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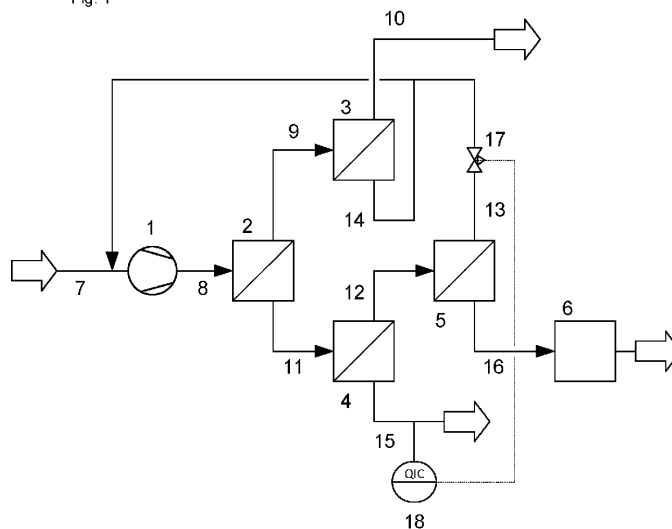
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(54) Title: A FACILITY AND A MEMBRANE PROCESS FOR SEPARATING METHANE AND CARBON DIOXIDE FROM A
GAS STREAM

Fig. 1



(57) Abstract: A facility and a process with four membrane separation units, where the second separation unit separates the retentate of the first unit, the third separation unit separates the permeate of the first unit, the fourth separation unit separates the retentate of the third unit, the permeate of the second unit and the retentate of the fourth unit are recycled to the feed to the first unit, the permeate of the fourth unit is passed to a methane oxidation unit and the permeate of the third unit is discharged to the atmosphere allows separating methane and carbon dioxide from a gas stream, providing a methane rich stream with the retentate of the second unit at a high methane yield and adhering to low limits for methane discharge to the atmosphere with a small size methane oxidation unit.

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