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Weyl's Theorem for Algebraically (p, k) -Quasihyponormal Operators

Let A be a bounded linear operator acting on a Hilbert space H . The B -Weyl spectrum of A is the set $\sigma_{Bw}(A)$ of all $\lambda \in \mathbb{C}$ such that $A - \lambda I$ is not a B -Fredholm operator of index 0. Let $E(A)$ be the set of all isolated eigenvalues of A . Recently M. Berkani and A. Arroud [J. Aust. Math. Soc. 76 (2004) 291–302] showed that if A is hyponormal, then A satisfies the generalized Weyl's theorem $\sigma_{Bw}(A) = \sigma(A) \setminus E(A)$, and the B -Weyl spectrum $\sigma_{Bw}(A)$ of A satisfies the spectral mapping theorem. Y. M. Han and W. Y. Lee [Proc. Amer. Math. Soc. 128 (2000) 2291–2296] showed that Weyl's theorem holds for algebraically hyponormal operators. In this paper the above results are generalized to an algebraically (p, k) -quasihyponormal operator which includes an algebraically hyponormal operator.

Keywords: Hyponormal operator, (p, k) -quasihyponormal operator, Generalized Weyl's theorem, Browder's theorem.

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