converted to HS^- by OH^- ions. The appearence of the cathodic peak at round -1000mV may be due to the discharge of water yielding atomic hydrogen along with H_2S formation.

CONCLUSIONS

On gold, the oxidation of HS^- to S_2^{2-} is reversible and is followed by the oxidation to sulphur which gets incorporated into the hydrous film on gold. Breakdown of these films and pitting susceptibility increased with alkali concentration. On the sulphur covered gold surface, the oxygen reduction was not observed and H_2S gas evolved along with hydrogen.

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