C L A I M S

1. A process for the conversion of butane and/or propane into aromatics which comprises first reacting a butane and/or propane feed in the presence of an aromatization catalyst under first stage reaction conditions which maximize the conversion of propane and/or butane into first stage aromatic reaction products, separating ethane produced in the first stage aromatic reaction from the first aromatic reaction products, reacting the ethane in presence of an aromatization catalyst under second stage reaction conditions which maximize the conversion of ethane into second stage aromatic reaction products, and optionally separating ethane from the second stage aromatic reaction products.

2. The process of claim 1 wherein the aromatization reaction is carried out at a temperature of from 400 to 700°C.

3. The process of claims 1 and 2 wherein the first stage reaction conditions comprise a temperature of from 400 to 650°C, preferably from 420 to 650°C.

4. The process of claims 1 to 3 wherein the second stage reaction conditions comprise a temperature of from 450 to 680°C, preferably from 450 to 660°C.

5. The process of claims 1 to 4 wherein the first stage reaction products are produced in at least two reactors aligned in parallel.

6. The process of claims 1 to 5 wherein the second stage reaction products are produced in at least two reactors aligned in parallel.

7. The process of claims 1 to 6 wherein fuel gas is also produced in either or both of the first and second stages and is separated from the aromatic reaction products and ethane.

8. The process of claim 1 wherein at least part of the ethane produced in the first stage aromatization reaction is mixed with the propane and/or butane feed to the first stage aromatization reactor.

CLAIMS

1. A process for the conversion of butane and/or propane into aromatics which comprises first reacting a butane and/or propane feed in the presence of an aromatization catalyst under first stage reaction conditions which maximize the conversion of propane and/or butane into first stage aromatic reaction products, separating ethane produced in the first stage aromatic reaction from the first aromatic reaction products, reacting the ethane in presence of an aromatization catalyst under second stage reaction conditions which maximize the conversion of ethane into second stage aromatic reaction products, and optionally separating ethane from the second stage aromatic reaction products.

2. The process of claim 1, wherein the aromatization reaction is carried out at a temperature of from 400 to 700°C.

3. The process of claim 1 or 2, wherein the first stage reaction conditions comprise a temperature of from 400 to 650°C, preferably from 420 to 650°C.

4. The process of any one of claims 1 to 3, wherein the second stage reaction conditions comprise a temperature of from 450 to 680°C, preferably from 450 to 660°C.

5. The process of any one of claims 1 to 4, wherein the first stage reaction products are produced in at least two reactors aligned in parallel.

6. The process of any one of claims 1 to 5, wherein the second stage reaction products are produced in at least two reactors aligned in parallel.

7. The process of any one of claims 1 to 6, wherein fuel gas is also produced in either or both of the first and second stages and is separated from the aromatic reaction products and ethane.

8. The process of claim 1, wherein at least part of the ethane produced in the first stage aromatization reaction is mixed with the propane and/or butane feed to the first stage aromatization reactor.

9. Aromatic products produced by the process of any one of claims 1 to 8.