

On the Kegel–Wielandt σ -Problem

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Abstract—For an arbitrary partition σ of the set \mathbb{P} of all primes, a sufficient condition for the σ -subnormality of a subgroup of a finite group is given. It is proved that the Kegel–Wielandt σ -problem has a positive solution in the class of all finite groups all of whose nonabelian composition factors are alternating groups, sporadic groups, or Lie groups of rank 1.

Keywords: finite group, σ -subnormal subgroup, Kegel–Wielandt σ -problem, Hall subgroup, complete Hall set.

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