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Surveying for Engineers

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Second Edition

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MACMILLAN

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Preface to the Second Edition

In the seven years that have passed since the publication of the first edition of *Surveying for Engineers* there have been several developments in engineering surveying, particularly in Electromagnetic Distance Measurement (EDM), micro-computers, data processing and in the acceptance of the need for a greater degree of control when setting out engineering works.

Consequently, when compiling this second edition, we have attempted to keep in step with current attitudes and, although the style of the book remains the same, several significant changes have been made.

The optical levels and levelling chapters have been combined as have the three distance measurement chapters. Much of the optical distance measurement material has been removed since such equipment and methods have been largely superseded by EDM techniques.

New chapters have been introduced dealing with triangulation, trilateration, intersection and resection since engineers are coming into contact with these techniques to a much greater extent than was the case in the past.

Within existing chapters, many amendments and changes have been incorporated. The setting-out chapter has been extended since this topic has gained in importance in recent years. The new Department of Transport design standards for highways are discussed in the curve chapters, trigonometrical heighting is introduced into the theodolites chapter, computerised plotting methods are discussed in the detail surveying chapter and more worked examples have been included throughout the book.

An introductory chapter has been added to provide a background to the subject and a guide to the professional and government bodies which are involved in surveying.

Although the book has been written with civil engineering students in mind, it is hoped that it will also be found useful by practising engineers as well as by any other students who undertake engineering surveying as a subsidiary subject.

The text covers engineering surveying up to the end of virtually all first-year and most second-year degree, diploma and BTEC courses in civil engineering, engineering geology, geography, surveying and other related disciplines at universities, polytechnics and colleges of technology. Other courses for which it is thought useful are O and A level surveying and the professional examinations of the various civil engineering related institutions.

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