biomass pyrolyzing zone A. This configuration can effectively heat the steam introduced into the vessel 1 through the contact with the heat carriers 3, can keep the steam in contact with the gas generated by pyrolyzing biomass and the heat carriers 3 for a long time, and thus can efficiently reform the pyrolyzed gas and the tar adhering to the heat carriers. Although the two steam inlets 6_2 and 6_1 are respectively disposed at the lower portion of the gas reforming zone B and the lower portion of the biomass pyrolyzing zone A in FIG. 1, any other arrangement can also be employed. Preferably multiple, more preferably two to four, even more preferably four steam inlets should be disposed at each of these lower portions. The temperature of the introduced steam is any temperature, but preferably 130°C to 200°C, more preferably approximately 160°C. The superheated steam at 500°C to 600 °C can also be preferably used. For example, upon the introduction of the more preferred steam at approximately 160°C, the supplied weight of the steam should preferably be substantially equal to the supplied weight of the material (biomass).

[0026]

The biomass inlet 4 only needs to be disposed at a position for effectively feeding the biomass **a** to the biomass pyrolyzing zone A. The biomass inlet 4 should preferably be disposed at the upper portion of the biomass pyrolyzing zone A, i.e., the space below the partitioning plate 7 and above the layer of the heat carriers 3 retained in the biomass pyrolyzing zone A. This configuration can determine an appropriate time of the contact between the biomass **a** and the heat carriers 3 to sufficiently ~~+~~ pyrolyze the biomass **a**. Although FIG. 1 depicts a single biomass inlet 4, any other arrangement can also be employed. Preferably at least one, more