ELECTRICAL PRACTICE IN COLLIERIES: A MANUAL FOR COLLIERY MANAGERS, UNDER-MANAGERS, ENGINEERS, AND MINING STUDENTS

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DANIEL BURNS

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ELECTRICAL PRACTICE

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A Manual

FOR COLLIERY MANAGERS, UNDER-MANAGERS, ENGINEERS, AND MINING STUDENTS.

BY

DANIEL BURNS, M.Inst.M.E.,
CERTIFICATED COLLIERY MANAGER; LECTURER ON MINING AND GEOLOGY, THE GLASGOW AND WEST OF SCOTLAND TECHNICAL COLLEGE.

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PREFACE.

DURING recent years the application of electric power in and about collieries has been extending rapidly, and at present few collieries of importance are without installations for the generation of electricity.

This little book is written with the intention of giving a short description of a few of the principal applications of this form of energy about collieries, and to serve as a guide to students who may be preparing for Certificates as Mine Managers, and who will, as time advances, be called upon to deal with questions and methods such as are here dealt with.

The ever-increasing demand for electric power in mines should form a sufficient reason for this attempt to put some information of a practical nature before that section of the public whose interests are largely bound up with recent developments and improvements in coal-working machinery. No attempt has been made to deal with the purely scientific aspects of the subject, but merely to include such technical details that the author has found to be of service in his own practice, and which, he hopes, will be of some service to Mining Students, Colliery Managers, and other responsible officials who may have to deal with the electrical equipment of collieries.

Arithmetical examples have been included at the end of several of the Chapters for the benefit of those students who may peruse the book. The answers given to these examples are only correct to the nearest round number, having in most cases been obtained by the use of the slide rule. If any errors come under the observation of those using the book, the author would feel much obliged if they would point them out to him.

The author gratefully acknowledges his indebtedness to many of the Technical Journals for information included in the book, and has also to thank the General Electric Company, Messrs. Ernest Scott & Mountain, the British Thomson-Houston Company, Messrs. Mavor & Coulson, and the Grant Electric Drill Company for the loan of process blocks, and the Jeffrey and other Companies who supplied photographs of their manufactures.

He has also further to express his thanks to the publishers for the pains that have been taken both with the text and the illustrations.

D. B.

Glasgow, January, 1903.

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