A SPECTRAL CHARACTERIZATION OF ABSOLUTELY NORMING OPERATORS ON S. N. IDEALS

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Abstract. The class of absolutely norming operators on complex Hilbert spaces of arbitrary dimensions was introduced in [6] and a spectral characterization theorem for these operators was established in [11]. In this paper we extend the concept of absolutely norming operators to various symmetric norms. We establish a few spectral characterization theorems for operators on complex Hilbert spaces that are absolutely norming with respect to various symmetric norms. It is also shown that for many symmetric norms the absolutely norming operators have the same spectral characterization as proven earlier for the class of operators that are absolutely norming with respect to the usual operator norm. Finally, we prove the existence of a symmetric norm on the algebra \( \mathcal{B}(\mathcal{H}) \) with respect to which even the identity operator does not attain its norm.

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REFERENCES

