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**MR1393002 (97b:47046)****[Oertel, F.](#)****Compositions of operator ideals and their regular hulls. (English summary)**

23rd Winter School on Abstract Analysis (Lhota nad Rohanovem, 1995; Poděbrady, 1995).

*Acta Univ. Carolin. Math. Phys.* **36** (1995), *no. 2*, 69–72.[47D50](#) ([46B28](#) [47B10](#))

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The regular hull  $\mathcal{A}^{\text{reg}}$  of a quasi-Banach operator ideal  $\mathcal{A}$  in the sense of Pietsch consists of all operators  $T: X \rightarrow Y$  (between Banach spaces) which, considered as operators with values in the bidual  $Y''$  of  $Y$ , belong to  $\mathcal{A}$ . The author studies the regular hull of the composition  $\mathcal{A} \circ \mathcal{B}$  of two ideals  $\mathcal{A}$  and  $\mathcal{B}$ —such objects appear naturally in the context of trace duality. As an application he proves that  $\mathcal{N}^{\text{reg}} = \mathcal{J} \circ \mathcal{W}$  which follows by standard arguments from Grothendieck's important formula  $\mathcal{N} = \mathcal{W} \circ \mathcal{J}$  (here  $\mathcal{N}, \mathcal{W}, \mathcal{J}$  stands for the ideal of nuclear, weakly compact and integral operators, respectively).

{For the entire collection see [MR1392994 \(96m:00021\)](#)}

**Reviewed** by [Andreas Defant](#)

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