

(IV.) APPLIED MECHANICS.

STATICS—

The calculation of the Stresses in Framed Structures, Solid Beams, Stone Arches, etc. Both Graphical and Analytical Methods used.

THEORY OF THE STRENGTH OF MATERIALS.

DESIGNING OF STRUCTURES in Timber, Iron and Masonry, Arches, Retaining Walls, Foundations, Roofs, Bridges, etc.

DYNAMICS—

Representation and Measurement of Motions.

Principles of *Work* and *Energy*.

Efficiency of Machines. Friction.

Transmission of Work,—Belts, Shafts, Crank and Connecting rod, etc.

Fly-wheels, Governors.

Balancing of Machinery.

Etc., etc.

STRENGTH OF THE PARTS OF MACHINES.

HYDRAULICS—

Water Power, Flow of Water in Pipes and Channels. Water-wheels, Turbines, Pumps.

THERMO-DYNAMICS AND THEORY OF THE STEAM ENGINE.

Text-books and Books of Reference.—V. Ott—Graphic Statics.

DuBois—Graphical Statics.

Wood—Resistance of Materials.

“ Bridges and Roofs.

Rankine—Applied Mechanics.

Rankine—Steam Engine and other Prime Movers.