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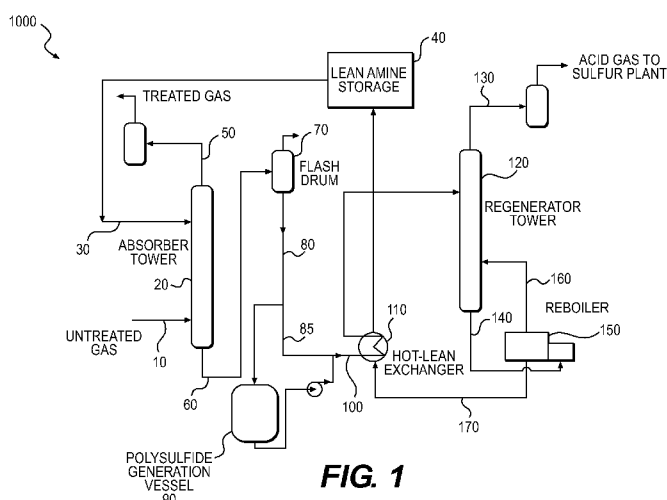
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(54) Title: IN SITU GENERATION OF POLYSULFIDE IONS USING ELEMENTAL SULFUR FOR IMPROVED CORROSION CONTROL, CYANIDE MANAGEMENT, MERCURY MANAGEMENT, ARSINE MANAGEMENT AND PERFORMANCE AND RELIABILITY OF ACID GAS REMOVAL EQUIPMENT



(57) Abstract: Methods and systems are provided for the *in situ* generation of polysulfide ions in a process stream including S²⁻ and/or HS⁻ ions. Methods and systems are also provided to ameliorate corrosion in a process stream containing an acid gas or a scrubbing agent solvent, and abate mercury and cyanide in process streams containing a scrubbing agent solvent.