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(54) Title: METHODS FOR OPTIMIZING GAS UTILIZATION

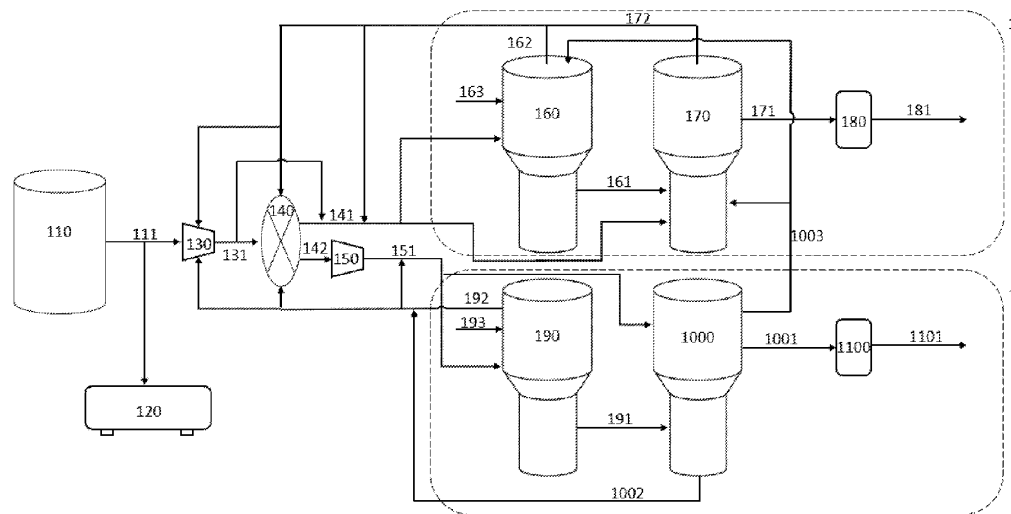


Fig. 1

(57) Abstract: The invention provides for the optimal utilization of gas by a fermentation process, whereby the various components within the gas stream are separated to increase the efficiency of the microorganisms. The invention is capable of tailoring the composition of the gas being used by the fermentation process so as to enhance the production of various products. The invention is capable of applying such controlled separation and utilization of gas to produce different products in two parallel fermentation processes. The invention is also capable of applying such controlled separation and utilization of gas to produce one product in a first fermentation process, which may be converted to a different product in a second fermentation process. The invention is additionally capable of mitigating culture inhibition.

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