The Trouble with the Dreamliner

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# Summary

The case highlighted is of Boeing 787-Dreamliner that had an issue with the use of batteries onboard the aircraft. This led to troubles in the electrical system of the airplane thereby causing a fire in some cases. This ultimately led to the grounding of the aircraft till proper measures were installed in place and an investigation was done.

**Problem**

The 787-Dreamliner had some major incidents relating to the electrical system that involved the lithium-ion battery installed. It started in January 2013 with the beginning of a fire in the Japan Airline’s 787. Gradually the number of incidents rose and all had a similar culprit and location. One of the airlines had to make an early landing as a result of an emergency due to the reason that the computer systems started giving a warning about a fire in the electrical compartment of the airplane (Song et al., 2014). The issue was brought to light and the National Transportation Safety Board (NTSB) took notice of the incidents and began investigating the issue.

## Safety Measures By Boeing

Boeing proceeded to ground the fleet of 787-Dreamliners in collaboration with the airlines that had purchased the faulted aircraft. The NTSB issued a report stating that the major cause of the issue was a short circuit that actually took place within the battery. The battery was designed to produce more power than its regular counterparts but it could not handle the immense strain that it was put under during flight. The workers at Boeing did a modification on the aircraft by making sure that the battery system is upgraded. The upgraded battery system would ensure that the fire, in case it occurs, would be contained within the battery compartment and not spread through other areas of the aircraft. Though the situation was a lot more critical, the safety measures that Boeing into place were not radical enough

**Recommendations**

After the proper investigation was carried out, a couple of things came to light. One of them was that Boeing had outsourced some of the functions to a Thales. It is a company from France. The French then proceeded to further outsource some of their functions as the design and development of battery to a Japanese company called GS Yuasa. The main reason Boeing chose to install the Lithium-ion battery was that they wanted more power density. This was due to the fact that the Boeing 787 was designed to be more dependent on electrical systems (Williard et al., 2013). Although the battery was powerful enough to produce 10 times the regular power, still it was not put to the test. A simple test of hammering a nail in the battery to see for short circuits was conducted.

Taking all things into consideration, If I was in charge of all the development and design of the 787 Dreamliner, I would have done certain things differently. Since my company is one of the leading in the industry, I would have relied on my own expertise rather than the outsourcing of a small component. No doubt that the manufacturers do tend to outsource because of the massive scale of production, but still small things could have been done in house. Secondly, if I had chosen to outsource, I would have gone deeper into the matter at hand and would have done the proper research. Since my company’s name is at stake, I would have done rigorous testing on the battery since it was not developed under my umbrella. Any parts that I outsource not just the battery would be tested rigorously to keep my company’s name safe. It would ensure that the final product is produced flawlessly and there is little room for error.

**References**

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