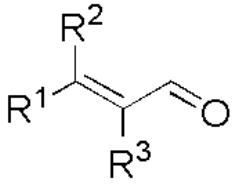
CLAIMS

[Claim 1]

A method for removing a sulfur-containing compound, which includes bringing the composition containing an α,β-unsaturated aldehyde represented by the following general formula (1) as an active ingredient in contact with liquid or vapor, the sulfur-containing compound being hydrogen sulfide, an -SH group-containing compound or a mixture thereof, and

the liquid or vapor is a water or a hydrocarbon:



(1)

wherein R^1 and R^2 each independently represent an alkyl group having 1 to 5 carbon atoms or an aryl group having 6 to 12 carbon atoms, or are connected to each other to represent an alkylene group having 2 to 6 carbon atoms; and R^3 represents a hydrogen atom or an alkyl group having 1 to 5 carbon atoms, or is connected to R^1 to represent an alkylene group having 2 to 6 carbon atoms.

[Claim 2]

The method according to claim 1, wherein R^3 is a hydrogen atom.

[Claim 3]

The method according to claim 1 or 2, wherein the hydrocarbon is at least one selected from the group consisting of natural gas, liquefied natural gas, sour gas, crude oil, naphtha, heavy aromatic naphtha, gasoline, kerosene, diesel oil, gas oil, heavy oil, FCC slurry, asphalt and oilfield condensate.

[Claim 4]

The method according to any of claims 1 to 3, wherein the α,β-unsaturated aldehyde contained in the composition is added in an amount of 0.1 to 100 parts by mass relative to 1 part by mass of the sulfur-containing compound contained in the liquid or vapor.

[Claim 5]

The method according to any of claims 1 to 4, comprising bringing the composition in contact with the sulfur-containing compound at a temperature in a

range of -30°C to 150°C.