The Restrained Geodetic Number of a Line Graph

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Abstract

For any graph $G(V,E)$, the line graph of $G$ denoted by $L(G)$. The Line graph $L(G)$ whose vertices corresponds to the edges of $G$ and two vertices in $L(G)$ are adjacent if and only if the corresponding edges in $G$ are adjacent. A geodetic set $S \subseteq V(G)$ of a graph $G = (V,E)$ is a restrained geodetic set if the subgraph $V-S$ has no isolated vertex. The minimum cardinality of a restrained geodetic set is the restrained geodetic number. In this paper we obtained the restrained geodetic number of line graph of any graph. Also, obtained many bounds on restrained geodetic number in terms of elements of $G$ and covering number of $G$.

References

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Keywords

Cross product, Distance, Geodetic number, Line graph, Vertex covering number