

Summary of IS 5797:2022– Rubber Hoses and Hose Assemblies for Aircraft Ground Fuelling and Defuelling - Specification

Indian Standard IS 5797:2022 defines the specifications for rubber hoses and hose assemblies used in aircraft ground fuelling and defuelling operations. These hoses are critical in safely transferring fuel to and from aircraft on the ground. The standard sets out the design, performance, and safety requirements to ensure that the hoses perform reliably under the demanding conditions of aviation fueling operations.

The primary focus of IS 5797:2022 is to ensure that the rubber hoses and their components are robust, durable, and safe for use in various environmental conditions, such as extreme temperatures, exposure to fuels, and physical wear during handling. The hoses must be resistant to cracking, swelling, or degradation when exposed to aviation fuels, ensuring that they do not contaminate the fuel or cause leaks during use. The hoses are also required to be flexible and lightweight, allowing for easy handling during fueling operations while still being strong enough to withstand the pressure and flow of fuel.

The standard details various tests to ensure the hoses meet these stringent requirements. These include tests for pressure resistance, ensuring the hose can handle the high pressures involved in fueling and defueling without failure. There are also tests for elongation and flexibility, which assess how the hose behaves under stretching or bending, making sure it remains easy to use even in challenging conditions. Environmental aging tests are conducted to check how the hose materials stand up to exposure to fuel, extreme temperatures, and ultraviolet (UV) light over time, ensuring that the hose will maintain its integrity during long-term use.

Other important tests include those for electrical conductivity, which is essential to prevent the buildup of static electricity during fueling operations, and abrasion resistance, which ensures the hose can endure wear from being dragged or moved around on the ground without sustaining damage. The standard also specifies safety checks for coupling integrity to make sure the hose connections are secure and will not leak during operation.

Overall, IS 5797:2022 ensures that rubber hoses and hose assemblies used in aircraft ground fueling are safe, durable, and reliable, meeting the rigorous safety and performance standards necessary for aviation fueling operations.

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