Claims

1. A process for producing a hydrocarbon stream with reduced CS_2 content, comprising contacting a hydrocarbon stream containing CS_2 with a solid reactive CS_2-scavenger which contains primary and/or secondary amino group-bearing hydrocarbon residues attached to a solid inorganic support, at a temperature in the range of from 0 to 300° C, and separating the obtained reaction product of CS_2 and reactive CS_2-scavenger from the hydrocarbon stream, wherein the hydrocarbon stream is a naphtha containing stream and the primary and/or secondary amino group-bearing hydrocarbon residues are aliphatic hydrocarbon residues bearing at least two amino groups.

2. The process according to claim 1, wherein the naphtha containing stream is a steam cracker feed stream or a stream coming from a steam cracker or subsequent extraction and/or distillation unit.

3. The process according to claim 1 or 2, wherein the solid reactive CS_2-scavenger is employed in the form of a slurry, a fluidized bed or fixed bed.

4. The process according to one of claim 1 to 3, wherein the solid inorganic support is selected from silica, alumina, magnesia, titania, zirconia or mixed oxides thereof or zeolites, aluminosilicates, spinels or carbon, wherein these supports can be coated with organic layers, preferably from silica gel particles.

5. The process according to one of claims 1 to 4, wherein the hydrocarbon residues each bear at least one primary and/or at least one secondary amino group, preferably at least one terminal primary or secondary amino group.

6. The process according to claim 5, wherein the primary and/or secondary amine groups in the hydrocarbon residue are separated from each other by a linear C_2-C_{11}-alkylene residue.

7. The process according to claim 5, wherein one primary amino group at the end of and at least one secondary amino group inserted in a linear C_{3-20}-alkylene residue are attached to the solid support, and/or wherein at least one tertiary amino group and/or secondary amino group is inserted in a branched or cyclic C_{5-20}-alkylene residue being attached to the solid support.

8. The process according to one of claims 1 to 7, wherein the aliphatic hydrocarbon residues are coupled with the solid support through an alkoxysilyl group, preferably trialkoxysilyl group, or through a hydroxysilyl group.

9. The process according to one of claims 1 to 8, wherein the solid reactive CS_2-scavenger is formed by reacting a solid support, selected from silica, alumina, magnesia, titania, zirconia or mixed oxides thereof or zeolites, aluminosilicates, spinels or carbon with N-(trialkoxysilylalkyl)alkylenediamine, preferably N-(3-

(Trimethoxysilyl)propyl)ethylenediamine, and/or wherein the solid reactive CS_2-scavenger contains 0.1 to 60 mmol, preferably 0.2 to 30 mmol, more preferably 0.5 to 7.5 mmol primary and secondary amino groups/g.