CLAIMS

1. Process for producing BTX comprising:
   (a) subjecting a hydrocarbon feedstream to catalytic cracking in a FCC unit to produce catalytic cracking gasoline and cycle oil;
   (b) subjecting cycle oil in the presence of hydrogen and an aromatic ring opening catalyst to aromatic ring opening to produce BTX; and
   (c) recovering BTX from catalytic cracking gasoline.
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 catalytic cracking gasoline and/or from the light-distillate by subjecting said catalytic cracking gasoline 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 the catalytic cracking further produces LPG and wherein said LPG produced by catalytic cracking is subjected to aromatization to produce BTX.
6. The process according to claim 5, wherein propylene and/or butylenes are separated from the LPG produced by catalytic cracking before subjecting to aromatization.
7. The process according to any one of claims 1-6, wherein the catalytic cracking is fluid catalytic cracking comprising contacting the feedstream with an FCC catalyst under FCC conditions, wherein
   the FCC catalyst comprises zeolite and wherein
   the FCC conditions comprise a temperature of 425-730 °C and a pressure of 10-800 kPa gauge.

8. The process according to any one of claims 1-7, wherein the catalytic cracking is high-severity FCC, preferably comprising temperature of 540-730 °C and a pressure of 10-800 kPa gauge.

9. The process according to any one of claims 3-8, wherein said hydrocracking comprises contacting the catalytic cracking gasoline 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}.

10. The process according to any one of claims 1-9, wherein said aromatic ring opening comprises contacting the cycle oil 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.

11. The process according to claim 10, 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).

12. The process according to any one of claims 4-11, 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}.

13. The process according to any one of claims 4-12, 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 0.1-7 h^{-1}; and/or wherein
the LPG produced by catalytic cracking are 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}.

14. The process according to any one of claims 1-13, wherein one or more of the group consisting of the aromatic ring opening, the hydrocracking and the aromatization further produce methane and wherein said methane is used as fuel gas to provide process heat.

15. The process according to any one of claims 1-14, wherein the hydrocarbon feedstream comprises one or more selected from the group consisting of naphtha, kerosene, gasoil and resid.

16. The process according to any one of claims 4-15, wherein the aromatization further produces hydrogen and wherein said hydrogen is used in the hydrocracking and/or the aromatic ring opening.