



Airline Wet Drill



Case Studies of Ditching Incidents



Welcome all to the class

Topics

- Detailed analysis of notable ditching incidents.
- Lessons learned and improvements in procedures.
- Impact on aviation regulations and safety protocols.

Welcome all to the class





Detailed Analysis of Notable Ditching Incidents

Ditching refers to an emergency landing of an aircraft on water. Analyzing notable ditching incidents helps improve safety protocols and emergency procedures.



Detailed Analysis of Notable Ditching Incidents

1. US Airways Flight 1549 (2009)
 - o Incident: On January 15, 2009, US Airways Flight 1549 struck a flock of birds shortly after takeoff from LaGuardia Airport. The bird strike caused both engines to fail. Captain Chesley “Sully” Sullenberger performed an emergency ditching on the Hudson River.
 - o Outcome: All 155 people aboard survived. The successful ditching was attributed to the crew's calm execution of emergency procedures and the quick response of nearby boats.
 - o Analysis: This incident highlighted the importance of crew training in emergency procedures and effective communication with rescue teams. It also demonstrated the critical role of quick and efficient rescue operations.



Detailed Analysis of Notable Ditching Incidents

2. Pan Am Flight 6 (1956)

- o Incident: On October 15, 1956, Pan Am Flight 6, a transpacific flight, experienced an engine failure and fuel exhaustion. The crew attempted to ditch the aircraft in the ocean near the coast of California. The ditching was partially successful, but the aircraft broke apart upon impact.

- o Outcome: Only a few passengers survived due to the challenging sea conditions and the failure of emergency equipment.

- o Analysis: This incident underscored the need for better life-saving equipment and improved ditching techniques. It also led to increased focus on survival training for both passengers and crew.



Lessons Learned and Improvements in Procedures

1. Enhanced Crew Training:
 - o Lesson: Effective training in emergency procedures is crucial.
 - o Improvement: Airlines now require more comprehensive training for crew members in ditching and survival techniques. This includes simulator training and regular drills.



Lessons Learned and Improvements in Procedures

2. Improved Emergency Equipment:
 - o Lesson: The availability and functionality of emergency equipment are vital.
 - o Improvement: Enhanced life vests, more accessible life rafts, and better emergency locator transmitters (ELTs) have been developed. Equipment design has been improved for easier deployment and use.



Lessons Learned and Improvements in Procedures

3. Better Coordination with Rescue Services:
 - o Lesson: Effective communication with rescue services can save lives.
 - o Improvement: Protocols for better coordination between airlines, SAR teams, and local authorities have been established, including real-time data sharing and integrated rescue operations.



Lessons Learned and Improvements in Procedures

4. Passenger Briefing Enhancements:
 - o Lesson: Clear and concise passenger briefings are crucial.
 - o Improvement: Airlines have improved safety briefings, making them more engaging and easier to understand. Visual aids and demonstration videos are commonly used.



Break for 10 minutes



Impact on Aviation Regulations and Safety Protocols

1. Regulatory Changes:

- o Impact: New regulations are often introduced to address the shortcomings identified in previous incidents.
- o Example: After the US Airways Flight 1549 ditching, regulations were updated to mandate more frequent emergency drills for flight crews and improvements in life raft design.



Impact on Aviation Regulations and Safety Protocols

2. Advancements in Technology:
 - o Impact: Technological advancements enhance safety and rescue operations.
 - o Example: The development of advanced ELTs and improved life rafts with better flotation and visibility features.



Impact on Aviation Regulations and Safety Protocols

3. Revised Safety Protocols:
 - o Impact: Safety protocols are revised to include new best practices and procedures.
 - o Example: Enhanced protocols for life vest and life raft usage, improved ditching procedures, and updated passenger briefing requirements.



Impact on Aviation Regulations and Safety Protocols

4. Increased Focus on Human Factors:
 - o Impact: Recognizing the role of human factors in safety has led to more emphasis on training and mental preparedness.
 - o Example: Improved Crew Resource Management (CRM) training that includes psychological aspects of emergency handling.



Impact on Aviation Regulations and Safety Protocols

Discussion



Q & A