations require the firewater system to be operational at all times. If not, traffic has to be stopped immediately. It was clear from the beginning of project engineering that conventional steel pipes would not be acceptable, because of the risk of corrosion inside the pipes and as a result potential output limitations.

For that reason originally the firewater system was envisioned to be constructed in stainless steel. However, after project kick-off it was found that total system cost was going to be unacceptably high (special steel alloys and a high wall thickness were required for continued corrosion resistance), there was a high risk of corrosion pitting of the welds, and there were major issues with steel pipe raw material availability potentially delaying the entire A2 tunnel project timeline.

SOLUTION IN COMPOSITES

Versteden was able to come up with an integrated solution for this tough challenge. *"We could provide system design, manufacturing and installation all in one hand, with easy and direct communication between the parties",* comments Peter Bogers, Managing Director of Versteden. *"Besides being able to deliver fast and at competitive price, we helped to keep overall project timeline on track. For project owner Rijkswaterstaat this was obviously a major benefit."*



Photo Versteden

The heart of the new firewater system is formed by a 125 mm diameter composite pipe network, installed inside the tunnel emergency tubes (located in between the main traffic tubes). In total, Versteden supplied 4.2 km of piping. The resin system used in this project is a novel Atlac® resin supplied by Aliancys through its Distributor Euroresins.



Photo by Reen van Beek

"Aliancys and Euroresins have helped us to fine-tune resin formulation and provide support in promoting our GRE piping systems", adds Peter Bogers. "With the support of both companies we can much better promote the benefits of composites solutions, and convince key stakeholders about the attractive economics and long term reliability of firewater systems in these materials." As a positive spin-off, Verstedden has been involved in several new projects since the completion of the project in Maastricht.

MORE INFORMATION

Promotion video for entire project https://www.youtube.com/watch?time_continue=41&v=ECfjDNfgFUo.

Video impression of new tunnel https://www.youtube.com/watch?v=Z7pD1A_xQxs.

ALIANCYS - LET'S TALK/

Aliancys is a leading global company active in the sales of Quality Resins for composite applications. Together with its customers, Aliancys is pushing the limits of both composite part manufacturing and performance. Taking an integral approach to new product development, Aliancys is using its full expertise in resin chemistry, material science, and component manufacturing for shaping new applications in composites. So let's talk and increase our mutual business success, both today and tomorrow.

The company's headquarters are based in Schaffhausen, Switzerland. More information can be found at www.aliancys.com. Aliancys is a joint venture of CVC Capital Partners and Royal DSM.

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