

Water gas shift reaction in lab-scale tube reactor

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Water gas shift reaction is the intermediate step used for hydrogen enrichment of syngas from gasification. For the application to the syngas from oxy gasification-melting reactor, water gas shift reaction has been performed. Water gas shift reaction without the catalyst has been performed in lab scale tube reactor. Effects of the reaction temperature, steam/carbon ratio and residence time have been performed. Optimum reaction temperature is 700°C and maximum H₂/CO ratio in the produced gas has reached 1.9.