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NATIONAL ADVISORY COMMITTEE FOR AERONAUTICS

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SUBJECT HEADINGS FOR INDEX OF NACA PUBLICATIONS SEPTEMBER 1947

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WASHINGTON, D. C.

National Advisory Committee for Aeronautics SUBJECT HEADINGS FOR INDEX OF NACA PUBLICATIONS

Subject Heading Number	Subject Heading Outline	Standard Subject Heading Title
1	Aerodynamics	Aerodynamics
1.1	Fundamental Aerodynamics	Aerodynamics, Fundamental
1.1.1	Incompressible Flow	Flow, Incompressible
1.1.2	Compressible Flow	Flow, Compressible
1.1.2.1	Subsonic Flow	Flow, Subsonic
1.1.2.2	Mixed Flow	Flow, Mixed
1.1.2.3	Supersonic Flow	Flow, Supersonic
1.1.3	Viscous Flow	Flow, Viscous
1.1.3.1	Laminar Flow	Flow, Laminar
1.1.3.2	Turbulent Flow	Flow, Turbulent
1.1.3.3	Jet Mixing	Flow, Jet Mixing
1.1.4	Aerodynamics with Heat	Aerodynamics with Heat
1.1.4.1	Heating	Heating, Aerodynamic
1.1.4.2	Heat Transfer	Heat Transfer, Aerodynamic
1.1.4.3	Additions of Heat	Heat, Additions of - Aerodynamic
1.1.5	Flow of Rarified Gases	Flow of Rarified Gases
1.1.5.1	Slip Flow	Flow, Slip
1.1.5.2	Free Molecule Flow	Flow, Free Molecule

Subject Heading Number	Subject Heading Outline	Standard Subject Heading Title
1.2	Wings	Wings
1.2.1	Wing Sections	Wing Sections
1.2.1.1	Section Theory	Wing Section Theory
1.2.1.2	Section Variables	Wing Sections - Section Variables
1.2.1.2.1	Camber	Camber - Wing Sections
1.2.1.2.2	Thickness	Thickness - Wing Sections
1.2.1.2.3	Thickness Distri- bution	Thickness Distribution - Wing Sections
1.2.1.2.4	Inlets and Exits	Inlets and Exits - Wing Sections
1.2.1.2.5	Surface Conditions	Surface Conditions – Wing Sections
1.2.1.3	Designated Profiles	Profiles, Designated - Wing Sections
1.2.1.4	High Lift Devices	High Lift Devices - Wing Sections
1.2.1.4.1	Plain Flaps	Flaps, Plain - Wing Sections
1.2.1.4.2	Split Flaps	Flaps, Split - Wing Sections
1.2.1.4.3	Slotted Flaps	Flaps, Slotted - Wing Sections
1.2.1.4.4	Leading Edge Flaps	Flaps, Leading Edge - Wing Sections
1.2.1.4.5	Slots and Slats	Slots and Slats - Wing Sections
1.2.1.5	Controls	Controls - Wing Sections
1.2.1.5.1	Flap Туре	Controls, Flap Type - Wing Sections

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Subject Heading Number	Subject Heading Outline	Standard Subject Heading Title
1.2.1.5.2	Spoilers	Controls, Spoiler - Wing Sections
1.2.1.6	Boundary Layer	Boundary Layer - Wing Sections
1.2.1.7	Reynolds Number Effects	Reynolds Number Effects - Wing Sections
1.2.1.8	Mach Number Effects	Mach Number Effects - Wing Sections
1.2.2	Complete Wings	Wings, Complete
1.2.2.1	Wing Theory	Wings, Complete - Theory
1.2.2.2	Wing Variables	Wings, Complete - Design Variables
1.2.2.2.1	Profiles	Profiles - Complete Wings
1.2.2.2.2	Aspect Ratio	Aspect Ratio - Complete Wings
1.2.2.2.3	Sweep	Sweep - Complete Wings
1.2.2.2.4	Taper	Taper - Complete Wings
1.2.2.2.5	Inlets and Exits	Inlets and Exits - Complete Wings
1.2.2.2.6	Surface Conditions	Surface Conditions - Complete Wings
1.2.2.3	High Lift Devices	High Lift Devices - Complete Wings
1.2.2.3.1	Flaps	Flaps - Complete Wings

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Subject Heading Number	Subject Heading Outline	Standard Subject Heading Title
1.2.2.3.2	Slots and Slats	Slots and Slats - Complete Wings
1.2.2.4	Controls	Controls - Complete Wings
1.2.2.4.1	Flap Type	Controls, Flap Type - Complete Wings
1.2.2.4.2	Spoilers	Controls, Spoiler - Complete Wings
1.2.2.5	Reynolds Number Effects	Reynolds Number Effects - Complete Wings
1.2.2.6	Mach Number Effects	Mach Number Effects - Complete Wings
1.2.2.7	Wake	Wake - Complete Wings
1.2.2.8	Boundary Layer	Boundary Layer - Complete Wings
1.3	Bodies	Bodies
1.3.1	Theory	Bodies - Aerodynamic Theory
1.3.2	Shape Variables	Bodies - Shape Variables
1.3.2.1	Fineness Ratio	Fineness Ratio - Bodies
1.3.2.2	Cross Section	Cross Section - Bodies
1.3.2.3	Thickness Distribu- tion	Thickness Distribution - Bodies
1.3.2.4	Surface Conditions	Surface Conditions - Bodies
1.3.2.5	Protuberances	Protuberances - Bodies
1.3.3	Canopies	Canopies

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Subject Heading	Subject Heading Outline	Standard Subject Heading Title
Number	Subject Heading Outline	Blandard Bubjeet Heading Title
1.3.4	Ducted Bodies	Bodies, Ducted
1.3.4.1	Nose Shape	Nose Shape - Ducted Bodies
1.3.4.2	Tail Shape	Tail Shape - Ducted Bodies
1.3.4.3	Side Inlets	Inlets, Side - Ducted Bodies
1.3.4.4	Side Exits	Exits, Side - Ducted Bodies
1.3.5	Hulls	Hulls - Aerodynamic
1.4	Internal Aerodynamics	Internal Aerodynamics
1.4.1	Nose Inlets	Inlets, Nose
1.4.1.1	Central	Inlets, Nose - Central
1.4.1.2	Annular	Inlets, Nose - Annular
1.4.2	Leading Edge Inlets	Inlets, Leading Edge
1.4.3	Side Inlets	Inlets, Side
1.4.3.1	Scoops	Inlets, Side - Scoops
1.4.3.2	Submerged	Inlets, Side - Submerged
1.4.4	Ducts	Ducts
1.4.4.1	Diffusers	Diffusers
1.4.4.2	Nozzles	Nozzles
1.4.4.3	Pipes	Pipes
1.4.4.4	Bends	Bends
1.4.5	Exits	Exits

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Subject Heading Number	Subject Heading Outline	Standard Subject Heading Title
1.4.6	Jet Pumps and Thrust Augmentors	Pumps, Jet and Thrust Augment- ors
1.4.7	Compressors	Compressors - Aerodynamics
1.4.7.1	Cascades	Cascades - Aerodynamics
1.4.8	Fans	Fans - Aerodynamics
1.4.9	Turbines	Turbines - Aerodynamics
1.4.10	Boundary Layer	Boundary Layer - Internal Aero- dynamics
1.5	Propellers	Propellers
1.5.1	Theory	Propeller Theory
1.5.2	Design Variables	Propellers - Design Variables
1.5.2.1	Blade Sections	Blade Sections - Propellers
1.5.2.2	Solidity	Solidity - Propellers
1.5.2.3	Pitch Distribution	Pitch Distribution - Propellers
1.5.2.4	Blade Planforms	Blade Planforms - Propellers
1.5.2.5	Mach Number Effects	Mach Number Effects - Propellers
1.5.2.6	Pusher	Propellers, Pusher
1.5.2.7	Dual Rotation	Propellers, Dual Rotation
1.5.2.8	Interference of Bodies	Interference of Bodies - Propellers
1.5.2.9	∕ Pitch and Yaw	Pitch and Yaw - Propellers
1.5.2.10	Diameter	Diameter – Propellers

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Subject Heading Number	Subject Heading Outline	Standard Subject Heading Title
1.5.3	Designated Types	Propellers - Designated Types
1.5.4	Slipstream	Slipstream - Propellers
1.5.5	Selection Charts	Propeller Selection Charts
1.5.6	Operating Conditions	Propeller Operating Conditions
1.6	Rotors	Rotors
1.6.1	Theory	Rotor Theory
1.6.2	Experimental Studies	Rotors - Experimental Studies
1.6.2.1	Power-Driven	Rotors - Power Driven
1.6.2.2	Autorotating	Rotors - Autorotating
1.7	Aircraft	Aircraft
1.7.1	Airplanes	Airplanes
1.7.1.1	Components in Com- bination	Airplanes - Components in Combination
1.7.1.1.1	Wing-Fuselage	Wing-Fuselage Combinations - Airplanes
1.7.1.1.2	Wing-Nacelle	Wing–Nacelle Combinations – Airplanes
1.7.1.1.3	Tail-Wing and Fuselage	Tail-Wing and Fuselage Combinations – Airplanes
1.7.1.1.4	Propeller and Jet Interference	Propeller and Jet Combinations • Airplanes
1.7.1.1.5	External Stores	Effects of External Stores - Airplanes

Subject Heading Number	Subject Heading Outline	Standard Subject Heading Title
1.7.1.2	Specific Airplanes	Airplanes - Specific Types
1.7.1.3	Performance	Airplanes - Performance
1.7.2	Missiles	Missiles
1.7.2.1	Components in Combination	Missiles - Components in Combination
1.7.2.1.1	Wing-Body	Wing-Body Combinations - Missiles
1.7.2.1.2	Tail-Body	Tail-Body Combinations - Missiles
1.7.2.1.3	Jet Interference	Jet Interference - Missiles
1.7.2.1.4	Wing-Tail-Body	Wing-Tail-Body Combinations - Missiles
1.7.2.2	Specific Missiles	Missiles, Specific Types
1.7.3	Rotating Wing Aircraft	Rotating Wing Aircraft
1.7.3.1	Autogiros	Autogiros
1.7.3.2	Helicopters	Helicopters
1.7.4	Seaplanes	Seaplanes
1.7.4.1	General Studies	Seaplanes - General Studies
1.7.4.2	Specific Types	Seaplanes – Specific Types
1.7.5	Airships	Airships
1.7.6	Biplanes and Triplanes	Biplanes and Triplanes
1.8	Stability and Control	Stability and Control

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Subject Heading Number	Subject Heading Outline	Standard Subject Heading Title
1.8.1	Stability	Stability
1.8.1.1	Static	Stability, Static
1.8.1.1.1	Longitudinal	Stability, Longitudinal - Static
1.8.1.1.2	Lateral	Stability, Lateral - Static
1.8.1.1.3	Directional	Stability, Directional - Static
1.8.1.2	Dynamic	Stability, Dynamic
1.8.1.2.1	Longitudinal	Stability, Longitudinal - Dynamic
1.8.1.2.2	Lateral and Directional	Stability - Lateral and Direc- tional - Dynamic
1.8.1.2.3	Damping Deriva- tives	Damping Derivatives - Stability
1.8.2	Controls	Controls
1.8.2.1	Longitudinal	Controls, Longitudinal
1.8.2.2	Lateral	Controls, Lateral
1.8.2.3	Directional	Controls, Directional
1.8.2.4	Airbrakes	Airbrakes
1.8.2.5	Hinge Moments	Controls - Hinge Moments
, 1.8.2.6	Automatic	Controls, Automatic
1.8.3	Spinning	Spinning
1.8.4	Stalling	Stalling
1.8.5	Flying Qualities	Flying Qualities
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Subject Heading Number	Subject Heading Outline	Standard Subject Heading Title
1.8.6	Mass and Gyroscopic Problems	Mass and Gyroscopic Problems
1.9	Aerodynamic Loading	Loading, Aerodynamic
1.9.1	Wings	Loading, Aerodynamic - Wings
1.9.1.1	Steady Loads	Loads, Steady Aerodynamic - Wings
1.9.1.2	Maneuvering	Loads, Maneuvering - Wings
1.9.1.3	Gust Loads	Loads, Gust - Wings
1.9.2	Tail	Loading, Aerodynamic - Tail
1.9.2.1	Steady	Loads, Steady Aerodynamic - Tail
1.9.2.2	Maneuvering	Loads, Maneuvering - Tail
1.9.2.3	Buffeting and Gust	Loads, Buffeting and Gust - Tail
1.9.3	Fuselage, Nacelles, and Canopies	Loading, Aerodynamic – Fuselage Nacelles, and Canopies
1.9.4	Rotating Wings	Loading, Aerodynamic – Rotating Wings
1.9.5	Aeroelasticity	Aeroelasticity
1.10	Vibration and Flutter	Vibration and Flutter
1.10.1	Wings and Ailerons	Vibration and Flutter – Wings and Ailerons
1.10.2	Tails	Vibration and Flutter – Tails
1.10.2.1	Elevators and Rudders	Vibration and Flutter - Elevators

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Subject Heading Number	Subject Heading Outline	Standard Subject Heading Title
1.10.2.2	Tabs	Vibration and Flutter - Tabs
1.10.3	Bodies	Vibration and Flutter - Bodies
1.10.4	Propellers, Fans, Compressors	Vibration and Flutter - Pro- pellers, Fans, Compressors
1.10.5	Rotating Wing Aircraft	Vibration and Flutter – Rotating Wing Aircraft
1.11	Parachutes	Parachutes

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Subject Heading Number	Subject Heading Outline	Standard Subject Heading Title
2	Hydrodynamics	Hydrodynamics
2.1	Theory	Hydrodynamic Theory
2.2	General Arrangement Studies	Hydrodynamic Configurations – General Studies
2.3	Seaplane Hull Variables	Hull Variables – Seaplanes
2.3.1	Length-Beam Ratio	Length-Beam Ratio - Seaplane Hulls
2.3.2	Deadrise	Deadrise - Seaplane Hulls
2.3.3	Steps	Steps – Șeaplane Hulls
2.3.4	Afterbody Shape	Afterbody Shape – Seaplane Hulls
2.3.5	Forebody Shape	Forebody Shape – Seaplane Hulls
2.3.6	Chines	Chines – Seaplane Hulls
2.4	Specific Seaplanes and Hulls	Seaplanes and Hulls - Specific Types
2.5	Lateral Stabilizers	Stabilizers, Lateral - Hydro- dynamic
2.5.1	Wing-Tip Float	Floats, Wing Tip
2.6	Planing Surfaces	Planing Surfaces, Hydrodynamic
2.7	Hydrofoils	Hydrofoils
2.8	Impace Loads	Impact Loads
2.9	Ditching Characteristics	Ditching Characteristics

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Subject Heading		· · · ·
Number	Subject Heading Outline	Standard Subject Heading Title
2.10	Stability and Control	Stability and Control - Hydro- dynamics
2.10.1	Longitudinal	Stability and Control, Longi- tudinal - Hydrodynamics
2.10.2	Lateral	Stability and Control, Lateral – Hydrodynamics
2.10.3	Directional	Stability and Control, Directional Hydrodynamics
2.11	Surface Craft	Surface Craft, Hydrodynamic

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Subject Heading Number	Subject Heading Outline	Standard Subject Heading Title
3	Propulsion	Propulsion
3.1	Complete Systems	Propulsion - Complete Systems
3.1.1	Reciprocating Engines	Reciprocating Engines
3.1.1.1	Spark-Ignition Engines	Reciprocating Engines - Spark- Ignition
3.1.1.2	Compression-Ignition (Diesel) Engines	Reciprocating Engines - Com- pression-Ignition (Diesel)
3.1.2	Reciprocating Engines Turbines	Reciprocating Engines with Turbines
3.1.2.1	Turbosupercharged Engines	Turbosupercharged Engines
3.1.2.2	Compound Engines	Compound Engines
3.1.2.3	Gas Generator-Turbine Engines	Gas Generator-Turbine Engines
3.1.3	Turbo-Jet Engines	Turbo-Jet Engines
3.1.4	Turbo-Propeller Engines	Turbo-Propeller Engines
3.1.5	Ducted Propeller Engines	Ducted Propeller Engines
3.1.6	Pulse Jet	Pulse Jet Engines
3.1.7	Ram Jet	Ram Jet Engines
3.1.8	Rockets	Rockets
3.1.9	Jet-Driven Rotors	Jet-Driven Rotors
3.1.10	Comparison of Engine Types	Engine Types - Comparisons

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Subject Heading Number	Subject Heading Outline	Standard Subject Heading Title
3.1.11	Miscellaneous Engines	Engines, Miscellaneous
3.2	Charging and Control of Engines	Charging and Control of Engines
3.2.1	Reciprocating Engines	Charging and Control - Recipro- cating Engines
3.2.1.1	Metering and Control Parameters	Metering and Control Parameters - Reciprocating Engines
3.2.1.2	Mixture Control	Mixture Control - Reciprocating Engines
3.2.1.3	Fuel Supply System	Fuel Supply System - Recipro- cating Engines
3.2.1.4	Ignition Systems	Ignition Systems - Reciprocating Engines
3.2.2	Gas Turbine Engines	Charging and Control - Gas Turbine Engines
3.2.2.1	Metering and Control Parameters	Metering and Control Parameters - Gas Turbines
3.2.2.2	Fuel Supply Systems	Fuel Supply Systems – Gas Turbines
3.2.2.3	Ignition Systems	Ignition Systems - Gas Turbines
3.2.3	Ram Jet and Pulse Jet Engines	Charging and Control – Ram Jet and Pulse Jet Engines
3.2.3.1	Metering and Control Parameters	Metering and Control Parameters - Ram and Pulse Jets
3.2.3.2	Fuel Supply Systems	Fuel Supply Systems - Ram and Pulse Jets

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Subject Heading Number	Subject Heading Outline	Standard Subject Heading Title
3.2.3.3	Ignition Systems	Ignition Systems - Ram and Pulse Jets
3.2.4	Rockets	Charging and Control - Rockets
3.2.4.1	Metering and Control Parameters	Metering and Control Parameters - Rockets
3.2.4.2	Fuel Supply Systems	Fuel Supply Systems - Rockets
3.2.4.3	Ignition Systems	Ignition Systems - Rockets
3.3	Auxiliary Booster Systems	Auxiliary Booster Systems
3.3.1	Reciprocating Engines	Auxiliary Booster Systems - Reciprocating Engines
3.3.2	Gas Turbines	Auxiliary Booster Systems – Gas Turbines
3.3.2.1	Liquid Injection	Liquid Injection - Gas Turbines
3.3.2.2	Afterburning	Afterburning - Gas Turbines
3.3.2.3	Bleed-off	Bleed-off - Gas Turbines
3.4	Fuels	Fuels
3.4.1	Preparation	Fuels - Preparation
3.4.2	Physical Properties	Fuels - Physical Properties
3.4.3	Relation to Engine Per- formance	Fuels - Relation to Engine Per- formance
3.4.3.1	Reciprocating Engines	Fuels - Reciprocating Engines
3.4.3.1.1	Spark-Ignition	Fuels - Spark-Ignition Engines

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Subject Heading Number	Subject Heading Outline	Standard Subject Heading Title
3.4.3.1.2	Compression- Ignition (Diesel)	Fuels - Compression-Ignition (Diesel) Engines
3.4.3.2	Turbine Engines, Ram Jets, and Pulse Jets	Fuels - Turbine Engines, Ram Jets, and Pulse Jets
3.4.3.3	Rockets (Includes Fuel and Oxidant)	Fuels - Rockets (Includes Fuel and Oxidant)
3.5	Combustion	Combustion
3.5.1	General Combustion Research	Combustion Research - General
3.5.1.1	Laminar-Flow Com- bustion	Combustion, Laminar-Flow
3.5.1.2	Turbulent-Flow Com- bustion	Combustion, Turbulent-Flow
3.5.1.3	Detonation	Combustion - Detonation
3.5.1.4	Effects of Fuel Atomi- zation	Combustion - Effects of Fuel Atomization
3.5.1:5	Effects of Chemical Intermediates	Combustion - Effects of Chemical Intermediates
3.5.1.6	Ignition of Gases	Combustion - Ignition of Gases
3.5.2	Effect of Engine Operating Conditions and Com- bustion Chamber Geometry	Combustion - Effect of Engine Operating Conditions and Combustion Chamber Geometry
3.5.2.1	Reciprocating Engines	Combustion - Reciprocating Engines
3.5.2.1.1	Spark-Ignition	Combustion - Spark-Ignition Engines

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Subject Heading Number	Subject Heading Outline	Standard Subject Heading Title
3.5.2.1.2	Compression- Ignition (Diesel)	Combustion - Compression-Ignition (Diesel) Engines
3.5.2.2	Turbine Engines	Combustion - Turbine Engines
3.5.2.3	Ram-Jet	Combustion - Ram-Jet
3.5.2.4	Pulse Jet	Combustion - Pulse Jet
3.5.2.5	Rockets	Combustion - Rockets
3.6	Compressors	Compressors
3.6.1	Flow Theory and Ex- periment	Compressor Flow Theory and Experiment
3.6.1.1	Axial Flow	Compressors - Axial Flow
3.6.1.2	Radial Flow	Compressors - Radial Flow
3.6.1.3	Mixed Flow	Compressors - Mixed Flow
3.6.1.4	Positive Displacement	Compressors - Positive Displace- ment
3.6.2	Stress and Vibration	Compressors Stress and Vibration
3.6.3	Matching	Compressors - Matching
3.7	Turbines	Turbines
3.7.1	Flow Theory and Ex- periment	Turbine Flow Theory and Experiment
3.7.1.1	Axial Flow	Turbines - Axial Flow
3.7.1.2	Radial Flow	Turbines - Radial Flow
3.7.1.3	Mixed Flow	Turbines - Mixed Flow
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Subject Heading Number	Subject Heading Outline	Standard Subject Heading Title
3.7.2	Cooling	Turbine Cooling
3.7.3	Stress and Vibration	Turbine Stress and Vibration
3.7.4	Matching	Turbines - Matching
3.8	Friction and Lubrication	Friction and Lubrication
3.8.1	Theory and Experiment	Friction and Lubrication – Theory and Experiment
3.8.1.1	Hydrodynamic Theory	Friction and Lubrication - Hydrodynamic Theory
3.8.1.2	Chemistry of Lubri- cation	Lubrication, Chemistry
3.8.1.3	Surface Conditions	Friction and Lubrication - Surface Conditions
3.8.2	Sliding Contact Surfaces	Contact Surfaces, Sliding
3.8.2.1	Sleeve Bearings	Bearings, Sleeve
3.8.2.2	Cylinder and Piston Mechanisms	Cylinder and Piston Mechanisms
3.8.2.3	Slipper Plate	Bearings, Slipper Plate
3.8.2.4	Kingsbury and Mitchell Bearings	Bearings, Kingsbury and Mitchell
3.8.3	Rolling Contact Surfaces	Contact Surfaces, Rolling
3.8.3.1	Anti-Friction Bearings	Bearings, Anti-Friction
3.8.4	Sliding and Rolling Contact Surfaces	Contact Surfaces, Sliding and Rolling
3.8.4.1	Gears	Gears

Subject Heading Number	Subject Heading Outline	Standard Subject Heading Title
3.8.5	Lubricants	Lubricants
3.8.6	Lubrication Systems	Lubrication Systems
3.9	Heat Transfer	Heat Transfer
3.9.1	Theory	Heat Transfer Theory
3.9.2	Heat Exchangers	Heat Exchangers
3.9.2.1	Radiators	Radiators
3.9.2.2	Intercoolers	Intercoolers
3.9.2.3	Aftercoolers	Aftercoolers
3.9.2.4	Regenerators	Regenerators
3.9.2.5	Oil Coolers	Oil Coolers
3.10	Cooling	Cooling
3.10.1	Reciprocating Engines	Cooling - Reciprocating Engines
3.10.1.1	Liquid Cooled	Cooling - Reciprocating Engines, Liquid Cooled
3.10.1.2	Air Cooled	Cooling - Reciprocating Engines Air Cooled
3.10.2	Gas Turbine Systems	Cooling - Gas Turbine Systems
3.10.3	Ram Jets	Cooling - Ram Jets
3.10.4	Pulse Jets	Cooling - Pulse Jets
3.10.5	Rockets	Cooling - Rockets
3.11	Properties of Gases	Gases, Properties

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Subject Heading Number	Subject Heading Outline	Standard Subject Heading Title
4	Structures	Structures
4.1	Columns	Columns, Structural
4.1.1	Tubular	Columns, Tubular
4.1.2	Beam	Columns, Beam
4.1.3	Sections	Columns, Sections
4.2	Frames, Gridworks and Trusses	Frames, Gridworks and Trusses
4.3	Plates	Plates, Structural
4.3.1	Flat	Plates, Flat
4.3.1.1	Unstiffened	Plates, Flat - Unstiffened
4.3.1.2	Stiffened	Plates, Flat - Stiffened
4.3.2	Curved	Plates, Curved
4.3.2.1	Unstiffened	Plates, Curved - Unstiffened
4.3.2.2	Stiffened	Plates, Curved - Stiffened
4.4	Beams	Beams, Structural
4.4.1	Box	Beams, Box
4.4.2	Diagonal Tension	Beams, Diagonal Tension
4.5	Shells	Shells, Structural
4.5.1	Cylinders	Cylinders
4.5.1.1	Circular	Cylinders, Structural - Circular

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Subject Heading Number	Subject Heading Outline	Standard Subject Heading Title
4.5.1.2	Elliptical	Cylinders, Structural - Elliptical
4.5.2	Boxes	Boxes, Structural
4.6	Connections	Connections, Structural
4.6.1	Bolted	Connections, Bolted
4.6.2	Riveted	Connections, Riveted
4.6.3	Welded	Connections, Welded
4.6.4	Bonded	Connections, Bonded
4.7	Loads and Stresses	Loads and Stresses - Structural
4.7.1	Tension	Loads and Stresses, Structural - Tension
4.7.2	Compression	Loads and Stresses, Structural - Compression
4.7.3	Bending	Loads and Stresses, Structural - Bending
4.7.4	Torsion	Loads and Stresses, Structural - Torsion
4.7.5	Shear	Loads and Stresses, Structural - Shear
4.7.6	Concentrated	Loads and Stresses, Structural - Concentrated
4.7.7	Dynamic	Loads and Stresses, Structural – Dynamic
4.7.7.1	Repeated	Loads and Stresses, Structural - Repeated Dynamic

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Subject Heading Number	Subject Heading Outline	Standard Subject Heading Title
4.7.7.2	Transient	Loads and Stresses, Structural - Transient Dynamic
4.7.8	Normal Pressures	Loads and Stresses, Structural - Normal Pressures

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Subject Heading Number	Subject Heading Outline	Standard Subject Heading Title
5	Materials	Materials
5.1	Types	Materials - Types
5.1.1	Aluminum	Aluminum
5.1.2	Magnesium	Magnesium
5.1.3	Steels	Steels
5.1.4	Heat-Resisting Alloys	Heat-Resisting Alloys
5.1.5	Ceramics	Ceramics
5.1.6	Plastics	Plastics
5.1.7	Woods	Woods
5.1.8	Adhesives	Adhesives
5.1.9	Protective Coatings	Protective Coatings
5.1.10	Fabrics	Fabrics
5.1.11	Sandwich and Laminates	Sandwich and Laminates
5.1.12	Miscellaneous	Materials - Miscellaneous Types
5 .2	Properties	Materials - Properties
5.2.1	Tensile	Properties, Materials - Tensile
5 .2.2	Compressive	Properties, Materials - Compressive
5.2.3	Creep	Properties, Materials - Creep
5 .2.4	Stress-Rupture	Properties, Materials - Stress- Rupture

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Subject Heading Number	Subject Heading Outline	Standard Subject Heading Title
5 .2. 5	Fatigue	Properties, Materials - Fatigue
5 .2.6	Shear	Properties, Materials - Shear
5.2.7	Flexural	Properties, Materials - Flexural
5.2.8	Corrosion Resistance	Properties, Materials - Corrosion Resistance
5. 2. 9	Structure	Properties, Materials - Structure
5.2.10	Effects of Nuclear Radiation	Properties, Materials - Effects of Nuclear Radiation
5.3	Operating Stresses and Conditions	Operating Stresses and Condi- tions
5.3.1	Airframe	Materials, Airframe - Operating Stresses
5 .3.2	Propulsion System	Materials, Propulsion System - Operating Stresses

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Subject Heading Number	Subject Heading Outline	Standard Subject Heading Title
6	Meteorology	Meteorology
6.1	Atmosphere	Atmosphere
6.1.1	Standard Atmosphere	Standard Atmosphere
6.1.2	Gusts	Gusts, Atmospheric
6.1.2.1	Structure	Gusts - Structure
6.1.2.2	Frequency	Gusts - Frequency
6.1.2.3	Turbulence	Gusts - Turbulence
6.1.2.4	Alleviation	Gusts - Alleviation
6.1.3	Electricity	Electricity, Atmospheric
6.2	Ice Formation	Ice Formation

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Subject Heading Number	Subject Heading Outline	Standard Subject Heading Title
7	Operating Problems	Operating Problems
7.1	Safety	Safety
7.2	Navigation	Navigation
7.3	Ice Prevention and Removal	Ice Prevention and Removal
7.3.1	Engine Induction Systems	Ice Prevention and Removal - Engine Induction Systems
7.3.2	Propellers	Ice Prevention and Removal – Propellers
7.3.3	Wings and Tails	Ice Prevention and Removal - Wings and Tails
7.3.4	Windshields	Ice Prevention and Removal – Windshields
7.3.5	Miscellaneous Accessories	5 Ice Prevention and Removal – Miscellaneous Accessories
7.3.6	Propulsion Systems	Ice Prevention and Removal - Propulsion Systems
7.4	Noise	Noise
7.5	Heating and Ventilating	Heating and Ventilating
7.6	Lightning Hazards	Lightning Hazards
7.7	Piloting Techniques	Piloting Techniques
7.8	Physiological	Physiological Operating Prob- lems

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Subject Heading Number	Subject Heading Outline	Standard Subject Heading Title	
8	Instruments	Instruments	
8.1	Flight	Instruments - Flight	
8.2	Laboratory	Instruments -Laboratory	
8.3	Meteorological	Instruments - Meteorological	

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Subject Heading Number	Subject Heading Outline	Standard Subject Heading Title
9	Research Equipment and Techniques	Research Equipment and Tech- niques
9.1	Equipment	Research Equipment
9.1.1	Wind Tunnels	Wind Tunnels
9.1 3 2	Free-Flight	Research Equipment - Free- Flight
9.1.3	Towing Tanks and Impact Basins	Towing Tanks and Impact Basins
9.1.4	Propulsion Research Equipment	Research Equipment - Propulsion
9.1.5	Propeller	Research Equipment - Propeller
9.1.6	Materials	Research Equipment - Materials
9.1.7	Structures	Research Equipment - Structures
9. 2	Technique	Research Technique
9.2.1	Corrections	Research Techniques - Correction

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Standard Subject Heading Title

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Nomenclature

Nomenclature

Subject Heading Number Subject Heading Outline

Standard Subject Heading Title

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Bibliographies and Indexes

Bibliographies and Indexes