AMENDED CLAIMS
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What is claimed is:

1. A method for preparing a kerosene jet fuel product in accordance with the thermal oxidation stability specification of ASTM D1655, comprising:

(i) determining a breakpoint in conformance with test method ASTM D3241 for a first sample of a jet fuel distillate fraction in accordance with ASTM Standard Specification D1655 having an initial boiling point of at least 140°C and a final boiling point not more than 300°C, at least a portion of the distillate fraction being derived from a first pre-refined crude oil that has been subjected to conversion in a hydrogen-limited environment but not subjected to hydroprocessing prior to shipment to a refinery, at least 5% of the jet fuel distillate fraction comprising molecules formed during the conversion;

(ii) maintaining a second sample of the jet fuel distillate fraction at a temperature of at least about 40°C for an aging period of at least 6 weeks;

(iii) determining a breakpoint for the aged second sample of the jet fuel distillate fraction; and if the breakpoint for the aged second sample is at least about 265°C;

(iv) preparing a jet fuel product comprising a kerosene derived from a second pre-refined crude oil derived from the same source as the first pre-refined crude oil and has been subjected to conversion but not subjected to hydroprocessing prior to shipment to a refinery, at least 5% of the jet fuel distillate fraction comprising molecules formed during the conversion in a hydrogen-limited environment, a the volume percentage of the kerosene derived from the second pre-refined crude in the jet fuel product being not more than 110% of a the volume percentage of the portion of the distillate fraction derived from the first pre-refined crude oil in the jet fuel distillate fraction, the initial boiling point of the jet fuel product being at least as high as the initial boiling point of the jet fuel distillate fraction, and the final boiling point of the jet fuel product being not more than the final boiling point of the jet fuel distillate fraction.

2. The method according to claim 1, in which the breakpoint of the aged second sample has not degraded during the aging at a rate equivalent to more than 10°C per year.

3. The method according to anyone of the preceding claims, wherein the second sample of the distillate fraction is maintained in step (ii) at about 43°C.

4. The method according to anyone of the preceding claims, wherein the volume percentage of the kerosene derived from the second pre-refined crude in the jet fuel product is not more than 100% of the volume percentage of the distillate fraction derived from the first pre-refined crude oil in the jet fuel distillate fraction.

5. The method according to anyone of the preceding claims, wherein the first volume percentage of the first pre-refined crude oil in the first crude oil feedstock is not more than 50 vol%.

6. The method according to anyone of the preceding claims, in which the first distillate fraction has been hydrogen treated, chemically treated, or hydrogen and chemically treated and in which the second distillate fraction is hydrogen treated, chemically treated, or hydrogen and chemically treated to improve the breakpoint stability of the jet fuel product or second distillate fraction, the treating conditions being at least as severe as the treating conditions of the first distillate fraction.

7. The method according to anyone of the preceding claims, further comprising determining that one or more composition features of the first pre-refined crude are similar to corresponding composition features of the second pre-refined crude.

8. The method according to anyone of the preceding claims, wherein the aging period is at least 12 weeks.

14. The method according to anyone of the preceding claims, wherein the second volume percentage of the kerosene derived from the second pre-refined crude in the jet fuel product is not more than 50% of the volume percentage of the portion of the distillate fraction derived from the first pre-refined crude oil in the jet fuel distillate fraction.

9. The method according to anyone of the preceding claims, wherein the source for the first pre-refined crude oil corresponds to a first blend of a plurality of pre-refined crude oils, the second pre-refined crude oil corresponding to a blend of the same plurality of pre-refined crude

oils, wherein a the volume ratio in the distillate fraction or first distillate fraction for each pair of pre-refined crudes in the first blend differs from a the volume ratio in the jet fuel product or second distillate fraction for the corresponding pair in the second blend by not more than 5%.

10. The method according to claim 9, wherein a the volume ratio of the first pre-refined crude oil to conventional crude oil in the distillate fraction or first distillate fraction is greater than or equal to a the volume ratio of the second pre-refined crude oil to conventional crude oil in the jet fuel product or second distillate fraction.

11. The method according to anyone of the preceding claims, wherein the first pre-refined crude oil comprises at least about 10 vol% of molecules formed during cracking or conversion in a hydrogen-limited environment.

12. The method according to anyone of the preceding claims, wherein the jet fuel product is prepared if the breakpoint for the aged second sample is less than 10°C lower than the breakpoint for the first sample.

What is claimed is:

1. A method for preparing a jet fuel or kerosene product, comprising:

determining a breakpoint for a first sample of a distillate fraction, the distillate fraction having an initial boiling point of at least about 284°F (140°C) and a final boiling point of about 572°F (300°C) or less, at least a portion of the distillate fraction being derived from a first pre-refined crude oil;

maintaining a second sample of the distillate fraction at a temperature of at least about 40°C for an aging period;

determining a breakpoint for the aged second sample of the distillate fraction, the breakpoint for the aged second sample being at least about 265°C; and

preparing a jet fuel product comprising a kerosene portion derived from a second pre-refined crude oil, the second pre-refined crude oil being derived from the same source as the first pre-refined crude oil, a volume percentage of the kerosene portion derived from the second pre-refined crude in the jet fuel product being about 110% or less of a volume percentage corresponding to the portion of the distillate fraction derived from the first pre-refined crude oil, the initial boiling point of the jet fuel product being at least about the initial boiling point of the distillate fraction, and the final boiling point of the jet fuel product being less than or equal to the final boiling point of the distillate fraction.

2. The method of claim 1, further comprising:

obtaining a portion of the distillate fraction; and

splitting the portion of the distillate fraction to form at least the first sample and the second sample.

3. The method of claim 1, wherein the second sample of the distillate fraction is maintained at about 43°C.

4. The method of claim 1, wherein the aging period is at least 6 weeks.

5. The method of claim 1, wherein the breakpoint for the aged second sample is less than 10°C lower than the breakpoint for the first sample.

6. The method of claim 1, wherein preparing a jet fuel product comprises distilling a crude oil feedstock to produce a fraction corresponding to the jet fuel product.

7. The method of claim 1, wherein the volume percentage of the kerosene portion derived from the second pre-refined crude in the jet fuel product is about 100% or less of the volume percentage corresponding to the portion of the distillate fraction derived from the first pre-refined crude oil.

8. The method of claim 1, further comprising hydrogen treating, chemically treating, or hydrogen treating and chemically treating the jet fuel product or second distillate fraction under effective treating conditions to improve the breakpoint stability of the jet fuel product or second distillate fraction, the effective treating conditions being at least as severe as treating conditions for a hydrogen treating, chemically treating, or hydrogen treating and chemically treating of the first distillate fraction.

9. The method of claim 1, further comprising determining that one or more composition features of the first pre-refined crude are similar to corresponding composition features of the second pre-refined crude.

10. The method of claim 1, wherein the source for the first pre-refined crude oil corresponds to a first blend of a plurality of pre-refined crude oils, the second pre-refined crude oil corresponding to a blend of the same plurality of pre-refined crude oils, wherein a volume ratio in the first distillate fraction for each pair of pre-refined crudes in the first blend differs from a volume ratio in the second distillate fraction for the corresponding pair in the second blend by about 5% or less.

11. The method of claim 1, wherein a volume ratio of the first pre-refined crude oil to conventional crude oil in the first distillate fraction is greater than or equal to a volume ratio of the second pre-refined crude oil to conventional crude oil in the second distillate fraction.

12. A method for preparing a jet fuel or kerosene product, comprising:

distilling a first crude oil feedstock comprising at least a first volume percentage of a first pre-refined crude oil to form a first distillate fraction having an initial boiling point of at least about 284°F (140°C) a final boiling point of about 572°F (300°C) or less;

determining a breakpoint for a first sample of the first distillate fraction;

maintaining a second sample of the first distillate fraction at a temperature of at least about 40°C for an aging period;

determining a breakpoint for the aged second sample of the distillate fraction, the breakpoint for the aged second sample being at least about 265°C; and

distilling a second crude oil feedstock comprising at least a second volume percentage of a second pre-refined crude oil to form a second distillate fraction, the second pre-refined crude oil being derived from the same source as the first pre-refined crude oil, the second distillate fraction having an initial boiling point of at least about the initial boiling point of the first distillate fraction, the second distillate fraction having a final boiling point of about the final boiling of the first distillate fraction or less,

wherein the second volume percentage is about 110% or less of the first volume percentage.

13. The method of claim 12, wherein the volume percentage of the kerosene portion derived from the second pre-refined crude in the jet fuel product is about 100% or less of the volume percentage corresponding to the portion of the distillate fraction derived from the first pre-refined crude oil.

14. The method of claim 12, wherein the first volume percentage of the first pre-refined crude oil in the first crude oil feedstock is about 50 vol% or less.

15. The method of claim 12, further comprising hydrogen treating, chemically treating, or hydrogen treating and chemically treating the jet fuel product or second distillate fraction under effective treating conditions to improve the breakpoint stability of the jet fuel product or second distillate fraction, the effective treating conditions being at least as severe as treating conditions for a hydrogen treating,

chemically treating, or hydrogen treating and chemically treating of the first distillate fraction.

16. The method of claim 12, further comprising determining that one or more composition features of the first pre-refined crude are similar to corresponding composition features of the second pre-refined crude.

17. The method of claim 12, wherein the second volume percentage is about 50% or less of the first volume percentage.

18. The method of claim 12, wherein the source for the first pre-refined crude oil corresponds to a first blend of a plurality of pre-refined crude oils, the second pre-refined crude oil corresponding to a blend of the same plurality of pre-refined crude oils, wherein a volume ratio in the first distillate fraction for each pair of pre-refined crudes in the first blend differs from a volume ratio in the second distillate fraction for the corresponding pair in the second blend by about 5% or less.

19. The method of claim 18, wherein a volume ratio of the first pre-refined crude oil to conventional crude oil in the first distillate fraction is greater than or equal to a volume ratio of the second pre-refined crude oil to conventional crude oil in the second distillate fraction.

20. The method of claim 12, wherein the first pre-refined crude oil comprises at least about 10 vol% of molecules formed during cracking or conversion in a hydrogen-limited environment.