

Project Profile - Civil Engineering & Infrastructure



PROJECT

Rega Helicopter Base,
Locarno Airport, Switzerland

SUMMARY

Protection of 450m² Helipad

PRODUCTS

Cemprotec EF Primer
Cemprotec Levelling Coat
Cemprotec E-Floor
Fastfill

CLIENT

Swiss Air-Rescue Organisation, Rega

CONTRACTOR

Swissnanotech Sa &
Steri-X Service Sa

BACKGROUND ►

Rega is a Swiss Air-Rescue service which comes to the aid of people in distress, providing medical assistance by air. A privately run, not-for-profit organisation funded by almost 2.5 million patrons, Rega organised almost 14,000 rescue missions in 2012, primarily dealing with winter sport, road, occupational and Alpine accidents. Rega's objective is to be able to reach almost any location in Switzerland within 15 minutes' flying time. To achieve this aim, there are 12 Rega helicopter bases and one partner base throughout Switzerland.

One such base is at Locarno Airport in the canton of Ticino, occupying a highly challenging operational area. The majority of the rescue operations carried out by Rega's Ticino base involve ski accidents, as well as rescue hoist operations in the mountains and from lakes and rivers. The Ticino base was renovated between 2011-2013 and the works comprised construction of a new building and helipad for the take-off and landing of Rega's rescue helicopters. Due to the location of the helicopter base at the foot of the Swiss Alps, the climatic conditions are extremely aggressive, particularly in winter when the helicopters have to land with snow skids due to the snow and icy conditions.

THE SOLUTION ►

The helipad is 450m² in size and incorporates an automated heating system which melts snow and ice to ensure safe take-off and landing. The concrete was freshly cast and this was a demanding project due to the geographical area and the fact that the application was carried out in the depths of winter. The helipad needed to incorporate a 1cm per metre slope to facilitate the flow of stormwater and the application had to be completed within very tight tolerances to ensure the fall was perfectly even to eliminate any potential for ponding to occur. The concrete surface was prepared using ultra high pressure water blasting before **Cemprotec EF Primer** was applied to seal and stabilise the substrate. **Cemprotec Levelling Coat** was applied to level off the surface before sanding, pressure washing and a 2mm application of **Cemprotec E-Floor**. **Cemprotec E-Floor** is a self-smoothing, water-based cementitious system which cures to form a dense, hard-wearing, waterproof surface with exceptional resistance to abrasion, impact, chloride ions and aggressive chemicals such as aviation fuels. Crucial for this project, it is able to resist freeze/thaw attack and forms an exceptional bond to green concrete and wet substrates without risk of osmotic blistering. **Fastfill** repair mortar was also used to set the helipad lighting to a perfect level and provide a flat, even finish on the area between the guide for the sliding hangar door and rainwater gully.



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