

ON THE INJECTIVE NORM OF $\sum_{i=1}^n A_i \otimes B_i$ AND CHARACTERIZATION OF NORMALOID OPERATORS

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Abstract. Let $\mathcal{B}(H)$ denotes the C^* -algebra of all bounded linear operators acting on the complex Hilbert space H . In this note, we shall give some lower estimates for the injective norm of the element $\sum_{i=1}^n A_i \otimes B_i$ in the tensor product $\mathcal{B}(H) \otimes \mathcal{B}(H)$, where $A = (A_1, \dots, A_n)$ and $B = (B_1, \dots, B_n)$ are two n -tuples of elements in $\mathcal{B}(H)$; and we shall characterize the normaloid operators in $\mathcal{B}(H)$ using the injective norm.

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