

Fireless, Burning Smell Driven, Mayday Landings of Commercial Aircraft as a Mechanisms of Motion in MIRCE Mechanics

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According to Knezevic the purpose for the existence of any functionable system¹ is to do functionability work. The work is done when the expected measurable function is performed through time. [1] However, experience teaches us that expected work is frequently beset by the occurrences of undesirable interruptions like component failures, natural phenomena or human actions, some of which result in hazardous consequences. MIRCE Mechanics is a body of knowledge that focuses on the scientific understanding and description of the mechanisms that generate undesirable in-service interruptions. Thus, the main objective of this paper is to examine the mechanism that generated undesirable in-service interruption to 32 flights, on 16th October 2017, within UK airspace. After fireless burning smoke/fumes were felt in their cockpits the flight crew went to oxygen and declared either a PAN-PAN or a MAYDAY landing. The first event took place around 0622 during departure from Liverpool causing the aircraft to declare mayday landing and return back to land. It was followed by clusters of affected aircraft in the Channel Islands, Liverpool, Manchester and London, later in the day. Although this is one of an extremely rear observed event, its mechanism had to be understood, as if repeated, it will generate the motion of an aircraft through MIRCE Functionability Field and impact its functionability work done and resources consumed. Inspections of aircraft involved and the analysis of the meteorological conditions in Europe have revealed that the burning smell did not result from a failure of any component, but it was as a result of smoke and dust carried in the atmosphere from North Africa and Iberia. Satellite imagery from the European Organisation for the Exploitation of Meteorological Satellites² (EUMETSAT) verified this theory. Potential actions for reducing the impact of this functionability mechanism are presented.

1.0 Introduction

2. MIRCE Science Fundamentals

3. Monday 16 October 2017

3.1 Dublin Airport, Ireland

3.2 Manchester Airport, England

3.2.1 EasyJet

3.2.1.1 Alicante – Manchester Flight

3.2.1.2 Manchester – Hamburg Flight

¹ According to Knezevic [1], functionable system type is “a set of mutually related entities put together to do a functionability work in accordance to physical laws and given functionability rules.”

² EUMETSAT in an intergovernmental organisation created through an international convention agreed by a current total of 30 European Member States,

3.2.2 Flybe

3.2.3 Jet2

3.3. Liverpool Airport, England

3.4 Guernsey Airport

3.5 Jersey Airport

3.6 Hawarden Airport, Chester, England

3.7 At the End of the Day

4.0 The Source of Fireless Burning Smell

4.1 UK Met office Report on 17th October 2017

4.2 EUMETSAT Confirmation

5.0 What Could Be Done?

5.1 Pilots Demand New Cabin Air Filters on Commercial Aircraft

5.2. Inclusion of Information to flight crews on the presence of smoke in the atmosphere from ground fires in SIGNET³

5.2.1 SIGMET

5.2.2 The Recommendation to ICAO

6. Conclusions

7. References

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[4] Air Accident Investigation Unit Ireland, SYNOPTIC REPORT SERIOUS INCIDENT Embraer SA, ERJ 190-200 LR, G-FBEM, Dublin Airport, 16 October 2017

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³ **Significant Meteorological Information** is a weather advisory that contains meteorological information concerning the safety of all aircraft.

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