

QUASI-WEAKLY COMPACT OPERATORS IN NORMED SPACES

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[Received 25 September 2000. Read 26 September 2001. Published 31 December 2002.]

ABSTRACT

We study the quasi-weakly compact operators between normed spaces, which are described in terms of their first and second conjugates. Using a result on factorisation of an arbitrary linear operator due to T. Alvarez, R.W. Cross and M. Gonzalez (Factorization of unbounded thin and cothin operators, *Quaestiones Mathematicae* 22 (1999), 519–29), we obtain that quasi-weakly compact operators admit factorisations through quasi-reflexive Banach spaces. As an application, we derive the connection between quasi-weak compactness of the operator and that of this conjugate, and we show examples and special cases. A condition is given for a quasi-weakly compact operator to be strictly singular or strictly cosingular.