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FedEx Fire Suppression System

Category: Systems Fire Safety – Fire Detection and Suppression

In 1996 Federal Express had an in flight fire and while the crew managed to land the aircraft and escape unhurt, the entire contents of the aircraft as well as the aircraft hull was lost to the fire. This was not the first or last documented incident of a cargo fire on board an aircraft but it was the one that started FedEx researching fire suppression for Class E cargo compartments. FedEx's research has spanned more than 10 years and has covered research in areas such as suppressing agents, delivery systems, fabrics and material coatings. As with any aircraft related project weight, cost, reliability and effectiveness played pivotal roles in selecting and advancing the items to research and develop. The past decade of work has cumulated into a comprehensive Fire Suppression System (FSS) that can protect an aircraft for more than four hours. The FSS is comprised of two types of suppression. The first is the active component and the second is the passive component. The active component is installed in the aircraft. It determines in which cargo position the fire is located, penetrates the container in that position and injects a fire suppressing agent. The passive component is for freight not shipped in a container. A pallet bag is installed over a palletized freight prior to being loaded onboard an aircraft.