

PROCESS FOR 1,3-BUTADIENE SEPARATION FROM A CRUDE C4 STREAM WITH ACETYLENE CONVERTER

Disclosed is a method of recovering 1,3-butadiene from a C4 stream containing butane,
5 isobutane, 2-butene, 1-butene, isobutene, butadiene and acetylene. The process of recovering
highly pure 1,3-butadiene includes acetylene conversion for selectively converting acetylene
through liquid-phase hydrogenation, so that the acetylene content is decreased to 70 wt ppm or
less, and 1,3-butadiene extraction using an extractive distillation column, a pre-separator, a solvent
stripping column, a solvent recovery column, and a purification column. Through the acetylene
10 conversion, the concentration of vinylacetylene is decreased to 70 wt ppm or less, after which 1,3-
butadiene is recovered using only one extractive distillation column, thereby considerably
decreasing the degree of utility and the loss of streams in the course of extraction. The number of
units necessary for the process is decreased, thus remarkably reducing the time during which
impurities can accumulate in a processing unit.

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Figure 2