TRUDY INSTITUTA MATEMATIKI I MEKHANIKI UrO RAN

Vol. 22 No. 3 **2016**

DOI: 10.21538/0134-4889-2016-22-3-200-211

MSC: 90C05, 90C46

DUALITY AND CORRECTION OF INCONSISTENT CONSTRAINTS FOR IMPROPER LINEAR PROGRAMMING PROBLEMS

Received February 19, 2016

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We continue the study of approximation properties of alternative duality schemes for improper problems of linear programming. The schemes are based on the use of the classical Lagrange function regularized simultaneously in direct and dual variables. The results on the connection of its saddle points with the lexicographic correction of the right-hand sides of constraints in improper problems of the first and second kind are transferred to a more general type of improperness. Convergence theorems are presented and an informal interpretation is given for the obtained generalized solution.

Keywords: linear programming, duality, improper problems, generalized solutions, regularization, penalty methods.

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Cite this article as:
L. D. Popov, V. D. Skarin, Duality and correction of inconsistent constraints for improper linear programming problems, *Trudy Inst. Mat. Mekh. UrO RAN*, 2016, vol. 22, no. 3, pp. 200–211 .