



Joint GRP forces for sustainable stormwater system at Kraków Airport

Two powerful brands make an even more powerful solution: A combination of filament wound Flowtite and centrifugally cast Hobas pipes by Amiblu is being installed to build a new, highly efficient stormwater sewer system for Kraków Airport. The new underground infrastructure is an important cornerstone for the airport's increasing importance in international aviation.

Since its modernization around the year 2000, more and more new international connections have been established at Kraków John Paul II International Airport. The airport's continuous development and the increasing number of air operations also required an extension of the underground infrastructure – especially stormwater drainage was in important issue.

The nearby stream into which the rainwater had previously been discharged could no longer handle the growing amounts. It was therefore decided to extend the stormwater sewer system by new pressure lines which should lead the water over a distance of 3 km into the Rudawa river.

The initial plan to implement the project with steel pipes was quickly dropped due to high risks of corrosion, the long installation period, and hydraulic parameters. HDPE was also rejected due to problems of welding and a long assembly time. Eventually, GRP prevailed as material and Amiblu Poland was commissioned with the production of the required piping. The investor can already draw on positive experiences with GRP pipes from Hobas which were installed under the airport in 2003 and are in trouble-free operation up until today.

PROJECT PARAMETERS

Year of construction	2017-2019
Application	stormwater drainage
Installation	microtunneling, open trench, pipe-in-pipe
Technologies	Hobas, Flowtite
Total length of pipe	~ 6 km
Pipe specifications Flowtite	5.85 km pressure pipes DN 1000, PN 6, SN 10 000 - SN 20 000
Pipe specifications Hobas	250 m jacking pipes OD 1280, PN 1, SN 32 000 - SN 40 000
Investor	International Kraków Airport
Contractor	Rzeszów Engineering S.A. / Abikorp Sp. z o.o.



Challenging environments require top-quality solutions: For the new stormwater sewer system of Kraków Airport, Amiblu supplied a perfect combination of Hobas and Flowtite GRP pipes.



Top left: Flowtite pipes with distance rings were inserted into Hobas jacking pipes to create a highly sustainable and reliable pipe-in-pipe system.
Top and bottom right: Hobas GRP pipes were used for microtunneling underneath roads.



The new stormwater sewer was realized with both Amiblu pipe technologies, Hobas and Flowtite, perfectly complementing each other: Filament wound Flowtite products were installed in open trench as pressure pipes for conducting the stormwater, while centrifugally cast Hobas pipes were used for stretches underneath roads where microtunneling was required. A very particular section even involved a very close “collaboration” of the two technologies: Underneath the local provincial road and the A4 motorway, Hobas pipes OD 1280 were installed via jacking as casing pipes, into which Flowtite pressure pipes with distance rings were then inserted.

Works at the airport started in November 2017 and are expected to be completed ahead of schedule at the beginning of 2019. The installation of this new drainage network will lay the foundation for future expansions of the airport, among others a new runway and aircraft hangars. This will allow for the number of flight operations to increase and further strengthen Krakow Airport’s international importance.



Amiblu is a 50:50 joint venture whose goal is to develop and deliver fully sustainable water solutions. Amiblu combines Amiantit Europe and its Flowtite Technology, and Hobas Europe, part of WIG Wietersdorfer Holding, and is the specialist in drinking water, irrigation, waste water, hydropower and industry.