

Abstract

A method for producing methanol using carbon dioxide and hydrogen as raw materials, the method comprising:

a step (A) of mixing carbon dioxide and hydrogen to obtain a make-up gas;

a step (B) of raising pressure of the make-up gas, and then mixing the make-up gas with a recycled gas recovered from an exit gas of a synthesis reactor to obtain a synthesis reactor-feeding gas;

a step (C) of preheating the synthesis reactor-feeding gas by exchanging heat with the exit gas from the synthesis reactor as a heating source; and

a step (D) of feeding the preheated synthesis reactor-feeding gas to the synthesis reactor and bringing into contact with a catalyst to synthesize methanol.