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Position

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Helicopter Emergency Flotation Systems

BACKGROUND

Emergency Flotation Systems (EFS) are designed to keep the helicopter upright for enough time to allow egress from the helicopter after a ditching. While there would be virtually no design possible that could mitigate against all roll over events, a properly executed landing onto a favourable sea state should give passengers and crew sufficient time to retrieve vital survival equipment and safely egress the helicopter into the life rafts. These flotation systems have physical limitations in that they are only rated to perform given certain aircraft weights, sea states, and other factors.

The reasons for these limitations are mostly self-evident but relate to the ability of the EFS to provide its rated performance in the event of a ditching. Many pilots seem to be unaware of the design and specific limitations of the EFS installed on their aircraft and many operations manuals, SOPs, and checklists do not reference examining sea state during the planning phases of a flight.

The UK CAA conducted an Offshore Helicopter Safety Review in which they noted:
"***Following the standard aviation system safety analysis methodology, in view of the historic ditching rate (3.4 per million flight hours) and the likely consequences of post-ditching capsize ('hazardous'), in order to minimise the probability of post ditching capsize, operations should be prohibited when the sea conditions at the offshore location that the helicopter is operating to/from exceed its certificated ditching performance.***"

POSITION

While it is operationally unlikely that helicopters will be totally removed from operating over hostile sea states in excess of the EFS' limitations, there must be better visibility of this risk and sensible mitigations made to ensure that crew and passengers have the best chances of egress and survival from a ditching event.