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(54) **Title:** SYSTEMS AND METHODS FOR SUB-DEWPOINT SULFUR RECOVERY

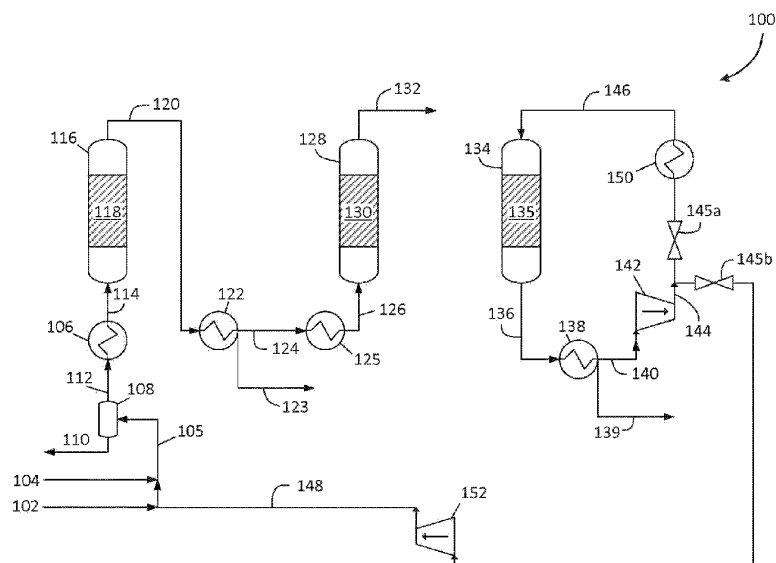


FIG. 1

(57) **Abstract:** Systems and methods for sub-dewpoint sulfur recovery using a separation device and/or an interstage heater to improve the performance of a single (catalytic) step sulfur recovery system without the need for a thermal step or an additional catalyst. The sulfur bearing compounds are removed at a higher pressure than traditional Claus operating pressures prior to additional feed gas processing. The main reaction in the Claus-type process used to convert the sulfur species to elemental sulfur is: $2H_2S + SO_2 \rightarrow 3S + 2H_2O$ where SO_2 may be used as the oxidant for the Claus catalytic reaction.

[Continued on next page]

LU, LV, MC, ME, MK, MT, NL, NO, PL, PT, RO, RS, SE,
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