

- (4) A less verbose one would be of more use;
- (5) The examples in the book may well be of use to teachers, but at this price they will borrow the book from the library.

LES GEE

Economics of Reliability in Electrical Power Systems

H. KHATIB

Technicopy Ltd, Stonehouse, Glos., 1978. 157 pp. £15.00/\$32.50

Only about a quarter of this book, reproduced from the author's (1974) doctoral thesis, truly reflects the title and this is a major criticism and disappointment.

Optimal reliability is defined as the level at which marginal cost (to the utility) and marginal utility (to consumer) of the last kWh secured are equal. The nature of consumer losses arising from supply disconnection are discussed together with some attempts at valuation; an unsupplied kWh being typically valued an order of magnitude higher than a delivered kWh. Although generally not demonstrated, the price/reliability relationship is unlikely to be greatly sub-optimal, having evolved over many decades. The margin of generation above expected demand and the measure of network redundancy providing this reliability are to some degree self-financing. With "excessive" generating margins a favoured point of attack for pressure groups worldwide, discussion of reliability economics is timely.

An algorithm developed by the author for generation production costing is described in Chapter 3. This schedules generation economically, allows for breakdown, plans maintenance so as to minimise loss of reliability and calculates values of a new reliability index and unsupplied energy (resulting from generation deficits). Areas of application are noted.

Most of the remaining half of the book deals with reliability evaluation (and general concepts) and its application to the generating system in particular, critical review of a number of generation reliability indices being followed by description of a new one claimed to overcome some of the noted deficiencies.

Proof reading is not apparent from the profuse number of errors and, considering the price, better might have been expected. The publisher should at least make available a list of errors and omissions. No index is provided and the numbered references and minus signs are, in places, almost imperceptible.

More for advanced students and young engineers in electrical power, however, the O.R. worker interested in cost benefit analysis could usefully look at the parts cited above (Ch. 5 etc.) on reliability economics.

ROY JENSEN

Infinitely Divisible Point Processes

K. MATTHES, J. KERSTAN and J. MECKE

John Wiley, New York, 1977. 529 pp. £17.50

This work sets the foundations for the developments over the last ten or more years of the theory of point processes, most of these carried out by the authors. The style is in the vein of pure mathematical probability theory and the readership must be limited to those interested in that specialist field. The applications of point processes, particularly marked processes, are numerous, but whereas the theoretical background of these is covered for the first time in this English Edition (not in the original German Edition) there will be no immediate assistance for the practical man. This is a definitive pure research treatise.

W. D. RAY