

ABSTRACTPROCESS FOR PRODUCING AROMATIC HYDROCARBON AND HYDROGEN

A process for producing aromatic hydrocarbons and hydrogen, in which a lower hydrocarbons-containing feedstock gas is reformed by being supplied to and being brought into contact with a catalyst under high temperature conditions thereby forming aromatic hydrocarbons and hydrogen. The method includes the steps of (a) supplying a hydrogen gas together with the feedstock gas during a supply of the feedstock gas; and (b) suspending the supply of the feedstock gas for a certain period of time while keeping a condition of a supply of the hydrogen gas. The catalyst is exemplified by a metallo-silicate carrying molybdenum and a metallo-silicate carrying molybdenum and rhodium. An amount of the hydrogen gas supplied together with the feedstock gas is set to be preferably larger than 2 % and smaller than 10 %, more preferably within a range of from 4 to 8 %, much more preferably 8 %. As a pretreatment for a reforming reaction by which aromatic hydrocarbons and hydrogen are formed, the catalyst is increased in temperature and kept at the temperature for a certain period of time while a gas containing methane and hydrogen is supplied thereto.