INEQUALITIES OF FURUTA AND MOND–PEČARIĆ

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Abstract. Furuta gives extensions of inequalities due to Ky Fan and Mond-Pečarić which are associated with Hölder-McCarthy and Kantorovich type inequalities. In this paper, inspired by Furuta’s idea, we shall generalize a theorem by Mond-Pečarić on the converse of Jensen’s inequality. It explains us Furuta’s generalizations well. As applications, we shall show general difference and ratio inequalities that can be given for several positive operators on a Hilbert space and give the explicit expressions in their estimations.

Key words and phrases: operator inequality, Kantorovich inequality, Jensen’s inequality.

REFERENCES