(A) A sulfur-containing compound removal method involving a step of bringing crude hydrocarbons, including at least one sulfur-containing compound selected from the group consisting of carbon disulfide and mercaptans, into contact with amide compounds ~~and nitrites~~ containing 0.5 to 50 ppm of nitrite.

(B) A manufacturing method of purified hydrocarbons involving the sulfur-containing compound removal method as described in above (A).

EFFECTS OF THE INVENTION

[0009]

According to the sulfur-containing compound removal method of the invention, the sulfur-containing compounds, especially carbon disulfide and mercaptanes, included in hydrocarbons is easily and efficiently removed; and in a subsequent step, which can contribute to a quality improvement of products obtained by the distillation purifying.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING

[0010]

[FIG. 1] Fig. 1 is a schematic configuration of an apparatus used in the invention.BEST MODE FOR WORKING THE INVENTION

[0011]

Hereinafter, the invention will be described in detail. The method of removing the sulfur-containing compounds of the invention includes a method of bringing crude hydrocarbons, including at least one sulfur-containing compound selected from a group consisting of carbon disulfide and mercaptans, into contact with amide compounds and nitrites.

[0012]

The crude hydrocarbons are generally a hydrocarbon including various sulfur-containing compounds. Among those sulfur-containing compounds,

CLAIMS

1. A sulfur-containing compound removal method comprising

a step of bringing a crude hydrocarbon, comprising at least one sulfur-containing compound selected from the group consisting of carbon disulfide and mercaptans, into contact with an amide compound and a nitrite.

2. The sulfur-containing compound removal method as set forth in claim 1, wherein

the crude hydrocarbon is C4 fraction composed mainly of a hydrocarbon having a carbon number of 4 or C5 fraction composed mainly of a hydrocarbon having a carbon number of 5.

3. The sulfur-containing compound removal method as set forth in claim 1, subsequent to the step of bringing the crude hydrocarbon into contact with the amide compound and the nitrite, further comprising a distillation step, wherein

the amide compound and the nitrite are separated from the crude hydrocarbon and then a purified hydrocarbon, in which a content of the sulfur-containing compound is decreased, is collected.

4. The sulfur-containing compound removal method as set forth in claim 2, subsequent to the step of bringing the crude hydrocarbon into contact with the amide compound and the nitrite, further comprising a distillation step, wherein

the amide compound and the nitrite are separated from the crude hydrocarbon and then a purified hydrocarbon, in which a content of the sulfur-containing compound is decreased, is collected.

5. The sulfur-containing compound removal method as set forth in claim 3, wherein

the content of sulfur-containing compound in the crude hydrocarbon is 1 ppm or more and 10,000 ppm or less, and

the content of the sulfur-containing compound in the purified hydrocarbon is 300 ppm or less and less than the content of the sulfur-containing compound in the crude hydrocarbon.

6. The sulfur-containing compound removal method as set forth in claim 4, wherein

the content of sulfur-containing compound in the crude hydrocarbon is 1 ppm or more and 10,000 ppm or less, and

the content of the sulfur-containing compound in the purified hydrocarbon is 300 ppm or less and less than the content of the sulfur-containing compound in the crude hydrocarbon.

7. A manufacturing method of the purified hydrocarbon including the sulfur-containing compound removal method as set forth in any one of claims 3 to 6.

CLAIMS

1. A sulfur-containing compound removal method comprising

a step of bringing a crude hydrocarbon, comprising at least one sulfur-containing compound selected from the group consisting of carbon disulfide and mercaptans, into contact with an amide compound containing 0.5 to 50 ppm of nitrite.

2. The sulfur-containing compound removal method as set forth in claim 1, wherein

the crude hydrocarbon is C4 fraction composed mainly of a hydrocarbon having a carbon number of 4 or C5 fraction composed mainly of a hydrocarbon having a carbon number of 5.

3. The sulfur-containing compound removal method as set forth in claim 1, subsequent to the step of bringing the crude hydrocarbon into contact with the amide compound and the nitrite, further comprising a distillation step, wherein

the amide compound and the nitrite are separated from the crude hydrocarbon and then a purified hydrocarbon, in which a content of the sulfur-containing compound is decreased, is collected.

4. The sulfur-containing compound removal method as set forth in claim 2, subsequent to the step of bringing the crude hydrocarbon into contact with the amide compound and the nitrite, further comprising a distillation step, wherein

the amide compound and the nitrite are separated from the crude hydrocarbon and then a purified hydrocarbon, in which a content of the sulfur-containing compound is decreased, is collected.

5. A manufacturing method of the purified hydrocarbon including the sulfur-containing compound removal method as set forth in any one of claims 3 to 4.