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- The Technical Value of the Rotating Wing Aircraft (Abstract from *Z.V.D.I.*, Vol. 78, No. 25), *J.*, XXXIX., p. 526.
- Variable Incidence Gyroplane (Abstract from *Flight*, Vol. 26, No. 1357), *J.*, XXXIX., p. 526.
- AUTOMATIC PILOT, see Control of Aircraft.**
- BALLISTICS, see Bombs and Ballistics.**
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- Ascension to Stratosphere by U.S.A. Balloon "Explorer" (Abstract from *L'Aeron.*, No. 185), *J.*, XXXIX., p. 857.
- Disaster to Russian Stratosphere Balloon (Abstract from *Luftwissen*, Vol. 1, No. 4), *J.*, XXXIX., p. 517.
- BASS, E. L., A.F.R.Ae.S., M.I.A.E., M.I.Ae.S., M.S.A.E.**
- Fuels for Aircraft Engines, *J.*, XXXIX., p. 879.
- BEACONS, see Wireless.**
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- The Corrosion of Elektron Alloy AM503 by Leaded Fuels, *J.*, XXXIX., p. 1144.
- BLIND FLYING, see Wireless.**
- BOMBS AND BALLISTICS**
- Air Torpedoes (Abstract from *Riv. Aeron.*, January, 1935), *J.*, XXXIX., p. 851.
- Air Torpedoes or Bombs (Abstract from *Riv. Aeron.*, Vol. 10, No. 3), *J.*, XXXIX., p. 163.
- Ballistics (Abstract from *Z.A.M.M.*, Vol. 14, No. 4), *J.*, XXXIX., p. 852.
- Bombing During a Dive (Abstract from *Revue de l'Armée de l'Air*, No. 65), *J.*, XXXIX., p. 851.
- Calculating Machine for Directing Anti-Aircraft Fire (Abstract from *Rev. de l'Armée de l'Air*, No. 58), *J.*, XXXIX., p. 511.
- Clementi Goerz Bomb Sights (Abstract from *Revue de l'Armée de l'Air*, No. 63), *J.*, XXXIX., p. 852.
- Construction of a Firing Table for Bombs Dropped from Aircraft (Abstract from *L'Aerotecnica*, Vol. 14, No. 6), *J.*, XXXIX., p. 510.
- Corrections for a Trajectory (Abstract from *J. Frank. Inst.*, Vol. 217, No. 6), *J.*, XXXIX., p. 510.
- Estoppey Bomb Sight (Abstract from *Rev. de l'Armée de l'Air*, No. 59), *J.*, XXXIX., p. 511.
- Hispano-Suiza Large Calibre Machine Gun (Abstract from *Flugsport*, Vol. 26, No. 10), *J.*, XXXIX., p. 510.
- History of Explosive Bullet in Aerial Combat (Abstract from *Rev. de l'Armée de l'Air*, No. 59), *J.*, XXXIX., p. 510.
- Improvements in Machine Gun Mounting in Aircraft (Abstract from *Rev. de l'Armée de l'Air*, No. 58), *J.*, XXXIX., p. 510.
- Machine Gun Operation at High Altitude (Abstract from *Flugsport*, Vol. 26, No. 18), *J.*, XXXIX., p. 510.

- The Madsen Machine Gun (Abstract from *R. de l'Armée de l'Air*, No. 54), *J.*, XXXIX., p. 163.
- New High Explosives (Abstract from *Z.V.D.I.*, Vol. 78, No. 45), *J.*, XXXIX., p. 851.
- Patents Concerning the Launching of Torpedoes from Aircraft (Abstract from *R. de l'Armée de l'Air*, No. 56), *J.*, XXXIX., p. 163.
- Practice Bomb (Abstract from *R. de l'Armée de l'Air*, No. 55), *J.*, XXXIX., p. 163.
- Protection Against Fire and Gas Attacks (Abstract from *Z.V.D.I.*, Vol. 78, No. 31), *J.*, XXXIX., p. 852.
- Torpedo and Bomb (Abstract from *Riv. Aeron.*, Vol. 10, No. 8), *J.*, XXXIX., p. 851.
- Vulnerability of Warship Structures (Abstract from *W.R.H.*, Vol. 15, No. 11), *J.*, XXXIX., p. 511.
- BOUNDARY LAYER**, see Aerodynamics.
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- BRASS**, see Materials, Brass.
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- CAVITATION**, see Materials, General.
- CIERVA, JUAN DE LA, F.R.Ae.S.**
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- CIVIL AVIATION**, see also Aeroplanes, General
Airways of Alaska—Report of Progress by Pan American Airways (Abstract from *Aviation*, Vol. 33, No. 8), *J.*, XXXIX., p. 836.
- British Commercial Aviation in 1934 (Abstract from *Flight*, Vol. 27, No. 1359), *J.*, XXXIX., p. 836.
- High Speed Air Transport (Abstract from *Riv. Aeron.*, Vol. 10, No. 3), *J.*, XXXIX., p. 143.
- High Speed Aircraft Design, with Special Reference to the D.H. "Comet," by Richard M. Clarkson, A.C.G.I., B.Sc., A.F.R.Ae.S., *J.*, XXXIX., p. 213.
- Impressions of a Tour on American Airways (Abstract from *Luftwissen*, Vol. 1, No. 3), *J.*, XXXIX., p. 145.
- Speeds of Commercial Aeroplanes, by Louis Breguet, *J.*, XXXIX., p. 192.
- World Airways, 1934 (Abstract from *Aviation*, Vol. 33, No. 8), *J.*, XXXIX., p. 836.
- CLARKSON, RICHARD M., A.C.G.I., B.Sc., A.F.R.Ae.S.**
- High Speed Aircraft Design, with Special Reference to the D.H. "Comet," *J.*, XXXIX., p. 213.
- CLOTHIER, W. C., M.Sc., Wh.Sch., A.M.I.Mech.E.**
- Ice Formation in Carburettors, *J.*, XXXIX., p. 761.
- CONTROL OF AIRCRAFT**
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- Design and Test of High Performance Servo-Mechanism (Abstract from *J. Frank. Inst.*, Vol. 218, No. 5), *J.*, XXXIX., p. 842.
- "Diruttore" Turbulence Wing (Abstract from *Flugsport*, Vol. 26, No. 13), *J.*, XXXIX., p. 533.
- Influence of Cut-away in Elevator on Longitudinal Stability and Elevator Control (Abstract from *L.F.F.*, Vol. 11, No. 1), *J.*, XXXIX., p. 495.
- A New Automatic Pilot (Abstract from *Flight*, 14th March, 1935), *J.*, XXXIX., p. 842.
- Servo-Control Flaps (Abstract from *J. Aer. Sci.*, Vol. 1, No. 4), *J.*, XXXIX., p. 842.
- Siemens Autopilot (Abstract from *Flight*, 10th January, 1935), *J.*, XXXIX., p. 841.
- Theory of Servo-Mechanisms (Abstract from *J. Frank. Inst.*, Vol. 218, No. 3), *J.*, XXXIX., p. 842.
- COOLING**, see Engines, Cooling.
- COOMBES, L. P., B.Sc., A.C.G.I.**
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- COPPER**, see Materials, General.
- CORRESPONDENCE**
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- CORROSION**, see Materials, Corrosion.
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- DE-ICING**, see Aeroplanes, General; Pilots and Piloting.
- DESCH, C. H., D.Sc., F.R.S.**
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- DETONATION**, see Fuels.
- DIESEL ENGINES**, see Engines, Heavy Oil.
- DIRECTION FINDING**, see Wireless.

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The Developments and Reliability of the Modern Multi-Engine Air Liner (23rd Wilbur Wright Memorial Lecture), *J., XXXIX.*, p. 1010.

DURALUMIN, see Materials, Duralumin.

ELASTICITY, see also Materials, Strength of.

Elastic Bending of Curved Bar (Abstract from *Phil. Mag.*, Vol. 18, No. 119), *J., XXXIX.*, p. 535.

A Membrane Analogy Supplementing Photo-Elasticity (Abstract from *J. Frank. Inst.*, Vol. 217, No. 4), *J., XXXIX.*, p. 535.

A New Form of Solution of Problems in Elasticity (Abstract from *Z.A.M.M.*, Vol. 14, No. 4), *J., XXXIX.*, p. 872.

Plastic Behaviour in the Light of Creep Elastic Recovery Phenomena (Abstract from *Trans. A.S.M.E.*, Vol. 56, No. 7), *J., XXXIX.*, p. 535.

Stability of Elastic System under External Forces Affected by the Deformation (Abstract from *L'Aerotecnica*, Vol. 14, No. 1), *J., XXXIX.*, p. 186.

ELECTRICITY, see also Wireless.

Electric Installations in Commercial Aircraft (Abstract from *Luftwissen*, Vol. 1, No. 12), *J., XXXIX.*, p. 866.

High Class Products of the German Electro-Ceramic Industry (Abstract from *Z.V.D.I.*, Vol. 78, No. 17), *J., XXXIX.*, p. 529.

ENGINEERING

The Training of an Aeronautical Engineer, by Prof. A. J. Sutton Pippard, M.B.E., D.Sc., M.Inst.C.E., F.R.Ae.S., *J., XXXIX.*, p. 61.

ENGINES, GENERAL, see also Ignition; Materials; Fuels; Heat Transmission.

Aero Engine Design in 1934 (Abstract from *Rev. Gen. L'Aéron.*, No. 17), *J., XXXIX.*, p. 502.

Aero Engine Installation (Abstract from *Airc. Eng.*, Vol. 6, No. 69), *J., XXXIX.*, p. 502.

Air-Cooled Engine Cowling (Abstract from *Airc. Eng.*, Vol. 6, No. 62), *J., XXXIX.*, p. 159.

The Alumilite Process for Pistons (Abstract from *Comm. Motor*, 13th April, 1934), *J., XXXIX.*, p. 158.

Analysis of Motion of Master and Auxiliary Connecting Rod Assembly (Abstract from *Z.V.D.I.*, Vol. 78, No. 27), *J., XXXIX.*, p. 503.

The Bertin Turbo-Compressor (Abstract from *Engineering*, Vol. 137, No. 3569), *J., XXXIX.*, p. 156.

The Coal Dust Engine (Abstract from *W.R.H.*, Vol. 15, No. 14), *J., XXXIX.*, p. 504.

Contribution to the Question of Cylinder Wear of Internal Combustion Engines (Abstract from *Autom. Tech. Zeit.*, Vol. 37, No. 9), *J., XXXIX.*, p. 505.

Coupling for Automatic Variation of Injection Timing (Abstract from *Autom. Tech. Zeit.*, Vol. 37, No. 19), *J., XXXIX.*, p. 850.

Cowling of Air-Cooled Engines (Abstract from *Luftwissen*, Vol. 1, No. 6), *J., XXXIX.*, p. 506.

The Cowling of Radial Engines (Abstract from *Airc. Eng.*, Vol. 6, No. 64), *J., XXXIX.*, p. 159.

Cowlings for Radial Engines (Abstract from *Pub. Sc. et Tech.*, No. 42, 1934), *J., XXXIX.*, p. 506.

Damping of Torsional Oscillations of Engines (Abstract from *Z.V.D.I.*, Vol. 78, No. 46), *J., XXXIX.*, p. 846.

Design and Construction of High Speed Two-Stroke Engines (Abstract from *Autom. Tech. Zeit.*, Vol. 37, No. 19), *J., XXXIX.*, p. 845.

The Design of Journal Bearings and Their Lubrication (Abstract from *Autom. Tech. Zeit.*, Vol. 37, No. 5), *J., XXXIX.*, p. 158.

Development of Aero Engine Design—Notes on the Paris Salon (Abstract from *Luftwissen*, Vol. 1, No. 12), *J., XXXIX.*, p. 844.

Development in Valve Seats in Automobile Engines (Abstract from *Autom. Tech. Zeit.*, Vol. 37, No. 1), *J., XXXIX.*, p. 162.

The Dynamics of the Differential Gear (Abstract from *Z.V.D.I.*, Vol. 78, No. 26), *J., XXXIX.*, p. 509.

Effect of Moderate Air Flow on the Distribution of Fuel Sprays after Injection Cut-off (Abstract from *N.A.C.A. Report No. 483*), *J., XXXIX.*, p. 849.

On the Effect of Pipe Bores on the Cut-off of Fuel Spray in Injection Systems with Open Nozzles (Abstract from *Aer. Res. Inst., Tokyo*, Report No. 108), *J., XXXIX.*, p. 509.

Effect of Speed, Load and Clearance on Seizing Temperature (Abstract from *N.P.L. Report for 1933*), *J., XXXIX.*, p. 159.

Elastic Couplings in Torsional Oscillations (Abstract from *F.G.I.*, Vol. 5, No. 3), *J., XXXIX.*, p. 509.

Engine Exhaust Collector Rings (Abstract from *Aero Digest*, Vol. 25, No. 6), *J., XXXIX.*, p. 850.

Engine Installation of ss. "Konigin Luise" (Abstract from *Z.V.D.I.*, Vol. 78, No. 20), *J., XXXIX.*, p. 503.

- Engine Installation in Tankers (Abstract from *Z.V.D.I.*, Vol. 78, No. 47), *J., XXXIX.*, p. 845.
- Engine Knock (Abstract from *Autom. Eng.*, Vol. 24, No. 322), *J., XXXIX.*, p. 161.
- Estimation of the Variation of Thrust Horse-Power with Air Speed (Abstract from *N.A.C.A. Tech. Note*, No. 446), *J., XXXIX.*, p. 498.
- Heat Transmission to Pipes when Coated with Dew and Rime (Abstract from *Z.V.D.I.*, Vol. 78, No. 26), *J., XXXIX.*, p. 506.
- High Altitude Tests of Aero Engines (Abstract from *Riv. Aeron.*, Vol. 10, No. 5), *J., XXXIX.*, p. 517.
- High Speed Gas Engine (Abstract from *Z.V.D.I.*, Vol. 78, No. 47), *J., XXXIX.*, p. 845.
- Hydraulic Similarity in Steam Turbine Construction (Abstract from *Z.V.D.I.*, Vol. 78, No. 48), *J., XXXIX.*, p. 846.
- Investigation on the Scavenging Process of Two-Stroke Engines (Abstract from *W.R.H.*, Vol. 15, No. 13), *J., XXXIX.*, p. 503.
- Investigation of Vibration Periods by Electro-Magnetic Analogy (Abstract from *F.G.I.*, Vol. 5., No. 2), *J., XXXIX.*, p. 158.
- The Isotta-Fraschini High Altitude Test House for Aero Engines (Abstract from *Luftwissen*, Vol. 1, No. 5), *J., XXXIX.*, p. 516.
- Liquid-Cooled Engines—Design and Application to High-Speed and other Aircraft, by Capt. A. Graham Forsyth, *J., XXXIX.*, p. 449.
- Magnetic Pressure Indicator for Internal Combustion Engines (Abstract from *Aer. Res. Inst., Tokyo*, Report No. 109), *J., XXXIX.*, p. 516.
- Mobile Electric Starting Battery—for Aero Engines (Abstract from *Luftwissen*, Vol. 1, No. 8), *J., XXXIX.*, p. 845.
- Motor Car Vibrations and Their Insulation from the Frame (Abstract from *Autom. Tech. Zeit.*, Vol. 37, No. 10), *J., XXXIX.*, p. 537.
- New Steam Plants for Locomotion (Abstract from *Z.V.D.I.*, Vol. 78, No. 3), *J., XXXIX.*, p. 157.
- Origin of Engine Noises and Means for their Reduction—with Special Reference to Diesel Engines (Abstract from *W.R.H.*, Vol. 15, No. 21), *J., XXXIX.*, p. 850.
- The Pitting of Gear Wheels (Abstract from *Z.V.D.I.*, Vol. 78, No. 2), *J., XXXIX.*, p. 163.
- Possibilities and Load Characteristics of a New Journal Bearing with the Dimensions of a Roller Bearing (Abstract from *Autom. Tech. Zeit.*, Vol. 37, No. 5), *J., XXXIX.*, p. 157.
- Precision Optical Pyrometer (Abstract from *J. Sci. Inst.*, Vol. 12, No. 3), *J., XXXIX.*, p. 844.
- Principles Underlying Automatic Automobile Gears (Abstract from *Z.V.D.I.*, Vol. 78, No. 10), *J., XXXIX.*, p. 163.
- Production of Cracks in Water-Cooled Piston Rods of Diesel Engines (Abstract from *Z.V.D.I.*, Vol. 78, No. 36), *J., XXXIX.*, p. 847.
- Progress in Design of Air Engine Bearings (Abstract from *Luftwissen*, Vol. 1, No. 6), *J., XXXIX.*, p. 506.
- The "Rapier" Aero Engines (Abstract from *Flight*, 14th March, 1935), *J., XXXIX.*, p. 844.
- Reliability of Pistons and Rings in Large Air-Cooled Engines (Abstract from *Luftwissen*, Vol. 1, No. 3), *J., XXXIX.*, p. 158.
- Removal of Critical Torsional Periods by Elastic Couplings (Abstract from *W.R.H.*, Vol. 15, No. 23), *J., XXXIX.*, p. 846.
- Renault Six-Cylinder Coupe Deutsche Engine (Abstract from *Flugsport*, Vol. 26, No. 13), *J., XXXIX.*, p. 503.
- Researches Carried Out in the Physical Laboratory of the French Air Ministry (Abstract from *L'Aéron.*, No. 178, March, 1934), *J., XXXIX.*, p. 157.
- Roller Bearings and Their Employment in Automobile Construction (Abstract from *Autom. Tech. Zeit.*, Vol. 37, No. 5), *J., XXXIX.*, p. 159.
- The Running-in of New Engines (Abstract from *D.M.Z.*, Vol. 11, No. 1), *J., XXXIX.*, p. 159.
- Silencing Arrangement for Aircraft Engines (Abstract from *L'Aéron.*, No. 179), *J., XXXIX.*, p. 509.
- The Silencing of Exhaust Gas Noises of Motor Car Engines (Abstract from *Z.V.D.I.*, Vol. 78, No. 43), *J., XXXIX.*, p. 850.
- S.P.C.A. Fuel Injection Pump for High Speed Engines (Abstract from *L'Aéron.*, No. 184), *J., XXXIX.*, p. 850.
- Steam Propulsion for Aircraft (Abstract from *Z.V.D.I.*, Vol. 78, No. 50), *J., XXXIX.*, p. 846.
- Steam Turbine for Aircraft (Abstract from *Luftwissen*, Vol. 1, No. 4), *J., XXXIX.*, p. 504.
- Tests on an Internal Combustion Engine with Variable Piston Stroke (Abstract from *Autom. Tech. Zeit.*, Vol. 37, No. 13), *J., XXXIX.*, p. 508.

Theory of the Resonance Vibration Damper
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The Thurston Rotor Cowl for Air-Cooled
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Thurston, F.R.Ae.S., D.Sc., *J.*, XXXIX.,
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Torsional Oscillations of Engines with Cylinders
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Vol. 5, No. 2), *J.*, XXXIX., p. 505.

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Valve Seat Wear (Abstract from *Autom.
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Vibration of Engine Mountings (Abstract
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stract from *Ing. Arch.*, Vol. 5, No. 5),
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Autom. Tech. Zeit., Vol. 37, No. 14), *J.*,
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Whaley Infinitely Variable Gear (Abstract
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Ice Formation in Carburettors, by W. C.
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stract from *Z.V.D.I.*, Vol. 78, No. 43),
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Cooling of Finned Cylinders (Abstract from
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stract from *Z.A.M.M.*, Vol. 14, No. 5),
J., XXXIX., p. 847.

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Cast Crankshafts (Abstract from *Autom.
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Cast Crankshafts (Abstract from *Autom.
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from *Autom. Tech. Zeit.*, Vol. 37, No.
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A Comparison of Several Methods of Measur-
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Note*, No. 485), *J.*, XXXIX., p. 157.

Deschamps 1,200 h.p. Diesel Aero Engine
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12), *J.*, XXXIX., p. 504.

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J., XXXIX., p. 162.

External Compression Process for Diesel
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Ignition and Combustion in the Diesel
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No. 366), *J.*, XXXIX., p. 845.

Ignition and Combustion in the Direct In-
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sheft*, No. 366), *J.*, XXXIX., p. 844.

New Researches on the Ignition Delay in
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from *Autom. Tech. Zeit.*, Vol. 37, No. 23),
J., XXXIX., p. 843.

ENGINES, LUBRICATION

The Ageing of Castor Oil (Abstract from
Pub. Sc. et Tech., No. 40, 1934), *J.*,
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Contribution to the Study of Lubrication
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46), *J.*, XXXIX., p. 529.

The Grading of Motor Oils from Carbon
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Zeit.*, Vol. 37, No. 15), *J.*, XXXIX., p.
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Lubricants for Car and Aircraft Engine (Ab-
stract from *Autom. Tech. Zeit.*, Vol. 37,
No. 18), *J.*, XXXIX., p. 848.

Lubricated Journal Bearings with Dimensions
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Z.V.D.I., Vol. 78, No. 14), *J.*, XXXIX.,
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Lubricating Quality (Oiliness) of Oils and
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Vol. 78, No. 12), *J.*, XXXIX., p. 160.

Lubrication of Gear Boxes (Abstract from
Autom. Tech. Zeit., Vol. 37, No. 19), *J.*,
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New Methods and Machines for Testing
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Oil Cooling Problem in Aircraft Engines
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3), *J.*, XXXIX., p. 849.

- Production of Lubricating Oil in Germany (Abstract from *Z.V.D.I.*, Vol. 78, No. 31), J., XXXIX., p. 848.
- Refining Aviation Lubricating Oil (Abstract from *Aero Digest*, Vol. 25, No. 6), J., XXXIX., p. 848.
- The Testing of Lubricating Oils by Surface Tension between Oil and Water (Abstract from *Pub. Sci. et Tech.*, No. 52, 1934), J., XXXIX., p. 848.
- FIRE PREVENTION**
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- Calculated Effect of Trailing-Edge Flaps on the Take-Off of Flying Boats (Abstract from *N.A.C.A. Tech. Note*, No. 510), J., XXXIX., p. 843.
- Complete Tank Tests of Two Flying Boat Hulls with Pointed Steps—Models 22-A and 35 (Abstract from *N.A.C.A. Tech. Note*, No. 504), J., XXXIX., p. 856.
- Completed Tank Test of a Flying Boat Hull with a Pointed Step (Abstract from *N.A.C.A. Tech. Note*, No. 488), J., XXXIX., p. 148.
- The Development and Characteristics of a Long-Range Flying Boat (The S-42), by Igor I. Sikorsky, J., XXXIX., p. 263.
- Effect of Trim Angle on Take-Off Performance of a Flying Boat (Abstract from *N.A.C.A. Tech. Note*, No. 486), J., XXXIX., p. 154.
- Flying Boats and Their Possible Developments, by A. Gouge, B.Sc., F.R.Ae.S., J., XXXIX., p. 691.
- Flying Boats and Their Possible Developments (Abstract from *Flight*, Vol. 27, No. 1368), J., XXXIX., p. 836.
- Flying Boats for Ocean Transport (Abstract from *J. Aer. Sci.*, Vol. 1, No. 2), J., XXXIX., p. 498.
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- Hull Design (Abstract from *Aviation*, Vol. 33, No. 8), J., XXXIX., p. 857.
- The Influence of Shape on Performance of Sea-going Vessels (Abstract from *Z.V.D.I.*, Vol. 78, No. 50), J., XXXIX., p. 857.
- Motion of Flying Boats during Take-off and Landing Run (Abstract from *Aer. Res. Inst.*, Tokyo, Report No. 105), J., XXXIX., p. 500.
- Tank Tests of a Family of Flying Boat Hulls (Abstract from *N.A.C.A. Tech. Note*, No. 491), J., XXXIX., p. 148.
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- The Causes of Detonation in the Carburettor and Injection Engine (Abstract from *Z.V.D.I.*, Vol. 78, No. 27), J., XXXIX., p. 509.
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Aerodynamic Theory, Vol. V., Edited by W. F. Durand, *J.*, XXXIX., p. 1196.

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Care and Maintenance of Aircraft, Fourth Edition, Published by Bunhill Publications Ltd., *J.*, XXXIX., p. 998.

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International Index to Aeronautical Technical Reports, 1934, Prepared by the Society of British Aircraft Constructors, *J.*, XXXIX., p. 996.

Jane's All the World's Aircraft, 1934, *J.*, XXXIX., p. 59.

Journées Scientifiques et Techniques de Mécanique des Fluids, *J.*, XXXIX., p. 635.

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WHIRLING ARM, *see* Wind Tunnels.

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The Developments and Reliability of the Modern Multi-Engine Air Liner, by D. W. Douglas, *J.*, XXXIX., p. 1010.

WIND TUNNELS, *see also* Tanks.

A Belt Method of Representing Ground (Abstract from *J. Aer. Sci.*, Vol. 1, No. 4), *J.*, XXXIX., p. 856.

Contribution to the Investigation of Open Throat Wind Channels (Abstract from *L'Aerotecnica*, Vol. 14, No. 3), *J.*, XXXIX., p. 169.

Experimental Verification of Theodorsen's Theoretical Jet-Boundary Correction Factors (Abstract from *N.A.C.A. Tech. Note.*, No. 506), *J.*, XXXIX., p. 856.

Experimental Verification of the Theory of Wind Tunnel Boundary Interference (Abstract from *N.A.C.A. Report No. 478*), *J.*, XXXIX., p. 169.

New N.P.L. Wind Tunnels (Abstract from *Airc. Eng.*, Vol. 6, No. 64), *J.*, XXXIX., p. 170.

New Whirling Arm (Abstract from *J. Aer. Sci.*, Vol. 1, No. 4), *J.*, XXXIX., p. 855.

Results from the Compressed Air Tunnel, by E. F. Relf, A.R.C.Sc., F.R.Ae.S., *J.*, XXXIX., p. 1.

Turin Aeronautical Laboratory (Abstract from *L'Aerotecnica*, Vol. 14, No. 4), *J.*, XXXIX., p. 514.

The Use of the Wind Tunnel in Connection with Aircraft Design Problems (Abstract from *Trans. A.S.M.E.*, Vol. 56, No. 3), *J.*, XXXIX., p. 169.

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Blind Landing by Means of Electrical Devices (Abstract from *Luftwissen*, Vol. 1, No. 7), *J.*, XXXIX., p. 520.

Compensation of Distortion by Space Charge in Gas-Filled Cathode Ray Oscillograph Tubes (Abstract from *Proc. Inst. Rad. Eng.*, Vol. 22, No. 4), *J.*, XXXIX., p. 521.

A Compensated Thermionic Electrometer (Abstract from *Bell Tele. B-780*), *J.*, XXXIX., p. 172.

Constancy of Selenium Layer Photocells (Abstract from *Phys. Zeit.*, Vol. 35, No. 11), *J.*, XXXIX., p. 522.

The Construction of High Vacuum Cathode Ray Tubes for Television and Measuring Purposes (Abstract from *H.F. Technik*, Vol. 44, No. 5), *J.*, XXXIX., p. 859.

Distributed Capacity of Single Layer Coils (Abstract from *Proc. Inst. Rad. Eng.*, Vol. 22, No. 7), *J.*, XXXIX., p. 518.

Echoes from the Ionosphere (Abstract from *Proc. Inst. Rad. Eng.*, Vol. 22, No. 7), *J.*, XXXIX., p. 519.

Echoes of Radio Waves (Abstract from *Proc. Inst. Rad. Eng.*, Vol. 22, No. 7), *J.*, XXXIX., p. 519.

Electro-Magnetic Radiations (Abstract from *Engineering*, Vol. 139, No. 3611), *J.*, XXXIX., p. 858.

Emission of Electrons from Cold Metals (Abstract from *J. Frank. Inst.*, Vol. 218, No. 4), *J.*, XXXIX., p. 859.

Experimental Investigation of the Disturbing Night Effect on Wireless Direction Finding (Abstract from *H.F. Technik*, Vol. 44, No. 5), *J.*, XXXIX., p. 859.

Extension of Theory of Three-Electrode Vacuum Tube Circuits (Abstract from *Bell Tele. B-812*), *J.*, XXXIX., p. 518.

Fluctuation Noise in Vacuum Tubes (Abstract from *Bell Tele. B-813*), *J.*, XXXIX., p. 518.

Free Oscillations of a Condenser Circuit with a Periodically Variable Capacity (Abstract from *Ann. d. Phys.*, Vol. 19, No. 6), *J.*, XXXIX., p. 518.

Frequency Transformations by Rectifier with Capacity Load (Abstract from *Phys. Zeit.*, Vol. 35, No. 7), *J.*, XXXIX., p. 519.

Gas-Filled Cathode Ray Tubes for Television (Abstract from *H.F. Technik*, Vol. 44, No. 3), *J.*, XXXIX., p. 859.

Gliding-in Beacons (Abstract from *Luftwissen*, Vol. 1, No. 4), *J.*, XXXIX., p. 520.

Helium Glow Lamp Current Indicator (Abstract from *Z.V.D.I.*, Vol. 78, No. 35), *J.*, XXXIX., p. 859.

High Frequency Models in Antennæ Investigation (Abstract from *Proc. Inst. Rad. Eng.*, Vol. 22, No. 4), *J.*, XXXIX., p. 519.

High Quality Radio Broadcasting (Abstract from *Proc. Inst. Rad. Eng.*, Vol. 22, No. 5), *J.*, XXXIX., p. 519.

The Iconoscope (Image Viewer)—Television (Abstract from *Proc. Inst. Rad. Eng.*, Vol. 22, No. 1), *J.*, XXXIX., p. 173.

Improved Aircraft Radio Beacon (Abstract from *Aero Digest*, Vol. 25, No. 6), *J.*, XXXIX., p. 858.

- Influence of Stray Capacitance on Antenna Measurements (Abstract from *Proc. Inst. Rad. Eng.*, Vol. 22, No. 5), *J.*, XXXIX., p. 519.
- Interference in Reception of Short-Waves by the Ignition System of Combustion Engines (Abstract from *H.F. Technik.*, Vol. 44, No. 4), *J.*, XXXIX., p. 860.
- League of Nations Wireless Station (Abstract from *Proc. Inst. Rad. Eng.*, Vol. 22, No. 4), *J.*, XXXIX., p. 520.
- Limits to Amplification (Abstract from *Bell Tele.* B-838), *J.*, XXXIX., p. 858.
- Maintaining Directivity of Antenna Arrays (Abstract from *Proc. Inst. Rad. Eng.*, Vol. 22, No. 7), *J.*, XXXIX., p. 521.
- Measurement of Photographic Densities by Photo-Electric Methods (Abstract from *Pub. Sc. et Tech.*, No. 38, 1934), *J.*, XXXIX., p. 174.
- Microphone Noise in Vacuum Tubes (Abstract from *Bell Tele.* B-814), *J.*, XXXIX., p. 517.
- Modern Aircraft Radio Equipment (Abstract from *Flight*, 14th March, 1935), *J.*, XXXIX., p. 861.
- New Cathode Ray Oscillograph (Abstract from *Bur. Stan. J. Res.*, Vol. 12, No. 1), *J.*, XXXIX., p. 172.
- New Type of Thyratron Relay (Abstract from *Proc. Inst. Rad. Eng.*, Vol. 22, No. 3), *J.*, XXXIX., p. 171.
- North Atlantic Ship-Shore Radiotelephone Transmission during 1932/33 (Abstract from *Proc. Inst. Rad. Eng.*, Vol. 22, No. 10), *J.*, XXXIX., p. 858.
- Optical Measurement of the Type of Motion of a Piezo-Electric Oscillator in Fluids (Abstract from *Phys. Zeit.*, Vol. 35, No. 1), *J.*, XXXIX., p. 174.
- Optimum Operating Conditions for Class C Amplifiers (Abstract from *Proc. Inst. Rad. Eng.*, *J.*, XXXIX., p. 171).
- Photo-cells Used in Light Controlled Machines and Apparatus (Abstract from *Z.V.D.I.*, Vol. 78, No. 31), *J.*, XXXIX., p. 860.
- Practical Measurement of Degree of Amplitude Modulation (Abstract from *Proc. Inst. Rad. Eng.*, Vol. 22, No. 7), *J.*, XXXIX., p. 519.
- Problem of "Bad Weather" Landing of Aeroplanes (Abstract from *Luftwissen*, Vol. 1, No. 5), *J.*, XXXIX., p. 521.
- Production and Application of Ultra-Short Undamped Electric Waves (Abstract from *H.F. Technik.*, Vol. 44, No. 2), *J.*, XXXIX., p. 860.
- Rectangular Short-Wave Frame Aerial for Reception and Transmission (Abstract from *Proc. Inst. Rad. Eng.*, Vol. 22, No. 1), *J.*, XXXIX., p. 172.
- Resistance Tuning (Abstract from *Proc. Inst. Rad. Eng.*, Vol. 22, No. 6), *J.*, XXXIX., p. 518.
- Seventy-Five Centimetre Radio Communication Tests (Abstract from *Proc. Inst. Rad. Eng.*, Vol. 22, No. 7), *J.*, XXXIX., p. 521.
- Short and Ultra Short Electric Waves (Abstract from *Phys. Zeit.*, Vol. 35, No. 5), *J.*, XXXIX., p. 171.
- Series-Phase Aerials. Marconi's Wireless Telegraph Co., Ltd. (Abstract from *Engineering*, Vol. 138, No. 3581), *J.*, XXXIX., p. 172.
- Suppression of Interlocking in Detector Circuits (Abstract from *Proc. Inst. Rad. Eng.*, Vol. 22, No. 7), *J.*, XXXIX., p. 518.
- Television (Abstract from *J. Frank. Inst.*, Vol. 217, No. 1), *J.*, XXXIX., p. 173.
- Television with Cathode Ray Tubes (Abstract from *H.F. Technik.*, Vol. 43, No. 4), *J.*, XXXIX., p. 522.
- Television by Electron Image Scanning (Abstract from *J. Frank. Inst.*, Vol. 218, No. 4), *J.*, XXXIX., p. 860.
- Theory of Scanning (Abstract from *Bell Tele.* B-799), *J.*, XXXIX., p. 522.
- Ultra Short-Wave Generators (Abstract from *Phil. Mag.*, Vol. 18, No. 121), *J.*, XXXIX., p. 522.
- Vacuum Tubes as High Frequency Oscillators (Abstract from *Bell Tele.* B-839), *J.*, XXXIX., p. 859.
- Velocity Modulation Television System (Abstract from *Inst. Elec. Engrs.*, Vol. 75, No. 451), *J.*, XXXIX., p. 173.
- Wireless Beacons on the U.S.A. Air Lines (Abstract from *L'Aeron.*, No. 181), *J.*, XXXIX., p. 520.
- Wireless Equipment on Federal Airways System, U.S.A. (Abstract from *L'Aeron.*, No. 181), *J.*, XXXIX., p. 520.
- WOOD**, see Materials, Wood.
- X-RAYS**, see also Materials, Testing.
- ZAP FLAPS**, see Aeroplanes, Wings.