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(54) Title: **ATOMIZED POLYSULFIDE USED IN ETHYLENE STEAM CRACKER**

(57) Abstract: Dialkyl polysulfides can be added to hydrocarbon gas fed streams for alkene steam crackers for the petrochemical industry. The polysulfides act as sulfiding agents for surfaces of the steam crackers and thereby reduce coking and CO generation. A preferred polysulfide is a di-t-butyl polysulfide. Such compounds tend to have lower vapor pressure, reasonable viscosities, and are relatively nonflammable as compared to the lower molecular weight sulfur containing compounds.