
SWISSSEARCH AND RESCUE SERVICES ON SHARPEN !

An old Swiss man Mr. Zurbriggen stands leaning with his elbows on the roof of his old car. Besides the fact that he was the supervisor of the great 'Mattmark Stausee-damm', he is an expert by years of the snow and winterconditions. He stands studying by its binocular the snow in the small town of Saas Almagell in the south of Switzerland. ' It is a feeling what you build in the course of a lot of years ' he explains. He suspects avalanche danger and decides to make a report. Result can be that a red-white helicopter of Air Zermatt will investigate and eventually by means of explosives from out of the air cause a controlled avalanche to obtain the danger.

AIR ZERMATT

As above mentioned the work of the Swiss helicopter rescue services does not exist from rescue work only although this is their primary task. The turnovers of other services which are carried out help however to support the rescue funds. Actually all types of helicopters spread over complete Switzerland are ready willing and able 24 hours per day including crew for assistance at all kinds of rescue operations. The moment someone finds oneself in actual need, possibly beeing wounded somewhere on a gletscher or in the mountains he must be helped one way or another and picked up out of his unhappy position. First priority is just save the person, later reflected and concerning the costs of such an operation. An area where this plays pre-eminently Zermatt, has been surrounded by mountain tops of 4000 meters high, where the non-governmental organisation air Zermatt carries out rescues.

During the day over a doctor is stand-by and in the evening to be called at once, beeing able to be on the airbase within 5 or 10 minutes. A rescue flight is made as much as possible with a real doctor and a paramedic on board. The information by means of the report chamber plays a large and important role. It may concern a ' Search and Rescue ' flight, where there possible first a mount guide must be obtained. There a doctor can be dropped off to stabilise a victim on site. Sometimes it is necessary with a quadrant system doctor to transport the victim first to a suitable landing spot whereupon the actual clearance follows and the patient can be stabilised.

Controlling the helicopter demands extreme perfection of the pilot and is crew. One must be 100% sure and secure and must be able to have faith on his colleagues of the ground services. Not very seldom steep mountains are very close approached and the pilot has to have a very good awareness of the helicopters rotor-blades. Thereby the pilot must know exactly what he does, concerning wind conditions on the spot because it often is necessary to hooover. One mistake and the rotorblades hit the rocks, and the ' party is over ' ... !! Much experience, much feeling developed for their profession has built the pilots and they fly as it were on instinct. The sometimes extreme dangerous conditions make that the work is not suitable for just every pilot. Even now there are experienced pilots who cannot yet handle night-flying in the mountains and on the snow. Sometimes a situation requires that a pilot must trust the indications of the man who hangs dozens of meters lower under the helicopter, just talking and directing by mobile phone (walkie-talkie). A high degree of cooperation is required by the rescue-team.

Even under a hang-over rock party (maximum 5 meters) the helicopter-crew can rescue a victim . The descended rescuer can draw himself to the victim using a lightweight rod to the mount partition to be whereupon clicked. In the case of a overhanging rock party the pilot can look by means of an ingenious monitor system to that what 25 meters below him is happening, he can actually monitor his crew-men and the victim under the helicopter!

In association with Rega and SAC (Swiss Alpine club) the long line system was developed (to 200 mtr.!) where 'cliffhangers' are approached on a spot where the heli can't possibly come above, but nevertheless using the long line system it is possible after all.

While having the interview with Doctor Volker Lische, A suddenly incoming report on the base for transport of a child with a meningitis to the university hospital in Bern made that suddenly all kinds of activity arose, we didn't exist at that time no more. Dr. Lische took his so called 'victim-attack bag' and ran to the chopper which at the same time started his engines. The paramedic jumped on board, doors were closed but.... At starting the EC-135 a failure appeared, a small warninglight burned red, and the task was immediately returned to the call centre in Zurich-Kloten airbase, where they integrated immediately a helicopter from another area. In Wallis the tasks are presented at KWRO (Kantonal Walliser Rettungs Organisation) in Ciders on central number 1444. A special team (VIVA) decides what there is necessary to aid and if a helicopter must be integrated in the mission. This goes with the speed of lightning in association with REGA, an organisation which covers the complete country outside Wallis. It is important that regional rescue pilots fly in that very same region because they know the local circumstances and obstructions, so that the missions are carried out this way as safe as possible.

Dr. Volker Lischke who is actual a Professor in anaesthesia, told us that surgeons and doctors do this job on the helicopters on rotation for some weeks, but they must maintain their knowledge in the regula hospitals as well. Volker Lische himself comes from Germany, And is active during his holidays at Air Zermatt rescue, while his wife and kids are having wintersports fun, vacation and are skiing from the mountains.... Why not, he asks us?... Just minutes later the Ecureuil became scrambled, and once again the interview was demolished for a need case. By means of the intercom we heard that the victim did not react anymore, and within some minutes the Ecureuil and it's crew departed in clouds of fine snow, lashing your face like ice. In between the rescue operations the helicopter arrived for a refuel. This happened with twisting rotor whereas the groundcrew assembled very rapidly a luggage rack. It more or less looked like a formula-one pitstop. Every man knows his job and duty, and does this very fast because a victim already is waiting already somewhere out there in the snow and ice. Air Zermatt flies the Eurocopter EC-135, the Eurocopter AS 350-B3 (Ecureuil) and the old SA 315-B Alouette II, nickname: 'Lama'.

The old-fashioned striking 'Lama' with his open failing tail appeared for the rescue work a type very arranged and obtained ever - by its strong engine and rather light weight - it has a world altitude record ! It happens that the Lama first picks up someone of very large altitude to the quadrant to a lower area, from where the patient is stabilised and one of the other types of helicopters takes over the victim for further transports. The ceiling of the helicopter is stipulated by its own weight, engine capacity, cargo, thin air and temperature. This last plays a larger role in the summer. The lama scores on this best and is for that reason probable still in service. On one side of the cockpit a so-called blister is found (also to find on other types). One can look from the cockpit to the already outside hanging person to the quadrant under the helicopter without blowing away entirely. The super Puma which is in use in the Airforce is a bit too large for the specific rescue work. However at large calamities the matter is rurally coordinated and by that time if necessary the Puma can be used ofcourse.

As far as concerns the Eurocopters, beside special hoist - and quadrant systems, broad searchlights (spectral lights) clarity amplifiers for night operations (Night Vision Goggles) and also medical supplies and special equipments are on board. Present are for example

intubation - and breathing equipment, defibrillators, ECG equipment, infuse-systems and narcosis resources.

An external pacemaker can be moored, labour can be done to border and special emergency kids-bags are present. At outburst there are backup systems. Victims can be secured in patient-bag if they are too heavily wounded for the hoist system.

The cureuil exists in a version with hydraulic hoist mechanism, but it takes much of the capacity of the engine though two people can be pulled in. The configuration with the electronic hoist system is suitable for only one person, but it can operate on much higher altitudes. Of each medical flight a report is written by both the doctor and the pilot. It is possible to rent your own helicopter if you want examine gladly once snow and the mountains from above. Costs a couple penny but then you have some nice results as well.... Other activities are ski-flights where you are brought to high altitudes in the mountains, or perhaps photograph flights, taxi flights, cable-construction but also for example fire suppression, and presence or absence of heavy transports of material to nasty places in the mountains. All turnovers of these commercial flights come into a central fund and cover one-third up to a half of the total exploitation costs. For 60 Francs per year the Swiss can obtain a special card with which one supports the organisation, and where the costs of possible rescue are covered. Without this card a rescue can run quite in big amounts of cost for the Swiss victim. Approximately 1500 missions per year are flown. Air Zermatt operates from a second base at Raron in the Rhone-valley near Sion, and engages if necessary in the busy summer months extra helicopters. In French-speaking part of Wallis the sister organisation ' Air Glacier' operates the Alouette III, well-known and everywhere still in appreciated use.

REGA

Near the city of Interlaken we visited the helicopter base BOHAG/REGA in Gsteigwiler. BOHAG stands for Berner Oberlander Helicopter AG and have now incorporated in REGA.

REGA are abbreviations of Schweizerische Rettungsflugwacht and Garde Aerieenne Suisse the Sauvetage and responsible for rescues in complete Switzerland outside Wallis. With 10 bases they have been spread all over the country and their Headquarters in Zürich on the airport of Kloten. REGA are not commercial and carry out purely rescue work. Approximately 65% of the costs are covered by the Swiss population, this way they have 1.7 million registered members. They have this member-card and a possible rescue has been covered with that, if not then you pay helicopter minutes, this means as long as the heli in air is you must pay, this is, however, with everything and including doctor. The remaining 35% comes in by means of the insurance companies. Rega has none commercial purposes.

By means of the emergency number 1414 reports come in in the central call-center in Zürich. In a serene rest the employees of this call centre work on the reports, the calls, helped by an ingenious lightsystem and large partition cards where the stage of the helicopters in action or score by right can be read. As soon as the report has been given away to a rescue company everyone in the team can see the statge and this way can dozens of reports simultaneously be settled. The helicopter companies communicate by means of 2 so called H-channels (helicopter) and the rescue organisations and hospitals mutually by means of 2 S-channels (Spittal). Kommunikation, the K-channel covers all communication of all organisations in the calamity area, (Regional) an R-channel stands for the arrangement of the ground teams rescue services and mountain rescue teams. Finally (Emergency) the E-channel exists for anyone who is not able to het in touch with 1414 alarm number.

There is contact with all helicopters which can be followed and traced by means of the GPS (Global Positioning System) constantly. REGA flies the Agusta A-109-K2, the Eurocopter AS350-B3 Ecureuil and as their 'parade-horse' the Eurocopter EC-145. This last mentioned one is as long as the A-109-K2, but by modern design techniques a considerable more wide cabin was developed, a more or less type 'spacewagon' implementation. Both the EC-145 and A-109 are twin-engined and are able to transport two persons next to the pilot, paramedic and doctor. The machines are rapidly, manoeuvrable, noise-reduced, very economic in use and they obtain a speed of around 250 km/hour. Naturally all systems are present on board to check primary body functions, the helicopters are similar equipped with those of air Zermatt. At REGA Zürich three Challenger 3 Canadair CL-604 ambulance planes stand on 24-hours alert. The Challenger have to 2 Intensive-care-units and a system to more or less horizontally charge a bed into the plane. The action-radius of these Challengers is about 7000 km, which means that patients can be transported or repatriated over very large distances, ofcourse after first having been stabilised. The planes have a capacity each of four victims and their speculators, they have been equipped with a complete 'medical kitchen' and equipped with 12 and 28 and even 220 volts flow supplies to be able to connect any external equipment at any thinkable place. The Challengers are also available for the Red Cross Organisation and United nations -missions and the personell is working according to the criteria of the international red cross standards.

HELISWISS / KAMOV

Certainly not unimportant are the private helicopter companies which can be called within the communication structure at aid if necessary. A very special company is Heliswiss in Belp near to the city of Bern. They have the sole in Western-Europa flying Kamov Ka-32 Helix in property, a machine which you find normally only at the Russian Navy. This by the Swiss modified Kamov (the cockpit could not be photographed, because they won't give up their modifications) can be used for the complete heavy work such as woods-firefighting. 5000 litres of water can be taken at once along in a sort of half balloon and are even lifted (depending on of the outside temperature) to 1500 meters altitude! The Kamov is a complete strong stable helicopter with double head rotors which turn contra to eachother which makes a tail-rotor superfluous. A conventional helicopter with hard wind must fly towards against wind, here the Kamov has no problems what so ever, and can as a result of this drop or pick up any cargo with an extreme exactness. The Kamov which are modified at avionics level for Western criteria are a reliable helicopter. The Eurocopters sometimes have problems with rubbers at serious heat or extreme cold, the Kamov have much bare metal in the rotor system and many nipples for oil grease. 'This thing always functions' thus the maintenance fitter of Heli-Swiss tells us proudly. Moreover legio private companies can be called at large calamities and in that case the organisations are automatically and direct coordinated by the government, in association with the army services. If you think of wintersport plans or a walking vacation in Switzerland coming summer? The Swiss rescue helicopters and their crews stand on alert 24 hours per day. Whatever happens!

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