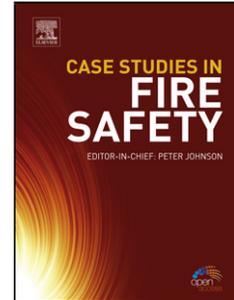


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The role of acetic acid or H^+ in initiating crevice corrosion of N80 carbon steel in CO_2 -saturated NaCl solution

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Highlights:

- Crevice corrosion could be initiated by concentration difference either HAc or H^+ .
 - The total corrosion rate inside and outside crevice decreases after connection.
 - The corrosion rate inside crevice becomes higher than that outside crevice.
 - Equilibrium potential of HAc reduction is more positive than that of H^+ reduction.
 - Greater galvanic effect and more severe crevice corrosion in the solution with HAc.
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