

ABSTRACT

A process for continuously producing tertiary butyl alcohol from water and a liquefied gas composed of isobutylene or an isobutylene-containing hydrocarbon using tertiary butyl alcohol as a solvent in the presence of a cation exchange resin in a series multistage reactor, wherein the reaction temperature in each reaction vessel of the series multistage reactor is adjusted to not more than 65°C, a part of the reaction mixture in the outlet of the first reaction vessel is returned to the inlet portion of the first reaction vessel at a circulation ratio of 1.8 to 10, and the weight ratio of the tertiary butyl alcohol to the liquefied gas in the inlet portion of the first reaction vessel is 0.5 to 3.5.