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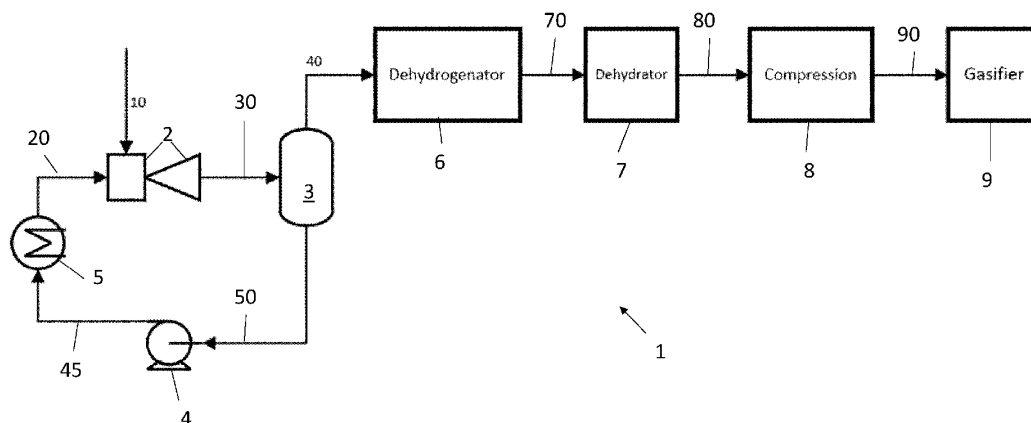


Fig. 5

(57) Abstract: The present invention provides a method of compressing a water-containing oxygen-containing stream originating from an electrolyzer, the method at least comprising the steps of: (a) providing a water-containing oxygen-containing stream (10); (b) combining the water-containing oxygen-containing stream (10) provided in step (a) as a suction fluid in an ejector (2) with a water-containing stream (20) as a motive fluid, thereby obtaining a combined stream; (c) flashing the combined stream by the ejector (2), thereby obtaining a two-phase fluid (30) discharged from the ejector (2); (d) separating the two-phase fluid (30) discharged from the ejector (2) into an oxygen-containing gas stream (40) and a liquid stream (50); (e) pressurizing the liquid stream (50) obtained in step (d), thereby obtaining a pressurized liquid stream; (f) using the pressurized liquid stream obtained in step (e) as the motive fluid (20) in step (b); (g) dehydrogenating the oxygen-containing gas stream (40) obtained in step (d), thereby obtaining a dehydrogenated oxygen-containing stream (70); (h) dehydrating the dehydrogenated oxygen-containing stream (70) obtained in step (g), thereby obtaining a dehydrated dehydrogenated oxygen-containing stream (80); (i) compressing the dehydrated dehydrogenated oxygen-containing stream (80) obtained in step (h) thereby obtaining a compressed oxygen-containing stream (90); and (j) using the compressed oxygen-containing stream (90)

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obtained in step (i), in particular in a gasifier (9).