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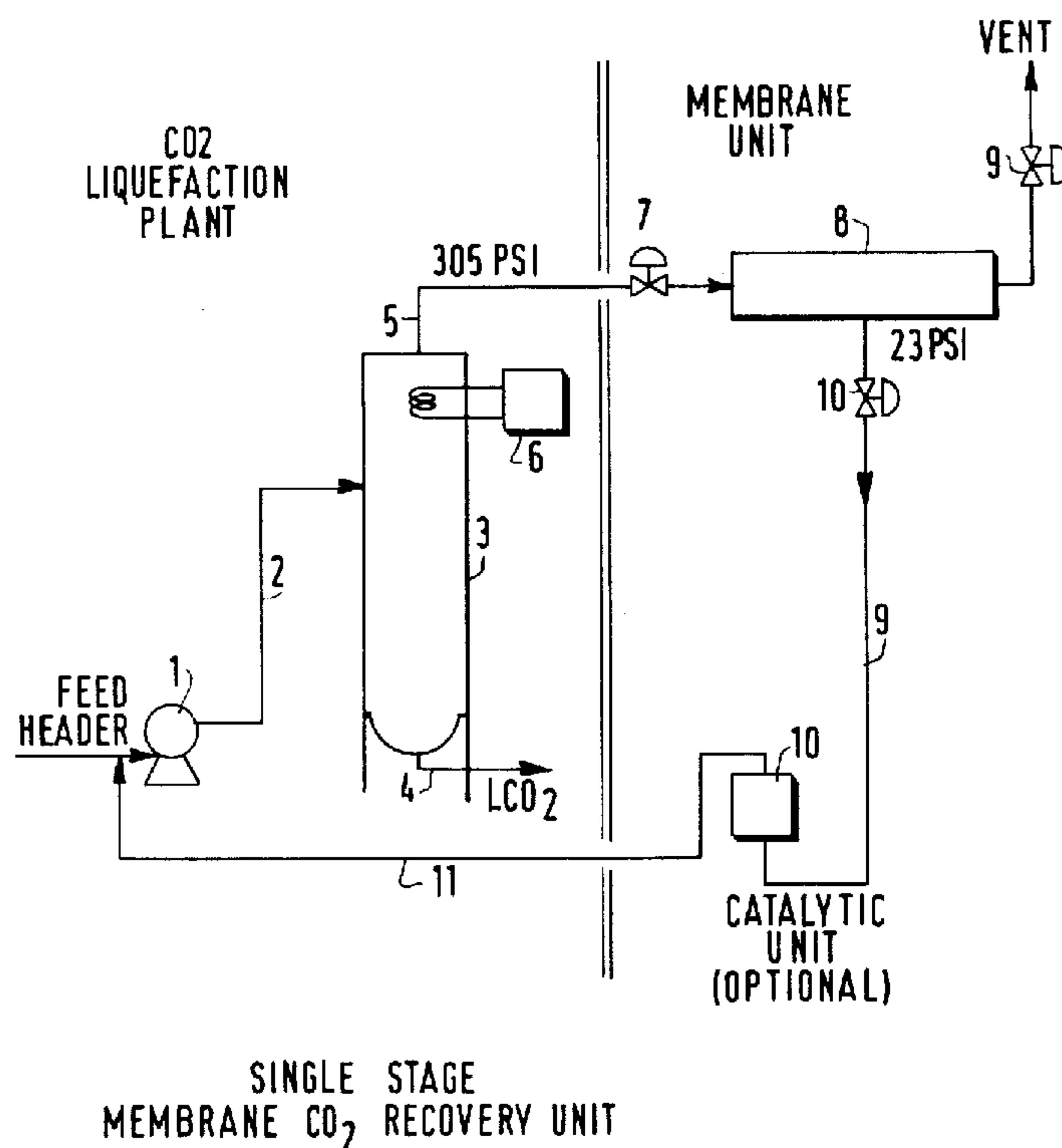
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(54) **RECUPERATION DU DIOXYDE DE CARBONE, A L'AIDE DE
MEMBRANES, A PARTIR DES GAZ D'ÉCHAPPEMENT
D'UNE INSTALLATION DE PRODUCTION DE DIOXYDE DE
CARBONE**

(54) **RECOVERY OF CARBON DIOXIDE FROM A CARBON
DIOXIDE PLANT VENT GAS USING MEMBRANES**



(57) A process for recovering CO₂ from a CO₂ liquifaction plant vent gas, which comprises feeding vent gas from a CO₂ liquifaction plant to a first semi-permeable gas separation membrane through which and at a pressure at which CO₂ is capable of diffusing therethrough, to form a CO₂-enriched permeate, and then returning the CO₂-enriched permeate to a feed side of said CO₂ liquifaction plant at a pressure capable of effecting the same.



ABSTRACT OF THE DISCLOSURE

A process for recovering CO₂ from a CO₂ liquifaction plant vent gas, which comprises feeding vent gas from a CO₂ liquifaction plant to a first semi-permeable gas separation membrane through which and at a pressure at which CO₂ is capable of diffusing therethrough, to form a CO₂-enriched permeate, and then returning the CO₂-enriched permeate to a feed side of said CO₂ liquifaction plant at a pressure capable of effecting the same.

TITLE OF THE INVENTION

THE RECOVERY OF CARBON DIOXIDE FROM A
CARBON DIOXIDE PLANT VENT GAS USING MEMBRANES

BACKGROUND OF THE INVENTIONField of the Invention

The present invention pertains to a passive membrane system which may be used to recover carbon dioxide from a carbon dioxide plant vent gas stream.

Description of the Background

Depending upon whether a gas mixture contains carbon dioxide (CO_2) in a high or low amount, a variety of techniques have been used to separate CO_2 from the mixture. For example, when the amount of CO_2 present in the gas mixture is low, and purification cannot be achieved directly by cooling and partial condensation, it is possible to scrub the gas mixture with a suitable solvent to dissolve the CO_2 , and then to strip the CO_2 from the solution so obtained. The carbon dioxide obtained can then be compressed, dried, cooled and further purified by partial condensation or distillation.

When the gas mixture contains a high amount of CO_2 , however, the gas mixture may be compressed and

