based on the mixing ratios shown in Table 1. A cold flow improver (Infineum R240 manufactured by Infineum Japan Ltd.) was added at 200 ppm by mass to the mixture, thereby obtaining gas oil compositions used as samples.

[0037]

For the gas oil compositions obtained in Examples and Comparative Examples above, after the properties were measured (note that the distillation temperature, cloud point, flash point, and cetane index were measured only with respect to Example 2, Comparative Example 1, and Comparative Example 2), the pour point and kinetic viscosity were evaluated. The results are shown in Table 1.

As for the conditions suitable for use under very low temperature weather conditions, cases where the requirements for the pour point of −70 °C to −35 °C and the kinetic viscosity at 30 °C of 1.5 $mm^2/s$ to 4.0 $mm^2/s$ were met were evaluated as "preferable (+)", whereas cases where the requirements for the pour point of −66 °C to −55 °C and the kinetic viscosity at 30 °C of 2.0 $mm^2/s$ to 3.5 $mm^2/s$ were met were evaluated as "particularly preferable (++)". On the other hand, cases where none of the above conditions were met were evaluated as "poor (−)".

[0038]

[Table 1]

[0039]

The results in Table 1 show that the gas oil compositions obtained in Examples had good quality even if they were used under very low temperature weather conditions, and in particular, Examples 1 to 3 that met the preferred ranges of the present invention achieved better quality.

On the other hand, for the gas oil compositions obtained in Comparative Examples, it was found that they deposited in the form of wax under very low temperature weather conditions or their kinetic viscosity was insufficient.

## INDUSTRIAL APPLICABILITY

[0040]

The present invention has particularly advantageous effects in that a gas oil composition providing superior low temperature performance as compared with the case of using the conventional techniques can be provided and an oil having a high normal paraffin content, such as FT synthetic oil can easily be used as a feedstock of the gas oil composition.

based on the mixing ratios shown in Table 1. A cold flow improver (Infineum R240 manufactured by Infineum Japan Ltd.) was added at 200 ppm by mass to the mixture, thereby obtaining gas oil compositions used as samples.

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[0038]

[Table 1]

| | | Example 1 | Example 2 | Example 3 | Example 4 | Comparative Example 1 | Comparative Example 2 |
|---|---|---|---|---|---|---|---|
| Light gas oil blnedstock | vol% | 20 | 40 | 60 | 80 | 0 | 100 |
| Heavy gas oil blnedstock | vol% | 80 | 60 | 40 | 20 | 100 | 0 |
| CFI Addition amount | mass ppm | 200 | 200 | 200 | 200 | 200 | 200 |
| 5 % Distillation temperature | ℃ | | 187.5 | | | 252 | 165 |
| 50 % Distillation temperature | ℃ | | 251 | | | 293.5 | 197 |
| 95 % Distillation temperature | ℃ | | 322 | | | 339 | 238 |
| 97 % Distillation temperature | ℃ | | 329 | | | 346 | 242 |
| Sulfur content | ppm | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 |
| Aromatic content | mass% | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 |
| Density | $g/cm^3$ | 0.776 | 0.769 | 0.762 | 0.755 | 0.783 | 0.749 |
| Cloud point | ℃ | | -56 | | | -6 | £ -25 ℃ |
| Pour point | ℃ | -56 | -58 | -57 | -53 | -54 | -53 |
| Flash point | ℃ | | 59 | | | 88 | 48 |
| Cetane index | | | 84 | | | 94.4 | 73.1 |
| Paraffin content | mass% | ³ 99.5 | ³ 99.5 | ³ 99.5 | ³ 99.5 | ³ 99.5 | ³ 99.5 |
| C5-15 Paraffin content | mass% | 40 | 55 | 69 | 84 | 26 | 99.7 |
| C20-27 Paraffin content | mass% | 14 | 11 | 7 | 4 | 17 | 0 |
| Isoparaffin content | mass% | 71 | 66 | 59 | 54 | 76 | 48 |
| Normal paraffin content | mass% | 29 | 34 | 41 | 46 | 24 | 52 |
| Normal paraffin content/Isoparaffin content | mass% | 0.4 | 0.5 | 0.7 | 0.9 | 0.3 | 1.1 |
| Pour point | ℃ | -56 | -58 | -57 | -53 | -54 | -53 |
| Kinetic viscosity (30 ℃) | $mm^2/s$ | 3.2 | 2.5 | 2.1 | 1.7 | 4.1 | 1.4 |
| Evaluation | | ++ | ++ | ++ | + | - | - |

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