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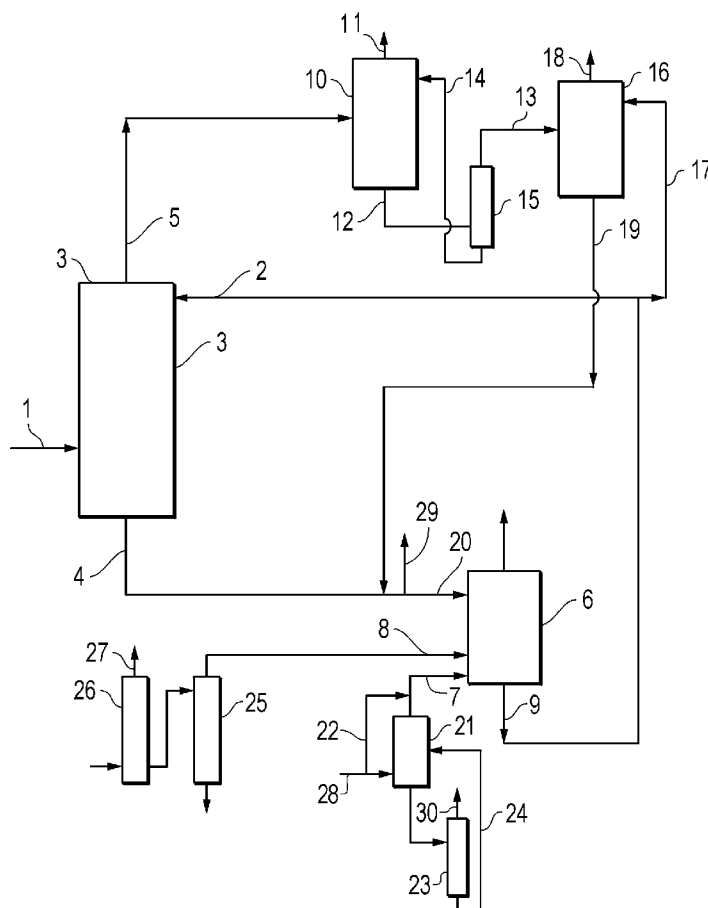
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(54) Title: PROCESS FOR TREATING A GAS STREAM



(57) Abstract: A process for treating a gas comprising hydrogen sulfide and carbon dioxide (1) by contacting the gas with a scrub solution comprising ammonium sulfite and ammonium bisulfite (2) in a first contact zone (3) to produce ammonium thiosulfate. The scrub solution can be formed in a second contact zone (6) by contacting ammonia (8) and sulfur dioxide (7) with an aqueous solution. The oxidation potential of the first contact zone effluent liquid can be controlled by modulating the amount of sulfur dioxide supplied to the second contact zone. Alternatively, the sulfite concentration of the first contact zone effluent can be measured with an infra-red analyzer and the amount of sulfur dioxide supplied to the second contact zone is modulated in response. Additionally, the amount of ammonia supplied to the second contact zone can be modulated in response to the pH in the second contact zone.



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