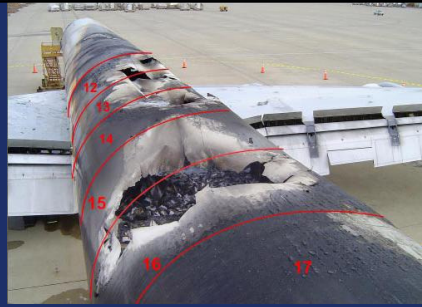


Freighter Fire Suppression Cost Benefit Analysis & Risk Model



IASFPWG May 2011 - Freighter Fire Suppression Cost Benefit Analysis & Risk Model



OVERVIEW

Following in-flight fire occurrences on US registered freighter airplanes, where it is suspected that lithium batteries have had an involvement, the Federal Aviation Administration (FAA) & Transport Canada have commissioned the development of Cost Benefit and Risk Models to evaluate potential mitigation strategies.

Models have been developed for both the US and Canadian fleets.

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FAA MODEL OVERVIEW

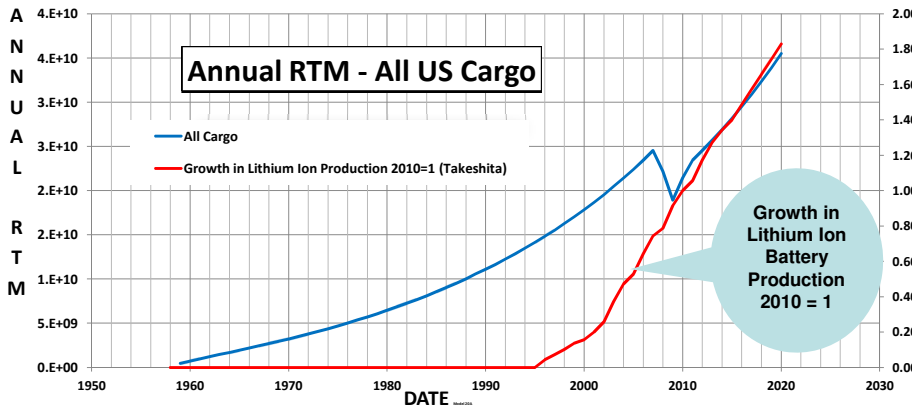
- The Monte Carlo Simulation model has been developed in Microsoft Excel
- The model considers each freighter airplane type individually and in combination
- The model assesses Cost Benefit Ratio and the likely reduction in the number of future accidents for any selected combination of 7 proposed mitigation strategies.

PROPOSED MITIGATION STRATEGIES

Mitigation	
All	None
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>

USER VARIABLES

- Many of the variables in the Model may be changed by the User including the following:
 - Aircraft Types selected for mitigation
 - Mitigation to be applied
 - Costs (Fuel, Labour Rates, Mitigation, etc)
 - Mitigation Effectiveness, Weights, Introduction date, etc.
 - Proportion of freight that is palletized versus containerized
- Default Values



If there was no increase in the threat of freighter fires due to batteries

PERIOD	CUMULATIVE RTM	NUMBER OF FIRE ACCIDENTS
1967 - 2010	624 x 10 ⁹	5
2011 - 2020	365 x 10 ⁹	3

MODEL AND REPORT

Both the Model
and the Report
may be
downloaded from
the FAA website.



**Risk Model and Report (DOT/FAA/AR-12/3)
published by FAA March 2012**

<http://www.fire.tc.faa.gov/reports>