



aquatherm
state of the pipe

CASE STUDY: SPECTACULAR ARCHITECTURE AND SECURITY GO HAND IN HAND



Photo: @sebasromero

PROJECT:
KTM Motohall

LOCATION:
Mattighofen, Austria

COMPLETION:
2019

APPLICATION:
Sprinkler

PRODUCT:
aquatherm red pipe

SPRINKLER SYSTEM FROM AQUATHERM ALMOST INVISIBLE INSTALLED IN THE KTM MOTOHALL

Visitors to the Upper Austrian town of Mattighofen have been able to immerse themselves in the world of motorcycle racing since May 2019: after four years of planning and construction, the KTM Motohall opened here and has since provided insights into the history of the legendary motorcycle brand with its machines, innovations and heroes. The fascination of KTM can be experienced up close in an ultramodern exhibition on 2,600 square metres and three levels – all with interactive displays, virtual tours and lots of original machines. A sprinkler system ensures the safety of visitors, which, due to its special properties, fits invisibly into the spectacular architecture of the building.

From the outside it can already be seen that everything in the KTM Motohall, which was built just a few steps away from where the company was founded, revolves around racing — true to the motto “READY TO RACE.” A spanning metal structure in the form of a tire track is the architectural exclamation mark of the oval structure.

Inside, visitors are led through the exhibition on a replica steep curve and move through the building using loops and ramps. This sophisticated architecture required a particularly high degree of design freedom from the building technology and the products used.

“In the area of fire protection, the architect’s specifications were that the sprinkler

THE CHALLENGE

The sprinkler system of the KTM Motohall should fit almost invisibly into the architecture.

THE SOLUTION

aquatherm red pipe was installed directly in the exposed concrete and thus offers invisible fire protection for visitors to the racing exhibition.



Photo: @sebasromero



system should be almost invisible as a wet system in the exposed concrete ceiling,”

explains Andreas Strobl, project manager of Accuro Brandschutzanlagen GmbH based in Mondsee, which was responsible for planning and installation. For this reason, the company decided to use aquatherm red pipe. The plastic sprinkler pipe system was installed as a branch and distribution line directly in the exposed concrete.

For comparison: metal sprinkler systems can only be installed in concrete using special protective measures. The reason for this is corrosion, which inevitably occurs when metal and damp concrete meet. The special protection of metal pipe systems, however, makes laying them in concrete complex and expensive.

NO CORROSION, QUICK INSTALLATION

aquatherm red pipe, on the other hand, consists of the plastic polypropylene, specifically from the material fusiolen® PP-R FS developed by aquatherm GmbH. Thanks to its flame-retardant properties (building material class B1) and its corrosion resistance, it offers a high level of security, as confirmed by VDS Schadenverhütung GmbH, Europe's largest institute for corporate security, through its certification. The special material also makes it possible to lay it in concrete. This means that the system cannot be seen in the ceiling

visitors to the KTM Motohall, only the total of 725 sprinkler heads suggest the invisible fire protection.

“These were attached to the formwork panels in such a way that they provided a harmonious picture and could meet the architect’s specifications,” says Strobl.

Another reason for using the system:

“The time constraints on the construction site were very tight,” explains the expert for fire protection systems. “The quick and easy installation of aquatherm red pipe made a significant contribution to keeping us on schedule.”

Thanks to the fusion, the roughly 2,200 metres of pipe were connected to form a homogeneous, integral and therefore safe unit. The pipe and fitting were briefly heated using the fusion tools provided and then simply joined together. In addition, Accuro manufactured the strand pipes in the in-house prefabrication line and then transported them directly to the construction site where they were installed.

“The light weight of aquatherm red pipe — especially in comparison to sprinkler systems made of steel pipes — also simplified handling on the construction site,” says Strobl.



Photo: @sebasromero



Photo: Accuro GmbH



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