United States Patent [19]

Heinzelmann et al.

[11] **Patent Number: 4,618,481**

[45] **Date of Patent: Oct. 21, 1986**

[54] **ABSORBENT COMPOSITION CONTAINING A SEVERELY HINDERED AMINO COMPOUND AND AN AMINE SALT AND PROCESS FOR THE ABSORPTION OF H_2S USING THE SAME**

[75] Inventors: **Fred J. Heinzelmann,** Fanwood, N.J.; **Noah S. Rothblatt,** New York, N.Y.; **James P. Glass, Jr.; Geoffrey R. Say,** both of Baton Rouge, La.; **George R. Chludzinski,** South Orange, N.J.; **Guido Sartori; W. S. Winston Ho,** both of Annandale, N.J.

[73] Assignee: **Exxon Research and Engineering Co.,** Florham Park, N.J.

[21] Appl. No.: **771,515**

[22] Filed: **Aug. 30, 1985**

[51] **Int. Cl.**[4] **C01B 17/16;** C01B 31/20; C09K 3/00

[52] **U.S. Cl.** **423/228;** 423/226; 423/229; 423/220; 252/189; 252/190; 252/188.28; 564/503; 564/505; 564/508; 55/68

[58] **Field of Search** 423/226, 228, 220, 229, 423/223; 55/73, 68; 252/189, 190, 188.28; 564/508, 505, 503

[56] **References Cited**

U.S. PATENT DOCUMENTS

2,722,500	11/1955	Rippie et al.	196/23
3,139,324	6/1964	Housset	23/2
3,848,057	11/1974	Leder et al.	423/223
4,080,423	3/1978	Smith et al.	423/210
4,153,674	5/1979	Verloop et al.	423/573 R
4,405,583	9/1983	Stogryn et al.	423/228
4,405,585	9/1983	Sartori et al.	423/228
4,471,138	9/1984	Stogryn	564/508
4,525,294	5/1985	Sartori et al.	423/226
4,556,546	12/1985	Burgoyne, Jr. et al.	423/228

FOREIGN PATENT DOCUMENTS

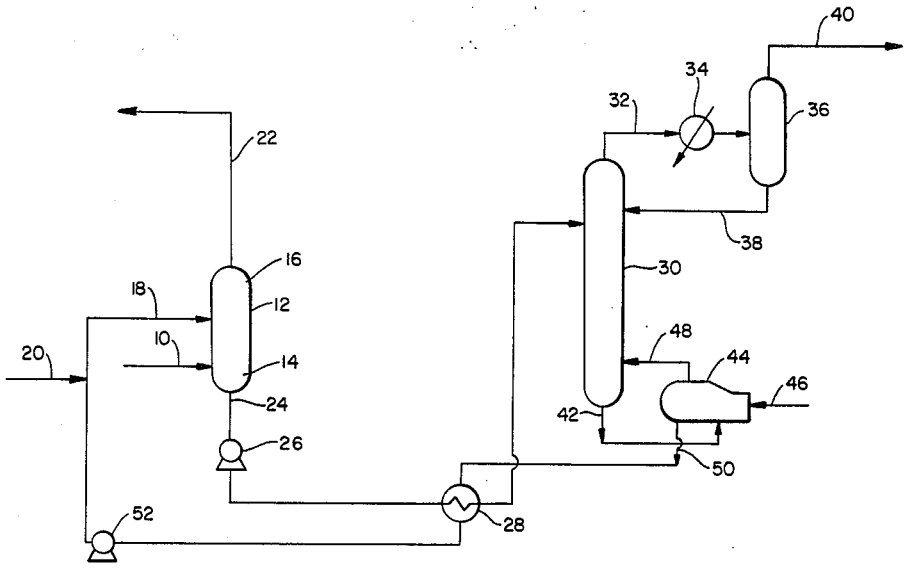
0134948 6/1984 United Kingdom .

Primary Examiner—John Doll
Assistant Examiner—Robert L. Stoll
Attorney, Agent, or Firm—Marthe L. Gibbons

[57] **ABSTRACT**

An alkaline absorbent composition comprising a severely hindered amino compound and an amine salt is provided. A process for the removal of H_2S from fluid mixtures using this absorbent composition to produce a very low level of H_2S in the treated fluid is also provided. The process is also suited for the selective removal of H_2S from fluid mixtures comprising H_2S and CO_2.

28 Claims, 4 Drawing Figures



ABSORPTION-REGENERATION UNIT FOR SELECTIVE H_2S REMOVAL