WHAT IS CLAIMED IS:

1. A process for preparing a base oil from a waxy hydrocarbon feedstock comprising:

a) passing the waxy hydrocarbon feedstock through a distillation column and collecting a light wax and fuel cut, a medium wax cut and a heavy wax cut;

b) passing the medium wax cut to a hydrodewaxing reactor; and

c) passing the heavy wax cut to a hydrocracking reactor to crack the heavy wax into smaller molecules, and passing hydrocracked product from the reactor to a distillation column; and

d) passing a medium wax cut from the distillation column in c) to a hydrowaxing reactor.

2. The process of claim 1, wherein the heavy wax cut comprises components boiling at 1050°F (565°C) and higher.

3. The process of claim 1, wherein the medium wax cut comprises components boiling at 600°F (315°C) to 1050°F (565°C).

4. The process of claim 3, wherein the medium wax cut comprises components boiling at 700°F (371°C) to 1050°F (565°C).

5. The process of claim 1, wherein the light wax and fuel cut comprises diesel fuel.

6. The process of claim 5, wherein the light wax and fuel cut comprises components boiling at 600°F (315°C) and lower.

7. The process of claim 6, where the light wax and fuel cut is passed to further processing.

8. The process of claim 1, wherein the hydrocracked product is passed to the distillation column in a).

9. The process of claim 1, wherein hydrodewaxed product is passed to a hydrofinishing reactor.

10. The process of claim 9, wherein the product of the hydrofinishing reactor is separated into base oil products and fuel products.

11. The process of claim 10, wherein the product from the hydrofinishing reactor is passed to a second distillation column for separating the product into a fuel product and various grades of base oil products.

12. The process of claim 11, wherein the various grades of base oil products comprise XLN, LN, and MN grades of base oil.

13. The process of claim 1, where the medium wax cut is hydrotreated prior to hydrodewaxing in the hydrodewaxing reactor.

14. The process of claim 1, wherein the hydrodewaxing reactor comprises a layered catalyst system.

15. A process for preparing a base oil from a waxy hydrocarbon feedstock comprising:

a) passing the hydrocarbon feedstock through a distillation column and collecting a light wax and fuel cut, a medium wax cut and a heavy wax cut;

b) passing the heavy wax to a hydrocracking reactor and passing hydrocracked product from the reactor to the distillation column in a);

c) passing the medium wax from the distillation column in a) to a hydrodewaxing reactor and passing hydrodewaxed product from the reactor to a hydrofinishing reactor; and

d) separating product from the hydrofinishing reactor into base oil products and fuel products.

16. A process for preparing a base oil from waxy hydrocarbon feedstock comprising:

a) passing the hydrocarbon feedstock through a first distillation column and collecting a light wax and fuel cut, a medium wax cut, and a heavy wax cut;

b) passing the heavy wax cut to a hydrocracking reactor and passing the hydrocracked product from the reactor to a second distillation column;

c) separating the hydrocracked product passed to the second distillation column into a light wax and fuel cut, a medium wax cut, and a heavy wax cut;

d) combining the medium wax cut of the second distillation column with the medium wax cut of the first distillation column in a), and passing the combined medium wax cuts to a hydrodewaxing reactor;

e) collecting and passing product from the hydrodewaxing reactor to a hydrofinishing reactor;

f) separating product from the hydrofinishing rector into base oil and fuel products; and

g) recirculating the heavy wax cut from the second distillation column in c) to the hydrocracking reactor.

17. The process of claim 16, wherein the product from the hydrofinishing reactor is passed to a third distillation column for separating the product into fuel product and various grades of base oil products.

18. The process of claim 17, wherein the various grades of base oil products comprise XLN, LN, and MN grades of base oil.

19. The process of claim 16, wherein the heavy wax cuts of the first distillation column and the second distillation column comprise components boiling at 1050°F (565°C) and higher.

20. The process of claim 16, wherein the medium wax cuts of the first and second distillation columns comprise components boiling in the range of 600°F (315°C) to 1050°F (565°C).

21. The process of claim 16, wherein the light wax and fuel cuts of the first and second distillation columns comprise diesel fuel.

22. The process of claim 21, wherein the light wax and fuel cuts comprise components boiling at 600°F (315°C) and lower.

23. The process of claim 21, wherein the light wax and fuel cuts are passed to further processing.

24. The process of claim 16, wherein the combined medium wax cuts from the first and second distillation columns are hydrotreated prior to hydrodewaxing in the hydrodewaxing reactor.

25. The process of claim 16, wherein the hydrodewaxing reactor comprises a layered catalyst system.

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