

Subject : Material and Hardware Part A

Theory

Topics	Level
<p>6.1 Aircraft Materials — Ferrous</p> <p>(A)Characteristics, properties and identification of common alloy steels used in aircraft; Heat treatment and application of alloy steels;</p> <p>(B)Testing of ferrous materials for hardness, tensile strength, fatigue strength and impact resistance</p>	2
<p>6.2 Aircraft Materials — Non-Ferrous</p> <p>(A)Characteristics, properties and identification of common non-ferrous materials used in aircraft; Heat treatment and application of non-ferrous materials;</p> <p>(B)Testing of non-ferrous material for hardness, tensile strength, fatigue strength and impact resistance.</p>	2
<p>6.3.1 Aircraft Materials - Composite and Non-Metallic other than wood and fabric.</p> <p>(A)Characteristics, properties and identification of common composite and nonmetallic materials, other than wood, used in aircraft; Sealant and bonding agents</p> <p>(B) The detection of defects/deterioration in composite and non-metallic material. Repair of composite and non-metallic material</p>	2
<p>6.3.2 Wooden structures</p> <p>Construction methods of wooden airframe structures; Characteristics, properties and types of wood and glue used in aeroplanes; Preservation and maintenance of wooden structure; Types of defects in wood material and wooden structures; The detection of defects in wooden structure; Repair of wooden structure.</p>	2
<p>6.3.3 Fabric covering</p> <p>Characteristics, properties and types of fabrics used in aeroplanes; Inspections methods for fabric; Types of defects in fabric; Repair of fabric covering.</p>	2
<p>6.4 Corrosion</p> <p>(A)Chemical fundamentals; Formation by, galvanic action process, microbiological, stress;</p> <p>(B)Types of corrosion and their identification; Causes of corrosion; Material types, susceptibility to corrosion.</p>	1