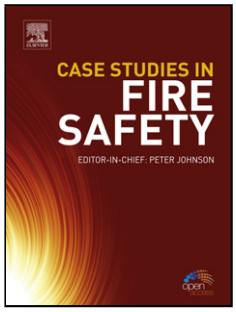

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Relationship between inhibition performance of melamine derivatives and molecular structure for mild steel in acid solution

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Highlights:

- Five similar melamine derivatives were employed as corrosion inhibitors.
- Their inhibition performances were evaluated experimentally and theoretically.
- The inhibition effects were correlated to their molecular structures.
- The effects of number and chain length of substituent were discussed.

Abstract

The influence of substituent groups on the inhibition performance of the heterocyclic ring is attractive in the field of corrosion inhibitor. The modification of various polar functional groups including dimethylamino ethyl and dimethylamino propyl groups on