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ON (n,k)–QUASI CLASS Q^* OPERATORS

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Abstract. Let T be a bounded linear operator on a complex Hilbert space H. In this paper we introduce a new class of operators: (n,k)-quasi class Q^* operators, superclass of (n,k)-quasi-$*$-paranormal operators.

An operator T is said to be (n,k)-quasi class Q^* if it satisfies

$$\|T^*(T^kx)\|^2 \leqslant \frac{1}{n+1}\left(\|T^{n+1}(T^kx)\|^2 + n\|T^kx\|^2\right),$$

for all $x \in H$ and for some nonnegative integers n and k. We will prove structural and spectral properties of this class of operators, and also prove the spectrum continuity of this class of operators.

Mathematics subject classification (2020): Primary 47B20; Secondary 47A80, 47B37.
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