Regulations versus operations

IKAR 2008 Chamonix

Christophe Berclaz - Pat. Fauchère

EASA 02.04.08

- EASA are considering appropriateness of creating a new standard (ETSO (European Rechnical Standard Orders) or maybe adopting other industry standard) to address design of human harness for rescue hoists and similar equipment (PCDS). In order to approach the topic in a structured manner, we would like to hear from industry what their service experience with the current harness is (in which way they obtain local NAA authorisations, i.e. in front of which kind of submissions, who the manufacturers are, what the usage/servicing instructions are, what sort of incidents/accidents they have suffered and any additional information that might be considered useful by the operators to be provided to EASA).

EHA to EASA

- Dear Ing. Mazzoletti,

  We are in receipt of a document created by Mr. Patrick Fauchère (Air-Glaciers SA/SHA Swiss Helicopter Association) concerning the subject matter and we are pleased to hand it over to you. I am sure that this paper, which summarize the various EU directives, EN standards, FOCA Guidance material and the unique experience of the Swiss colleagues, could bring significant contribution to the EASA initiative.

  Buon lavoro and best regards
  Ing. Vittorio Morassi
  EHA Chairman

Answer from EASA

- Pat,

I just wanted to thank you very much for the rigorous investigation you made on this topic. We will start internal discussions to EASA from there.

Best Regards,

Massimo Mazzolletti, EASA

Class D - HCS

- FOCA
- JAR / FAR / NAA Helicopter (Cert./Ops. /Lic./Tech)
- Winch/Mirror/Hooks/ other Pilots Training/Licensing

- Suva
- EC-Directives/EN-Standards UVG
- Personal (Pilots, Assistants, other) Insurance, Occupational Safety and Health
- STEG (technical)
- Load-lifting devices, Attaching means (JAR-OPS 4, CP HELO = Additional equipment) PSA/PPE, other
- Technical safety of Equipment and Facilities

Good old days

Full Harness

- Some operators request the use of a full body harness.

Seat Harness

- Some other operators allow the usage of seat harness.
- In our case (OCVS-KWRO) our guides use seat harnesses to have a better mobility in rescue.
- BUT :

Harness

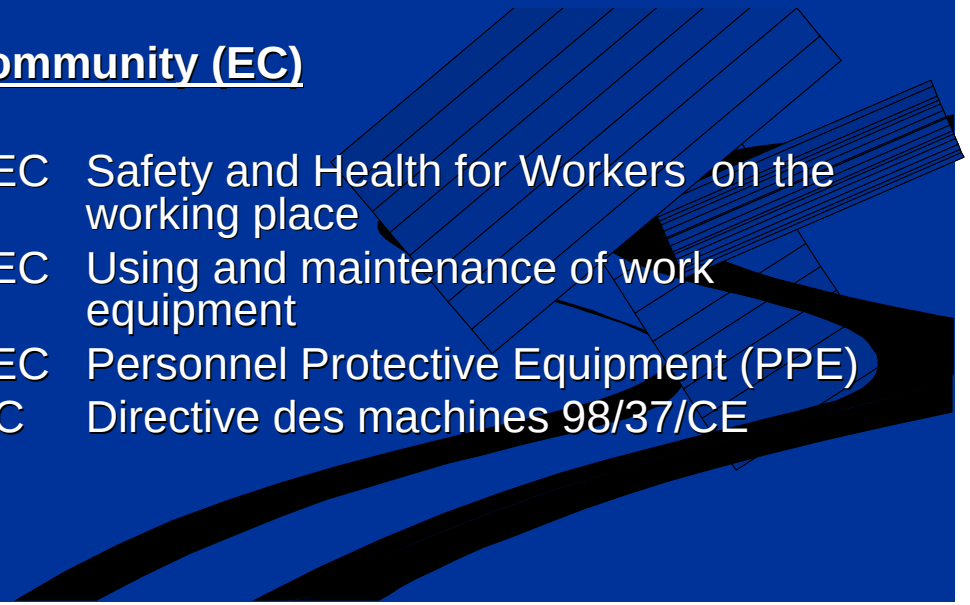
- Air-Glaciers SOP's : bag has to be carried between the legs

EN Standards

- Following the different Directives and EN Standards and Guidance Materials (GM) and documents already existing see list below and annexes on the complete file:

- **<u>European Community (EC)</u>**

- EC 89/391/EEC Safety and Health for Workers on the working place
- EC 89/655/EEC Using and maintenance of work equipment
- EC 89/686/EEC Personnel Protective Equipment (PPE)
- EC 98/37/EEC Directive des machines 98/37/CE

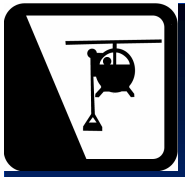


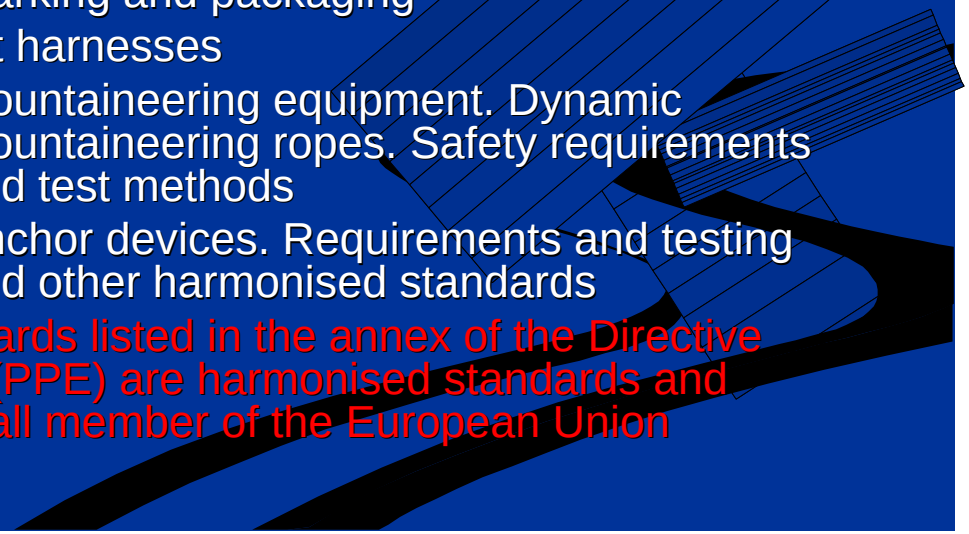
EN Standards

- **EN-Standards**
- Personal Protective Equipment against Falls from a Height and Mountaineering Equipment
- EN 353-1 Guided type fall arresters including a rigid anchor line
- EN 353-2 Guided type fall arresters including a flexible anchor line
- EN 354 Lanyards
- EN 355 Energy absorbers
- EN 358 Belts for work positionning and restraint and work positionning lanyards
- EN 361 Full body harnesses
- EN 362 Connectors

EN Standards

- **EN-Standards**
- EN 363 Fall arrest systems
- EN 365 General requirements for instructions for use, maintenance, periodic examination, repair, marking and packaging
- EN 813 Sit harnesses
- EN 892 Mountaineering equipment. Dynamic mountaineering ropes. Safety requirements and test methods
- EN 795 Anchor devices. Requirements and testing and other harmonised standards
- All EN-Standards listed in the annex of the Directive 89/686/EEC (PPE) are harmonised standards and accepted by all member of the European Union





FOCA Standards

- **Guidance Material (GM) by Foca**
- Helicopter operations are subject to the Technical Notice of the FOCA to get the full approval for Air Rescue and Aerial work operations.
- TN 50.605-20 § 4.1.b (in conformity with EC Dir. 89/686/EEC and EC Dir. 98/37EEC) and 4.2 (factors and calculation)
- All operators in Switzerland (as in Austria, Italy, France, Germany etc.) use certified PPE for alpine rescue / air rescue, as well as in all working environments situated next to, inside and under helicopters.
- The FOCA GM has been updated on 23.04.07.

FOCA Standards

- The FOCA TN 50-605-20 is formulated in a manner that PPE (personal protective equipment against falls) will be approved by FOCA at any time and without any additional certification, provided that such equipment is manufactured in conformity with EC Directive 89/686/EEC and that it fulfils the requirements of art. 4.1.b and 4.2. contained in the above mentioned technical notice.
- The FOCA GM has been renewed and adapted on the 23.04.07, in the way that all PPE (Personal Protective Equipement Against Falls) which have been manufactured following the EC Directive 89/686/EEC will be approved by FOCA when they respect Art.4,1b and 4.2.

Harness

Harness

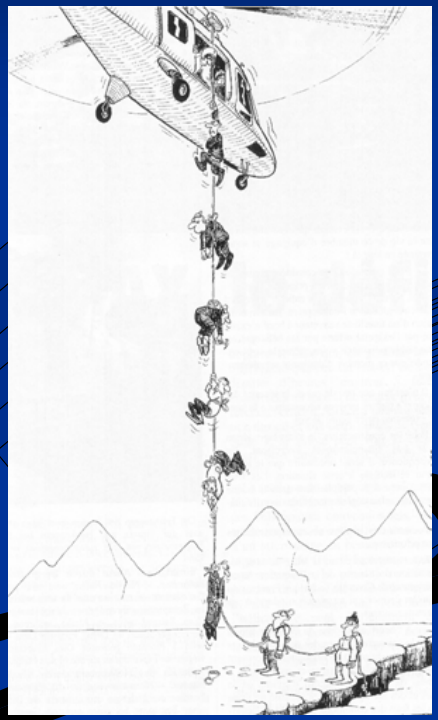
Harness

Do you think these rescuer would risk their life with unadapted material ?

ACJ to Appendix 1 to JAR-OPS 3.005(D)

- At night, when the crew is composed of one pilot and one HEMS crew member, the latter should be seated in the front seat (copilot seat) during the flight, so as to be able to accomplish the tasks that the commander may delegate, as necessary.

- That mean that AS 350, 355 series, SA 315, B407, 206, would not fulfill the above requirement.



Multi or single engine

- JAR-OPS 3 will only permit to fly HEMS on multi-engine helicopters.
- Since 1965, Air-Zermatt and Air-Glaciers did more than 75’000 rescue missions with only 5 announced accident to the AIB with only one fatality.

Multi or single engine

- Matterhorn at night, rescue of 2 climbers:
- on the Italian side they need a twin engine, a crew of 2 Pilots IFR rated and weather on site must be good.

- In Switzerland we fly Single engine, single pilot and we are allowed to try to rescue these climbers.

Multi or single engine

- Did we asked the rescuers to decide which type of helicopters would be best suited……Downwash produced, visibility, size, etc…

Defining standard for others

Why don’t we impose to the office workers to wear a helmet, protection goggles and seat belts on their chairs ?

Multi or single engine

- SAR and HEMS :since 1968 in Switzerland, 25 accidents were reported to the AIB and 8 occured on multi-engine helicopters.

- Out of the 25, only 6 are related to maintenance / technical.
- One flame out on a single engine helicopter due to human factors.

Multi or single engine

- Insurances that are always more reluctant to pay, fuel price, insurance price, training and recurrent, basic price of the machine etc…

- The final bill is huge compairing with the single engine generation helicopters and do you think we are better or even safer ?

Conclusion

- To go or not to go is a risk management followed by a crew decision taken with the help of pre-established SOP'S
- How we operate, what kind of harness we use, what kind of machine we like, **must remain a crew decision** and not left to bureaucracy.
- WE ARE TRAINED TO DEAL WITH THIS AS WE ARE PROFESSIONAL !

Guide = UIAGM / Doctor = University Diploma /
Hems Crew - Pilot = EASA - JAR-FAA - NAA requirements