Claims

1. A computer implemented blend control system for preparation of a hydrocarbon blend from a plurality of component streams, said system comprising:
   a) a product tank for receiving a mixture comprising said plurality of component streams;
   b) at least one sensing and analyzing means adapted to sense and analyze a first attribute of said mixture for obtaining a first attribute data;
   c) at least one processing means operatively connected to said at least one sensing and analyzing means and adapted to process said first attribute data to derive a second attribute data to be transmitted to a comparator means for comparing said second attribute data with a pre-stored model data; and
   d) at least one optimizing means having,
      i) data storage means for storing attribute based model data,
      ii) receiving means for receiving said second attribute data, and
      iii) comparator means adapted to compare said second attribute data with said pre-stored model data, said comparator means further adapted to compute an optimized proportion data between each of the streams in said plurality of component streams to enable selective drawing of said component streams into said product tank for preparing said hydrocarbon blend.

2. The blend control system as claimed in claim 1, further comprising a flow regulating means cooperating with at least one optimizing means, and operatively connected to said product tank, said flow regulating means adapted to control the flow of said component streams into said product tank based on the optimized proportion data.

3. The blend control system as claimed in claim 1, wherein said first attribute of said mixture is a composition attribute, said first attribute data is composition data, said second attribute of said mixture is a property attribute, and said model data is property based model data.

4. The blend control system as claimed in claim 1, wherein said first attribute of said mixture is a property attribute, said second attribute of said mixture is a composition attribute, and said model data is composition based model data.

5. The blend control system as claimed in claim 1, further comprising a plurality of component streams operatively connected to said product tank.

6. The blend control system as claimed in claim 2, wherein said flow regulating means is adapted to control at least one control valve.

7. The blend control system as claimed in claim 2, wherein said flow regulating means comprises at least one flow sensor.

8. The blend control system as claimed in claim 1, wherein said at least one sensing and analyzing means comprises a combination of a separating means and at least one detector means.

9. The blend control system as claimed in claim 1, wherein said at least one sensing and analyzing means is adapted to sense said first attribute at predetermined time intervals, said time intervals ranging between 1 hour and 24 hours.

10. A computer implemented method for preparation of a hydrocarbon blend from a plurality of component streams, said method comprising the following steps:
    a) dispensing a mixture comprising the plurality of component streams, to a product tank;
    b) sensing and analyzing a first attribute of the mixture and computing a first attribute data;
    c) processing said first attribute data to derive a second attribute data;
    d) comparing said second attribute data with a pre-stored model data;
    e) computing optimized values of proportions based on the comparison of said second attribute data with said pre-stored model data to determine a proportion data between each of the component streams; and

f) controlling the flow of the component streams based on the proportion data for preparing the hydrocarbon blend.

Claims

1. A computer implemented blend control system for preparation of a hydrocarbon blend from a plurality of component streams, said system comprising:
   a) a product tank for receiving a mixture comprising said plurality of component streams;
   b) at least one sensing and analyzing means adapted to sense and analyze a first attribute of said mixture for obtaining a first attribute data;
   c) at least one processing means operatively connected to said at least one sensing and analyzing means and adapted to process said first attribute data to derive a second attribute data to be transmitted to a comparator means of at least one optimizing means for comparing said second attribute data with a pre-stored model data, wherein one of:
      - said first attribute of said mixture is a composition attribute, said first attribute data is a composition data, said second attribute data of said mixture is a property attribute data, and said pre-stored model data is a property based model data; and
      - said first attribute of said mixture is a property attribute, said second attribute data of said mixture is a composition attribute data, and said pre-stored model data is a composition based model data; and
   d) said at least one optimizing means having,
      i) data storage means for storing attribute based model data comprising said pre-stored model data,
      ii) receiving means for receiving said second attribute data, and
      iii) said comparator means adapted to compare said second attribute data with said pre-stored model data, said comparator means further adapted to compute an optimized proportion data between each of the streams in said plurality of component streams to enable selective drawing of said component streams into said product tank for preparing said hydrocarbon blend.

2. The blend control system as claimed in claim 1, further comprising a flow regulating means cooperating with at least one optimizing means, and operatively connected to said

product tank, said flow regulating means adapted to control the flow of said component streams into said product tank based on the optimized proportion data.

3. The blend control system as claimed in claim 2, wherein said flow regulating means is adapted to control at least one control valve.

4. The blend control system as claimed in claim 2, wherein said flow regulating means comprises at least one flow sensor.

5. The blend control system as claimed in claim 1, wherein said at least one sensing and analyzing means comprises a combination of a separating means and at least one detector means.

6. The blend control system as claimed in claim 1, wherein said at least one sensing and analyzing means is adapted to sense said first attribute at predetermined time intervals, said time intervals ranging between 1 hour and 24 hours.

7. A computer implemented method for preparation of a hydrocarbon blend from a plurality of component streams, said method comprising the following steps:

a) dispensing a mixture comprising the plurality of component streams, to a product tank;

b) sensing and analyzing a first attribute of the mixture and computing a first attribute data;

c) processing said first attribute data to derive a second attribute data;

d) comparing said second attribute data with a pre-stored model data, wherein one of:

- said first attribute of said mixture is a composition attribute, said first attribute data is a composition attribute data, said second attribute data of said mixture is a property attribute data, and said pre-stored model data is a property based model data; and
- said first attribute of said mixture is a property attribute, said second attribute data of said mixture is a composition attribute data, and said pre-stored model data is a composition based model data;

e) computing optimized values of proportions based on the comparison of said second attribute data with said pre-stored model data to determine a proportion data between each of the component streams; and

f) controlling the flow of the component streams based on the proportion data for preparing the hydrocarbon blend.