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3.4.1 Drop Tanks and Conformal Tanks 3.4.2 Closed Vent Systems; 3.5 Maintenance Considerations; 3.5.1 Access; 3.5.2 Contamination; 4 Fuel System Functions of Commercial Aircraft; 4.1 Refueling and Defueling; 4.1.1 Pressure Refueling; 4.1.2 Defueling; 4.2 Engine and APU Feed; 4.2.1 Feed Tank and Engine Location Effects; 4.2.2 Feed Pumping Systems; 4.2.3 Feed Tank Scavenging; 4.2.4 Negative g Considerations; 4.2.5 Crossfeed; 4.2.6 Integrated Feed System Solution; 4.2.7 Feed System Design Practices; 4.3 Fuel Transfer; 4.3.1 Fuel Burn Scheduling; 4.3.2 Wing Load Alleviation 4.3.3 Fuel Transfer System Design Requirements 4.4 Fuel Jettison; 4.4.1 Jettison System Example; 4.5 Fuel Quantity Gauging; 4.5.1 Architectural Considerations; 4.5.2 Fuel Load Planning; 4.5.3 Leak Detection; 4.6 Fuel Management and Control; 4.6.1 Refuel Distribution; 4.6.2 In-flight Fuel Management; 4.6.3 Fuel Management System Architecture Considerations; 4.6.4 Flight Deck Displays, Warnings and Advisories; 4.7 Ancillary Systems; 5 Fuel System Functions of Military Aircraft and Helicopters; 5.1 Refueling and Defueling; 5.1.1 Pressure Refueling; 5.1.2 Defueling; 5.2 Engine and APU Feed 5.3 Fuel Transfer 5.4 Aerial Refueling; 5.4.1 Design and Operational Issues Associated with Aerial Refueling; 5.4.2 Flying Boom System; 5.4.3 Probe and Drogue Systems; 5.5 Fuel Measurement and Management Systems in Military Applications; 5.5.1 KC-135 Aerial Refueling Tanker Fuel Measurement and Management System; 5.6 Helicopter Fuel Systems; 6 Fluid Mechanical Equipment; 6.1 Ground Refueling and Defueling Equipment; 6.1.1 Refueling and Defueling Adaptors; 6.1.2 Refuel Shut-off Valves; 6.1.3 Fuel Transfer Valves; 6.2 Fuel Tank Venting and Pressurization Equipment; 6.3 Aerial Refueling Equipment 6.3.1 The Flying Boom System Equipment

Sommario/riassunto

All aspects of fuel products and systems including fuel handling, quantity gauging and management functions for both commercial (civil) and military applications. The fuel systems on board modern aircraft are multi-functional, fully integrated complex networks. They are designed to provide a proper and reliable management of fuel resources throughout all phases of operation, notwithstanding changes in altitude or speed, as well as to monitor system functionality and advise the flight crew of any operational anomalies that may develop. Collates together a wealth of information on
