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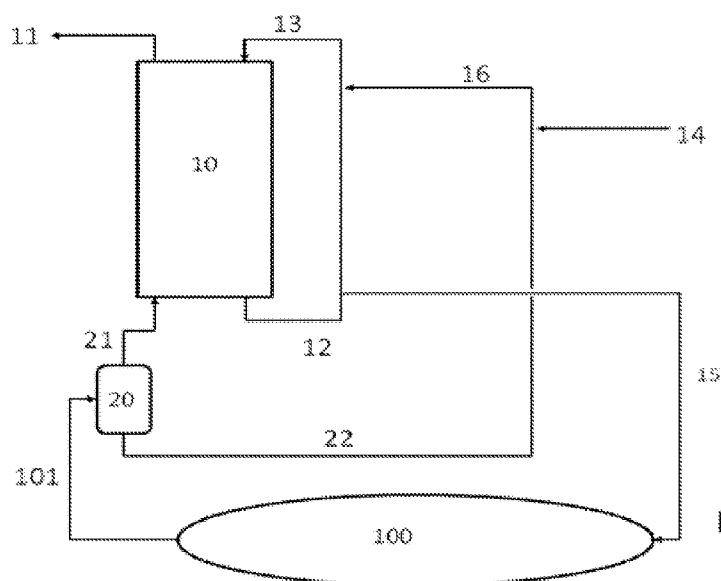
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Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

[Continued on next page]

(54) **Title:** PROCESS, METHOD, AND SYSTEM FOR REMOVING MERCURY FROM FLUIDS**Figure 1**

(57) **Abstract:** Trace levels of mercury in a natural gas are reduced by scrubbing the natural gas in an absorber with an aqueous solution comprising a water-soluble sulfur compound. The water-soluble sulfur compound reacts with at least a portion of the mercury in the natural gas to produce a treated natural gas with a reduced concentration of mercury, and a mercury containing sulfur-depleted solution which can be disposed by injection into a (depleted) underground formation. The produced water extracted with the natural gas from the underground formation can be recycled for use as the scrubbing solution. In one embodiment, a fresh source of water-soluble sulfur compound as feed to the absorber can be generated on-site by reacting an elemental sulfur source with a sulfur reagent in produced water.



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