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**Zbl 1034.47044****Oertel, Frank****Extension of finite rank operators and operator ideals with the property (I).**

(English)

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The author is interested in the study of the adjoint operator ideal  $(\mathcal{U}^*, \mathbf{A}^*)$  of an injective and totally accessible maximal Banach ideal  $(\mathcal{U}, \mathbf{A})$ . In order to decide if  $(\mathcal{U}^*, \mathbf{A}^*)$  is itself totally accessible, the author introduces criteria and related techniques based on the extension of finite rank operators, viewed as elements of the adjoint ideal  $(\mathcal{U}^*, \mathbf{A}^*)$ . In particular, combining these methods with a factorization property for finite rank operators due to *H. Jarchow* and *R. Ott* [Math. Nachr. 108, 23–37 (1982; Zbl 0523.47030)], it is shown that  $\mathcal{L}_\infty$  and  $\mathcal{L}_1$  cannot be totally accessible, thus solving an open problem of *A. Defant* and *K. Floret* [“Tensor norms and operator ideals” (North Holland Math. Studies 176, Amsterdam: North-Holland) (1993; Zbl 0774.46018)].

*K. W. Lucas**Keywords* : principle of least reflexivity; totally accessible operator ideal*Classification* :

- \*47L20 Operator ideals
- 46M05 Tensor products of topological linear spaces
- 46B07 Local theory of Banach spaces
- 46B28 Normed linear spaces of linear operators, etc.