

57
GENERAL ELECTRIC REVIEW

INDEX TO VOLUME XIII

January, 1910—December, 1910

GENERAL ELECTRIC COMPANY

Schenectady, N. Y.

INDEX TO VOLUME XIII

| | Page | | Page |
|---|------|---|---------------|
| A.I.E.E. Standardisation Rules of the, by Dr. C. P. Steinmetz..... | 34 | Gas Power, Producer, by C. L. Straub..... | 312 |
| Agriculture, Electrified, The Promise of, by Edmund P. Edwards..... | 546 | Gears for Motor-Driven Tools, with Special Reference to Cambrie Fixtons, by John Riddell..... | 284 |
| Arc Lamp, The Vertical Carbon Flame, by G. N. Chamberlin..... | 430 | General Electric Company, Annual Report of the..... | 286 |
| Automobiles, Electric, Motive Equipment for, by H. S. Baldwin..... | 232 | General Electric Repair Shop and Warehouse, Chicago, Ill., by John Liston..... | 297 |
| Baltimore & Ohio Railroad Company, Electric Locomotives for the, by S. T. Dodd..... | 533 | Generators, Rosenberg, by J. L. Hall..... | 39 |
| Beechnut Packing Company, by W. D. Bearce..... | 550 | Generators and Feeder Systems, Voltage Control of, by F. W. Shackelford..... | 424 |
| Bettendorf Asse Company, Davenport, Iowa, Installation of Low Pressure Turbine, by P. Bendixen..... | 354 | Great Northern Railway Company, The Electrification of the Cascade Tunnel of the, by W. I. Slichter..... | 349 |
| Billet Mill, A Motor-Operated, by B. E. Sempke..... | 210 | Hydro-Electrical Development in Southern Asia, The First Important, by H. P. Gibbs..... | 5 |
| Blowers, Exhaust Fan, for Residence Furnaces, by R. E. Barker..... | 43 | Hyperbolic Functions and Their Application to Transmission Line Problems, by W. E. Miller..... | 177, 220, 284 |
| Boat Haul and Ferry, Motor-Operated, by W. D. Bearce | 479 | Induction Motor, The Single-Phase, by Prof. J. H. Morecroft and M. Arndt..... | 187, 245 |
| Book Bindery, Motor Drive in a, by F. J. Chisolm..... | 421 | Induction Motor Construction, Some Points of Modern Practice in, by E. L. Farrer..... | 91 |
| BOOK REVIEWS. | | Insulation Against Electrical Impulse Forces, by C. P. Steinmetz..... | 470 |
| The Theory of Electric Cables and Networks, by Alexander Russel, A.M., D.S.C..... | 144 | John N. Robins Co., Erie Basin, Brooklyn, The Electrical Equipment of the, by G. S. Rose..... | 513 |
| Theory and Calculation of Transient Electrical Phenomena and Oscillation, by Charles Proteus Steinmetz..... | 239 | Lamps, Incandescence Electric, The Three-Voltage Rating of, by F. W. Wilcox..... | 446 |
| The Copper Handbook, Vol. IX..... | 384 | Light, Some Chemistry of, by W. R. Whitney..... | 101 |
| Books Received..... | 236 | LIGHTING. | |
| Catenary Line Material, by R. L. Hoffman..... | 516 | Notes on Electric Lighting, by Caryl D. Hawkins 432, 520, 566 | |
| Cars, Pay-As-You-Enter..... | 143 | Store Lighting, by P. L. Healy..... | 127 |
| Carbon Dioxide in Furnace Gases, Regulation of the Percentage of, by E. A. Barnes..... | 141 | Locomotives, Electric, for the Baltimore and Ohio Railroad Company, by S. T. Dodd..... | 533 |
| Cauvery Hydro-Electrical Development, India, A Financial Statement of the..... | 84 | Luminescence, by Dr. Charles P. Steinmetz..... | 379 |
| Central Station, Small, The Distribution of Electric Energy from a, by C. R. Croninger..... | 307 | Meter, A New Type of, for Measuring the Flow of Steam and Other Fluids, by A. R. Dodge..... | 134 |
| Circuit Breaker Installation, A Large Alternating Current, by D. E. Morgan..... | 524 | Meter Installation, An Interesting, by B. E. Sempke..... | 283 |
| Coal Colliery, The Westport-Stockton Company's, Westport, New Zealand, by W. A. Reece..... | 149 | Mines of the Davis Coal and Coke Company, Electricity in the, by R. Neil Williams..... | 268 |
| Color Testing, A New Method of, by R. B. Hussey..... | 419 | Molybdenum (See Tungsten.) | |
| Comets, Some Consideration as to the Nature of, and Their Probable Relation to the Sun, by Prof. Elihu Thomson..... | 304 | MOTORS. | |
| Compensators, by W. W. Lewis..... | 539 | Determination of Resistance Steps for the Acceleration of Series Motors, by E. R. Carthoff, M.A., and Harold Fender, Ph. D..... | 331 |
| Compensators, Starting, by E. P. Gehrkens..... | 130 | Sewing Machine Motors—Drawn Shell Type, by R. E. Barker..... | 92 |
| CONTROL. | | Single-Phase Induction Motor, The, by Prof. J. H. Morecroft and M. Arndt..... | 187, 245 |
| Automatic Load Regulation by Means of Water-Box Control, by Harold V. Green..... | 523 | Small Buffing and Grinding Motors—Drawn Shell Types, by R. E. Barker..... | 282 |
| Voltage Control of Generators and Feeder Systems, by F. W. Shackelford..... | 424 | Some Notes on the Behavior of D.C. Machines, by F. G. R..... | 456 |
| Conveyors (See Elevators). | | Some Points of Modern Practice in Induction Motor Construction, by E. L. Farrer..... | 91 |
| Davis Coal and Coke Company, Electricity in the Mines of the, by R. Neil Williams..... | 268 | MOTOR-DRIVE. | |
| Diamond Jewels, Life of, by F. G. Vaughan..... | 429 | Beechnut Packing Company, by W. D. Bearce..... | 530 |
| Distribution, Underground Electrical, by W. E. H. Clinton | 227 | Development of Electrical Drive in the Mills of the Proximity Manufacturing Company, by John P. Judge..... | 473 |
| Distribution of Electric Energy from a Small Central Station, The, by C. R. Croninger..... | 307 | Electric Drive in Pulp and Paper Mills, by John Liston..... | 437 |
| Drying Outfits, Oil and Transformer, by E. P. Gehrkens | 93 | Electricity on the Farm, by John Liston..... | 106 |
| Edison Medal, Presentation of..... | 191 | High Speed Motors for Woodworking Machinery, by John Liston..... | 251 |
| Electric Current in Rain and Snow Storms, by J. B. Taylor | 325 | Motor Drive in a Book Bindery, by F. J. Chisolm..... | 421 |
| Electric Light Plant, The, at Mukden, Manchuria..... | 422 | Motor-Operated Billet Mill, A, by B. E. Sempke..... | 210 |
| Electrical Measurements, Appliances for, by C. D. Hawkins 360, 413 | | Motor-Operated Rail Mill A, by B. E. Sempke..... | 85 |
| Elevators, Atmospheric, by Prof. Elihu Thomson..... | 53 | Motor-Operated Boat Haul and Ferry, by W. D. Bearce..... | 479 |
| Elevators and Conveyors, Electrically-Driven Portable | 302 | Power in the Silk Mill, by Andrew Kidd, Jr..... | 341 |
| Farm, Electricity on the, by John Liston..... | 166 | Union Bag & Paper Company, Hudson Falls, N. Y., by John Liston..... | 569 |
| Feeder Systems (See Control.) | | Mukden, Manchuria, The Electric Light Plant at..... | 428 |
| Fire-Damp Proof Apparatus, by William Baum..... | 402 | | |
| Furnace Economy, by F. W. Caldwell..... | 728 | | |
| Gases, Furnace, Regulation of the Percentage of Carbon Dioxide in, by E. A. Barnes..... | 141 | | |
| Gas-Electric Motor Car, Self Contained Type, by A. W. Jones..... | 30 | | |

| | Page |
|--|--|
| York, New Haven and Hartford Railroad, Readville Repair Shop of the, by A. I. Totten..... | 367 |
| Notes..... | 432, 480, 527, 576 |
| OBITUARY. | |
| John Trumbull Marshall..... | 96 |
| H. H. Buddy..... | 144 |
| James J. Mahony..... | 240 |
| Clinton Charles Burr..... | 384 |
| Theodore P. Bailey..... | 480 |
| Oil and Transformer Drying Outfits, by E. F. Gehrkens.. | 95 |
| Oscillograph, The, by L. T. Robinson..... | 485 |
| Paper Mills (See Motor Drive.) | |
| Pinions (See Gears.) | |
| Power Factor, Effect of Rotary Condensers on, by John Liston..... | 67 |
| Producer Gas Power, by C. L. Straub..... | 312 |
| Protective Devices, The Development of, for High Tension Circuits, by P. G. Langley..... | 333 |
| Proximity Manufacturing Company, Development of Electrical Drive in the Mills of, by John P. Judge..... | 472 |
| Pulp and Paper Mills, Electric Drive in, by John Liston.. | 437 |
| Rail Mill, A Motor-Operated, by B. E. Semple..... | 85 |
| Railroad, the 1200 Volt, A Study of Its Value for Inter-urban Railways, by Chas. E. Eveleth..... | 274 |
| Railway Electrification, Economics of, by Wm. Bancroft Potter..... | 389 |
| Railway, 1200 Volt D.C., Washington, Baltimore & Annapolis, by John R. Hewett..... | 492 |
| Reactive Power, Curves of, by V. Karapetoff..... | 477 |
| Regulators, Power Factor, by H. A. Laycock..... | 14 |
| Repair Shop, Readville, of the N. Y., N. H. & H. R.R., by A. I. Totten..... | 367 |
| Repair Shop and Warehouse, General Electric, Chicago, Ill., by John Liston..... | 297 |
| Rotary Condensers, The Effect of, on Power Factor, by John Liston..... | 67 |
| Schenectady Power Company, The Johnsonville Hydro-Electric Development of the, by John Liston..... | 118 |
| Series Motors, Determination of Resistance Steps for the Acceleration of, by E. R. Carichoff, M. A., and Harold Pender, Ph. D..... | 331 |
| Sewing Machine Motors—Drawn Shell Type, by R. E. Barker..... | 92 |
| Silk Mill, Power in the, by Andrew Kidd, Jr..... | 341 |
| Southern Power Company, Transmission System of the, by John Liston..... | 24 |
| Switchboard Specialists, First Annual Meeting of..... | 526 |
| Testing, Commercial Electrical, by E. F. Collins..... | 17, 78, 109, 159, 204, 259, 319, 357, 409, 460, 503, 563 |
| Toaster, Electric, for Hotels and Restaurants..... | 310 |

| | Page |
|---|--------------------|
| TRANSFORMERS. | |
| Apparent Change of Ratio of Transformation in Three-Phase Transformers, by G. Paccioli..... | 235 |
| The Elements of Transformer Construction, by W. A. Hall..... | 181, 212 |
| High Voltage Power Transformers of Large Size, by E. R. Pearson..... | 22 |
| 400,000 Volt Testing Transformer, by John J. Frank | 335 |
| Transformation of the Energy in Coal into Electrical Energy, Notes on the Magnitude of the Losses Incidental to the, by Dr. E. J. Berg..... | 293 |
| TRANSMISSION. | |
| Catenary Line Material, by R. L. Hoffman..... | 516 |
| Hyperbolic Functions and Their Application to Transmission Line Problems, by W. E. Miller..... | 177, 220, 264, 326 |
| Transmission Line Calculations, by Milton W. Franklin | 42, 72, 139 |
| Transmission Line, Key for the Complete Calculation of a, by Milton W. Franklin..... | 186 |
| Transmission Line Constants..... | 46 |
| Transmission System of the Southern Power Company, by John Liston..... | 24 |
| Tungsten, Duocils, and Molybdenum, by Colin G. Pink, Ph. D | 223 |
| TURBINES. | |
| The Relation of the Steam Turbine to Modern Central Station Practice, by G. R. Parker..... | 62 |
| The Curtis Turbine, by Charles B. Burleigh..... | 508, 560 |
| Installation of Low Pressure Turbine, Bettendorf Aale Company, Davenport, Iowa, by P. Bendixen..... | 554 |
| The Steam Turbine, by Ernst J. Berg..... | 399, 466 |
| The Turbine (Poem), by Harriet Monros..... | 625 |
| Water Rate and Coal Consumption of Turbines, by Dr. E. J. Berg..... | 376 |
| Union Bag and Paper Company, The, Hudson Falls, N. Y., by John Liston..... | 669 |
| Ventilating Outfits, Small, or Exhaust Fan Motors, by R. E. Barker..... | 310 |
| Washington, Baltimore & Annapolis Railway, 1200 Volt Direct Current, by John R. Hewett..... | 492 |
| WATER POWER. | |
| A Financial Statement of the Cauvery Hydro-Electrical Development, India..... | 84 |
| The First Important Hydro-Electrical Development in Southern Asia, by H. P. Gibbs..... | 5 |
| Johnsonville Hydro-Electrical Development of the Schenectady Power Company, by John Liston..... | 118 |
| Westport-Stockton Coal Company's Colliery, The, Westport, New Zealand, by W. A. Reece..... | 149 |
| Woodworking Machinery, High Speed Motors for, by John Liston..... | 251 |

INDEX TO AUTHORS

| | |
|---|----------|
| Arendt, M. | |
| The Single-Phase Induction Motor..... | 197, 245 |
| Baldwin, H. S. | |
| Motive Equipment for Electric Automobiles..... | 232 |
| Barker, R. E. | |
| Small Ventilating Outfits or Exhaust Fan Motors..... | 310 |
| Exhaust Fan Blowers for Residence Furnaces..... | 45 |
| Sewing Machine Motors—Drawn Shell Type..... | 92 |
| Small Buffing and Grinding Motors—Drawn Shell Type | 282 |
| Barnes, E. A. | |
| Regulation of the Percentage of Carbon Dioxide in Furnace Gases..... | 141 |
| Baum, William | |
| Fire-Damp Proof Apparatus..... | 402 |
| Beacroft, W. D. | |
| Beechnut Packing Company..... | 550 |
| Motor-Operated Boat Haul and Ferry..... | 479 |
| Bendixen, P. | |
| Installation of Low Pressure Turbine, Bettendorf Aale Co., Davenport, Ia..... | 551 |

| | |
|---|--|
| Berg, Ernst, J. | |
| Notes on the Magnitude of the Losses Incidental to the Transformation of the Energy in Coal into Electrical Energy..... | 293 |
| The Steam Turbine..... | 399, 466 |
| Water Rate and Coal Consumption of Turbines..... | 376 |
| Burleigh, Chas. B. | |
| The Curtis Turbine..... | 508, 560 |
| Caldwell, F. W. | |
| Furnace Economy..... | 236 |
| Carichoff, E. R., M.A. | |
| Determination of Resistance Steps for the Acceleration of Series Motors..... | 331 |
| Chamberlin, G. N. | |
| The Vertical Carbon Flame Arc Lamp..... | 430 |
| Chiswick, F. J. | |
| Motor Drive in a Book Bindery..... | 421 |
| Collins, E. F. | |
| Commercial Electrical Testing..... | 17, 78, 109, 159, 201, 239, 310, 357, 409, 460, 503, 563 |

| | Page | | Page |
|--|---------------|--|--------------------|
| Croninger, C. R. | | High Speed Motors for Woodworking Machinery | 251 |
| The Distribution of Electric Energy from a Small Central Station | 307 | The Effects of Rotary Condensers on Power Factor | 67 |
| Dodd, E. T. | | The Johnsonville Hydro-Electric Development of the Schenectady Power Co. | 118 |
| Electric Locomotives for the Baltimore & Ohio Railroad Company | 533 | The Union Bag and Paper Company, Hudson Falls, N. Y. | 569 |
| Dodge, A. R. | | Transmission System of the Southern Power Company | 24 |
| A New Type of Meter for Measuring the Flow of Steam and Other Fluids | 134 | Miller, W. E. | |
| Edwards, E. P. | | Hyperbolic Functions and Their Application to Transmission Line Problems | 177, 220, 264, 326 |
| The Promise of Electrified Agriculture | 546 | Monroe, Harriet | |
| Evelth, Charles E. | | "The Turbine" | 523 |
| The 1200 Volt Railroad—A Study of its Value for Interurban Railways | 274 | Morsecroft, Prof. J. H. | |
| Faccoli, G. | | The Single-Phase Induction Motor | 197, 243 |
| Apparent Change of Ratio of Transformation in Three-Phase Transformers | 235 | Morgan, D. S. | |
| Farrar, B. L. | | A Large Alternating Current Circuit Breaker Installation | 324 |
| Some Points of Modern Practice in Induction Motor Construction | 91 | P. O. R. | |
| Fink, Cohn G. | | Some Notes on the Behavior of D. C. Machines | 456 |
| Ductile Tungsten and Molybdenum | 323 | Parkes, G. R. | |
| Frank, John J. | | The Relation of the Steam Turbine to Modern Central Station Practice | 63 |
| 400,000 Volt Testing Transformer | 333 | Pearson, E. R. | |
| Franklin, M. W. | | High Voltage Power Transformers of Large Size | 22 |
| Key for the Complete Calculation of a Transmission Line | 186 | Pender, Harold | |
| Transmission Line Calculations | 43, 72, 139 | Determination of Resistance Steps for the Acceleration of Series Motors | 331 |
| Gehrlens, E. F. | | Potter, W. B. | |
| Oil and Transformer Drying Outfits | 95 | Economics of Railway Electrification | 389 |
| Starting Compensators | 130 | Reece, W. A. | |
| Gibbs, H. P. | | The Westport-Stockton Coal Company's Colliery, Westport, New Zealand | 149 |
| The First Important Hydro-Electrical Development in Southern Asia | 5 | Riddell, John | |
| Green, Harold V. | | Gears for Motor-Driven Tools with Special Reference to Cambric Pinions | 284 |
| Automatic Load Regulation by Means of Water-Box Control | 323 | Robinson, L. T. | |
| Hall, J. L. | | The Oscillograph | 485 |
| Rosenberg Generators | 39 | Rose, G. S. | |
| Hall, W. A. | | The Electrical Equipment of the John N. Robins Co., Erie Basin, Brooklyn | 413 |
| The Elements of Transformer Construction | 181, 212 | Semple, B. E. | |
| Haakins, C. D. | | An Interesting Meter Installation | 383 |
| Appliances for Electrical Measurements | 360, 413 | A Motor-Operated Bullet Mill | 210 |
| Notes on Electric Lighting | 432, 520, 366 | A Motor-Operated Rail Mill | 85 |
| Haseltine, W. E. | | Shackelford, F. W. | |
| Underground Electrical Distribution | 227 | Voltage Control of Generators and Feeder Systems | 424 |
| Healy, F. L. | | Slichter, W. I. | |
| Store Lighting | 127 | The Electrification of the Cascade Tunnel of the Great Northern Railway Company | 349 |
| Hewett, John R. | | Steinmetz, C. P. | |
| Washington, Baltimore & Annapolis 1200 Volt D. C. Ry. | 492 | Insulation Against Electrical Impulse Forces | 470 |
| Huffman, R. L. | | Luminescence | 379 |
| Catenary Line Material | 316 | Standardization Rules of the A.I.E.E. | 34 |
| Hunsey, R. B. | | Straub, C. L. | |
| A New Method of Color Testing | 419 | Producer Gas Power | 312 |
| Jones, A. W. | | Taylor, J. B. | |
| Gas-Electric Motor Car—Self Contained Type | 30 | Electric Current in Rain and Snow Storms | 325 |
| Judge, John P. | | Thomson, Prof. Elhu | |
| Development of Electrical Drive in the Mills of the Proximity Manufacturing Co., Greensboro, N. C. | 472 | Atmospheric Electricity | 53 |
| Karapetoff, V. | | Some Consideration as to the Nature of Comets and their Probable Relation to the Sun | 304 |
| Curves of Reactive Power | 477 | Totten, A. I. | |
| Kidd, Andrew, Jr. | | Readville Repair Shop of the N. Y. N. H. & H. R. R. | 367 |
| Power in the Silk Mill | 341 | Vaughen, F. G. | |
| Langley, P. C. | | Life of Diamond Jewels | 429 |
| The Development of Protective Devices for High Tension Circuits | 353 | Whitney, W. R. | |
| Laycock, H. A. | | Some Chemistry of Light | 101 |
| Power Factor Regulators | 14 | Wilcox, F. W. | |
| Lewis, W. W. | | The Three-Voltage Rating of Incandescent Electric Lamps | 446 |
| Compensators | 539 | Williams, R. Neil | |
| Liston, John | | Electricity in the Mines of the Davis Coal and Coke Company | 268 |
| Electric Drive in Pulp and Paper Mills | 437 | | |
| Electricity on the Farm | 166 | | |
| General Electric Repair Shop and Warehouse, Chicago | 297 | | |

