

SYL M06 B1.3 rev. 1.0

Lesson
Subject
<p>6.1 A Aircraft Materials - Ferrous A Characteristics, properties and identification of common alloy steels used in aircraft; Heat treatment and application of alloy steels</p>
<p>6.1 B Aircraft Materials - Ferrous B Testing of ferrous materials for hardness, tensile strength, fatigue strength and impact resistance</p>
<p>6.2 A Aircraft Materials - Non ferrous A Characteristics, properties and identification of common non-ferrous materials used in aircraft; Heat treatment and application of non-ferrous materials;</p>
<p>6.2 B Aircraft Materials - Non ferrous B Testing of non-ferrous material for hardness, tensile strength, fatigue strength and impact resistance</p>
<p>6.3.1 A Composite and non-metallic other than wood and fabric A Characteristics, properties and identification of common composite and non-metallic materials, other than wood, used in aircraft; Sealant and bonding agents</p>
<p>6.3.1 B Composite and non-metallic other than wood and fabric B The detection of defects/deterioration in composite and non-metallic material; Repair of composite and non-metallic material.</p>
<p>6.3.2 Wooden structures 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>
<p>6.3.3 Fabric Covering Characteristics, properties and types of fabrics used in aeroplanes; Inspections methods for fabric; Types of defects in fabric; Repair of fabric covering.</p>
<p>6.4 A Corrosion A Chemical fundamentals; Formation by, galvanic action process, microbiological, stress;</p>
<p>6.4 B Corrosion B Types of corrosion and their identification; Causes of corrosion; Material types, susceptibility to corrosion.</p>
<p>6.5.1 Screw threads Screw nomenclature; Thread forms, dimensions and tolerances for standard threads used in aircraft; Measuring screw threads.</p>

Lesson
Subject
<p>6.5.2 Bolts, Studs and screws Bolt types: specification, identification and marking of aircraft bolts, international standards; Nuts: self locking, anchor, standard types; Machine screws: aircraft specifications; Studs: types and uses, insertion and removal; Self tapping screws, dowels.</p>
<p>6.5.3 Locking Devices Tab and spring washers, locking plates, split pins, pal-nuts, wire locking, quick release fasteners, keys, circlips, cotter pins</p>
<p>6.5.4 Aircraft Rivets Types of solid and blind rivets: specifications and identification, heat treatment.</p>
<p>6.6 A Pipes and Unions A Identification of, and types of rigid and flexible pipes and their connectors used in aircraft;</p>
<p>6.6 B Pipes and Unions B Standard unions for aircraft hydraulic, fuel, oil, pneumatic and air system pipes;</p>
<p>6.7 Springs Types of springs, materials, characteristics and applications</p>
<p>6.8 Bearings Purpose of bearings, loads, material, construction; Types of bearings and their application</p>
<p>6.9 Transmissions Gear types and their application; Gear ratios, reduction and multiplication gear systems, driven and driving gears, idler gears, mesh patterns; Belts and pulleys, chains and sprockets;</p>
<p>6.10 Control of Cables Types of cables; End fittings, turnbuckles and compensation devices; Pulleys and cable system components; Bowden cables; Aircraft flexible control systems.</p>
<p>6.11 Electrical Cables and Connectors Cable types, construction and characteristics; High tension and co-axial cables; Crimping; Connector types, pins, plugs, sockets, insulators, current and voltage rating, coupling, identification codes;</p>