

A&H ENG Information

Successful EASA approval flights for H135/H135-M fixed rope system

At the beginning of May, test flights for the new fixed rope system suitable for H135/H135M helicopters were carried out in Gampel/Valais.

The approval flights were conducted by the organization responsible for the rope's design (DO), under the vigilant eye of a Compliance Verification Engineer (CVE), using an EC135 T3 HB-ZEF helicopter owned by Air Zermatt.

The purpose of the flights was to test the most critical rope lengths (the shortest length possible of 5.7 m and the critical length of 10–15 m described in the FMS) while attaching the lightest weights possible (critical mass), thus ascertaining if the values reached during the flights (both with and without payload) were in compliance with the allowed limit values defined in the FMS.

The test flights comprised a range of rope lengths from 5.7 m/12.5 kg without payload to 15m/15 kg with 600 kg of payload and during the flights speeds of up to 60 kts were successfully reached, including a bank angle of 30° at 60 kts.

An exciting event was the release of the fixed rope with an attached weight of 600 kg, at a speed of 40 kts. After opening the first hook (primary cargo hook), the loaded rope was captured by the redundancy system (equipped with shock absorber) and then, shortly afterwards, the second hook was released (secondary cargo hook). Apart from a light falling of the helicopter nose, the release of the rope plus cargo was unproblematic. The shock load to be absorbed at the release of the fixed rope is around 2.5 g.



Fig. 1: Shortest rope length (5.7 m), without payload. Y-rope, shock absorber and weight element.



Fig. 2: 15.7 m at 65 kts, i.e. 10 m of rope extension.



Fig. 3: 600 kg of payload.



Please also check the links and documents under the menu item A&H ENG of our website.



www.linkedin.com

