

عنوان مقاله:

Replacing DSO with DMDS in ethane steam cracking and investigating its effect on coke deposition and CO production

محل انتشار:

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تعداد صفحات اصل مقاله: 12

نویسندگان:

Somayeh Mohebi - *Research and Development Center, Jam Petrochemical Company, Pars Special Economic Energy Zone, Iran*

Akbar Bolhasani - *Department of Chemical Engineering, Shiraz University, Shiraz, Iran*

Shahin Hosseini - *Research and Development Center, Jam Petrochemical Company, Pars Special Economic Energy Zone, Iran*

Soroush Karamian - *Department of Chemical Engineering, Shiraz University, Shiraz, Iran*

Ali Darvishi - *Department of Chemical Engineering, Shiraz University, Shiraz, Iran*

Faraz khanblouk - *Chemistry and Chemical Engineering Research Center of Iran (CCERCI), Tehran, Iran*

خلاصه مقاله:

Disulfide oil (DSO) is a by-product of refineries obtained by removing mercaptans from hydrocarbon compounds and has many adverse environmental effects. In this paper, we try to replace this base sulfide compound with the valuable DMDS, which is used in cracking furnaces for olefin production as a coke and CO inhibitor and evaluate the refining of this material to extract beneficial sulfide compounds such as DMDS in it. After extracting DMDS, it can be used directly in steam cracking of hydrocarbons. DEDS and MEDS are significant components of DSO and cannot reduce coke formation as much as DMDS due to their different decomposition temperature compared to DMDS. Also, each of them releases various free radicals after decomposition. Therefore, refining DSO and separating the DMDS from it, which is more valuable than other compounds, could make a suitable source of inhibitor for the olefin plants.

کلمات کلیدی:

steam cracking, olefin production, coke reduction, disulfide oil, DMDS

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