Bastos, Raimundo; Silveira, Danilo
Bounded Engel elements in residually finite groups satisfying an identity. (English)
Commun. Algebra 49, No. 6, 2556-2562 (2021)

Summary: Let $G$ be a $m$-generator residually finite group. We show that: 1) if every $\gamma_k$-value in $G$ is right $n$-Engel, then $\gamma_k(G)$ is $s$-Engel for some $(k, m, n)$-bounded number $s$; 2) if $G$ satisfies an identity $w \equiv 1$ and $G$ can be generated by a commutator-closed set of left $n$-Engel elements, then $G$ has $(m, n, w)$-bounded class. 3) if $G$ has a specific generating set $X$ in which some power of each element in $X$ is a bounded left Engel, then $G$ is virtually nilpotent.

MSC:
20E26 Residual properties and generalizations; residually finite groups
20F40 Associated Lie structures for groups
20F45 Engel conditions

Keywords:
Engel elements; Lie algebras; residually finite groups

Full Text: DOI

References:


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