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METODE ALE CERCETĂRII OPERAȚIONALE ÎN GESTIUNEA ÎNTREPRINDERILOR

(Methods of Operational Research in Enterprise Management)

Editura Tehnică seria „Bazele matematice ale cercetării operaționale", Bucharest 1972, 286 pag.

In the present stage of development of modern society, the problems of enterprise administration must be approached in an ever more complex way, to this purpose considering psycho-sociological, technological criteria, etc. To solve these problems, it is necessary to apply to mathematical modelling and to modern computing equipment with a view to obtaining solutions ensuring a maximum efficiency.

Taking these considerations into account, the initiative of the Technical Publishing House to publish a work on the applications of operational research in the administration problems in industrial enterprises is welcome.

In the first chapter, the enterprise is considered as a cybernetic system, the stages of the projection and implementation of a modern administration system being presented: the informational-decisional analysis, the general informational-decisional projection, the analysis and projection of the data processing system, its simulation and implementation.

The second chapter deals with the multidimensional decisions, dwelling on linear programming with several optimum functions, a field in which the authors have made original contributions.

The next two chapters are devoted to the effective programming of production, a problem holding a big share in the organization of production. The static problems of the effective programming of production are presented at the beginning: the assignment of workers on places of work, the loading of equipment, classification, the grouping on technological lines and the location of equipment and the piling of optimum lots.

Chapter four presents the dynamic problems of the effective programming of production: the ordering of operation-details, the establishment of the necessary resources, the flows of raw and related materials and of semi-products and a model of the complex problem of the effective programming of production is formulated in the end.

A method for the simultaneous solution to the problems in connection with the loading of equipment, lotting, ordering, the stocking of semi-products and the use of resources is presented within the complex problem of the effective programming of production.

The last chapter dwells on the problem of the cutting of materials, which leads to the savings of metal, wood, etc. The original methods for the cutting of rectangular elements is being especially developed.

The work contains illustrative examples explaining the theoretical aspect of the expounded problems. Each chapter ends with rich reference material, comprising works of speciality from the country and from abroad.

The work is intended for economists, engineers, mathematicians in industrial enterprises or computation centres as well as for students in the economic and technical education.

The topicality of the problems approached and the level of treatment make of the book "Methods of operational research in enterprise administration" a valuable instrument of study and it opens up new extremely interesting directions of study, which, obviusly, have to be continued.

Prof. dr. P. Burloiu