

EmiControls

An innovative way of fire protection with the FT10e water mist turbine

The Italian company EmiControls has been working on innovative fire protection solutions worldwide since 2011. With the FT10e water mist turbine, EmiControls has launched a product that gives companies more safety in the fight against fires. This is a brief Case Study of an FT10e installation at the Recycling Centre Santini in Northern Italy Italy.

EmiControls develops stationary and mobile firefighting turbines. The innovation lies in the fact that EmiControls combines the high efficiency of water mist with an advanced turbine technology.

When extinguishing fires, water mist achieves a higher cooling effect than a traditional water jet. At the same time less amount of water is required and therefore damages due to the extinguishing process can be limited. Up to now, the use of water mist for firefighters has been limited because water mist could not be thrown to a long distance. EmiControls has solved this problem by using a turbine.

Fire protection concept for Recycling Centers

Recycling companies generally have a high fire risk. Especially due to incorrectly recycled materials (e.g. batteries), the shredding process often generates sparks that can start a fire. It is usually impossible for recycling companies to detect and remove these items in time.

In order to be prepared for such moments, the recycling company Santini in Bolzano (Italy) decided to implement an innovative fire protection concept. The FT10e firefighting turbine was positioned on a platform in the middle of the large hall to protect the critical points. This has two main advantages: firstly, thanks to its elevated position, the turbine can reach the source of the fire more easily and secondly, the turbine does not take up any storage space and does not disturb the work processes.

Due to the 360° rotation, the fire-fighting turbine can cover the entire area of the hall.



◀ The turbine is positioned on a platform in the middle of the hall. It can cover the entire surface because of its 360° swing.

▼ As soon as the fire alarm system is triggered, the FT10e fire-fighting turbine automatically swings to the appropriate area and starts the extinguishing work.

How the turbine works

As soon as the fire alarm system is triggered, the turbine automatically swings to the appropriate area and starts the extinguishing work. The fire-fighting turbine produces very fine and small water droplets, which are distributed by means of a propeller. Since very small water droplets form a large water surface area, heat can be extracted from the fire more easily. The fine mist also has a lower sedimentation rate and can envelop fire objects well.

If necessary, the turbine can also be controlled manually and supports the work of the fire department. The aim is to keep the fire in check until the fire brigade arrives. In the event of an emergency the available water supply is sufficient for 30 minutes.

Since the turbine starts to extinguish the fire as soon as it is detected, the risk for the people involved in the extinguishing process is reduced. In addition, the water mist prevents most of the gases produced by the fire from escaping, so environmental damage can be prevented as good as possible.

A short interview with Mauro Santini (Owner of the Recycling Plant)

Mr. Santini, why did you decide on a new fire protection system?

We currently use "traditional" systems. However, it was important for us to set a



good example and to improve the protection of our company and the environment and to work with alternative extinguishing methods that use water more efficiently.

Why did you prefer the firefighting turbine over traditional solutions?

We decided on the solution with the turbine because the water mist technology brings many advantages for our company. Above all, we were convinced by the high cooling effect of the atomized water, as well as the significant reduction in the consumption of extinguishing water in the event of an emergency. In addition, the turbine can be perfectly adapted to the needs of our waste storage thanks to the integrated swing and tilting angles.

➔ For more information, go to www.emicontrols.com/ft10e