CLAIMS

1. Process for producing BTX comprising:

(a) subjecting a coker feedstream comprising heavy hydrocarbons to coking to produce coker naphtha and coker gasoil;

(b) subjecting coker gasoil to aromatic ring opening to produce BTX; and

(c) recovering BTX from coker naphtha, wherein the coking further produces LPG wherein said LPG produced by coking is subjected to aromatization to produce BTX.

2. The process according to claim 1, wherein the aromatic ring opening further produces light-distillate and wherein the BTX is recovered from said light-distillate.

3. The process according to claim 1 or 2, wherein the BTX is recovered from the coker naphtha and/or from the light-distillate by subjecting said coker naphtha and/or light-distillate to hydrocracking.

4. The process according to any one of claims 1-3, wherein the aromatic ring opening and preferably the hydrocracking further produce LPG and wherein said LPG is subjected to aromatization to produce BTX.

5. The process according to any one of claims 1-4, wherein propylene and/or butylenes are separated from the LPG produced by coking before subjecting to aromatization.

6. The process according to any one of claims 1-5, wherein said coking comprises subjecting the coker feedstream to coking conditions, wherein

the coking conditions comprise a temperature of 450-700 °C and a pressure of 50-800 kPa absolute.

7. The process according to any one of claims 3-6, wherein said hydrocracking comprises contacting the coker naphtha and preferably the light-distillate in the presence of hydrogen with a hydrocracking catalyst under hydrocracking conditions, wherein

the hydrocracking catalyst comprises 0.1-1 wt.% hydrogenation metal in relation to the total catalyst weight and a zeolite having a pore size of 5-8 Å and a silica (SiO_2) to alumina (Al_2O_3) molar ratio of 5-200 and wherein

the hydrocracking conditions comprise a temperature of 400-580 °C, a pressure of 300-5000 kPa gauge and a Weight Hourly Space Velocity (WHSV) of 0.1-20 h^{-1}.

8. The process according to any one of claims 1-7, wherein said aromatic ring opening comprises contacting the coker gasoil in the presence of hydrogen with an aromatic ring opening catalyst under aromatic ring opening conditions, wherein

the aromatic ring opening catalyst comprises a transition metal or metal sulphide component and a support, preferably comprising one or more elements selected from the group

consisting of Pd, Rh, Ru, Ir, Os, Cu, Co, Ni, Pt, Fe, Zn, Ga, In, Mo, W and V in metallic or metal sulphide form supported on an acidic solid, preferably selected from the group consisting of alumina, silica, alumina-silica and zeolites and wherein

the aromatic ring opening conditions comprise a temperature of 100-600 °C, a pressure of 1-12 MPa.

9. The process according to claim 8, wherein the aromatic ring opening catalyst comprises an aromatic hydrogenation catalyst comprising one or more elements selected from the group consisting of Ni, W and Mo on a refractory support; and a ring cleavage catalyst comprising a transition metal or metal sulphide component and a support and

wherein the conditions for aromatic hydrogenation comprise a temperature of 100-500 °C, a pressure of 2-10 MPa and the presence of 1-30 wt.% of hydrogen (in relation to the hydrocarbon feedstock) and wherein the ring cleavage comprises a temperature of 200-600 °C, a pressure of 1-12 MPa and the presence of 1-20 wt.% of hydrogen (in relation to the hydrocarbon feedstock).

10. The process according to any one of claims 4-9, wherein the aromatization comprises contacting the LPG with an aromatization catalyst under aromatization conditions, wherein

the aromatization catalyst comprises a zeolite selected from the group consisting of ZSM-5 and zeolite L, optionally further comprising one or more elements selected from the group consisting of Ga, Zn, Ge and Pt and wherein

the aromatization conditions comprise a temperature of 400-600 °C, a pressure of 100-1000 kPa gauge and a Weight Hourly Space Velocity (WHSV) of 0.1-20 h^{-1}.

11. The process according to any one of claims 4-10, wherein

the LPG produced by hydrocracking and aromatic ring opening is subjected to a first aromatization that is optimized towards aromatization of paraffinic hydrocarbons, wherein said first aromatization preferably comprises the aromatization conditions comprising a temperature of 400-600 °C, a pressure of 100-1000 kPa gauge and a Weight Hourly Space Velocity (WHSV) of 0.5-7 h^{-1}; and/or wherein

the LPG produced by coking is subjected to a second aromatization that is optimized towards aromatization of olefinic hydrocarbons, wherein said second aromatization preferably comprises the aromatization conditions comprising a temperature of 400-600 °C, a pressure of 100-1000 kPa gauge and a Weight Hourly Space Velocity (WHSV) of 1-20 h^{-1}.

12. The process according to any one of claims 1-11, wherein one or more of the group consisting of the coking, the hydrocracking and the aromatic ring opening, and optionally the

aromatization, further produce methane and wherein said methane is used as fuel gas to provide process heat.

13. The process according to any one of claims 1-12, wherein the coker feedstream comprises hydrocarbons having a boiling point of 350 °C or more.

14. The process according to any one of claims 4-13, wherein the aromatization further produces hydrogen and wherein said hydrogen is used in the hydrocracking and/or the aromatic ring opening.