United States Patent [19]

Hunt

[11] **4,057,528**

[45] **Nov. 8, 1977**

[54] **PROCESS FOR REPAIRING CONCRETE STRUCTURES USING PNEUMATICALLY SPRAYABLE CEMENT MORTAR COMPOSITIONS CONTAINING PORTLAND CEMENT, MINERAL AGGREGATE, A STYRENE-BUTADIENE COPOLYMER LATEX AND WATER**

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[21] Appl. No.: **678,280**

[22] Filed: **Apr. 19, 1976**

[51] **Int. Cl.**[2] **C08L 9/10**

[52] **U.S. Cl.** ..... **260/29.7 S**; 260/29.7 SQ; 260/29.7 SE

[58] **Field of Search** ..... 260/29.7 S, 29.7 SQ, 260/29.7 SE, 29.6 S

[56] **References Cited**

U.S. PATENT DOCUMENTS

Re. 28,722	2/1976	Sanders	260/29.7 S
3,043,790	7/1962	Sanders	260/29.7 S
3,895,953	7/1975	Mekta	106/88

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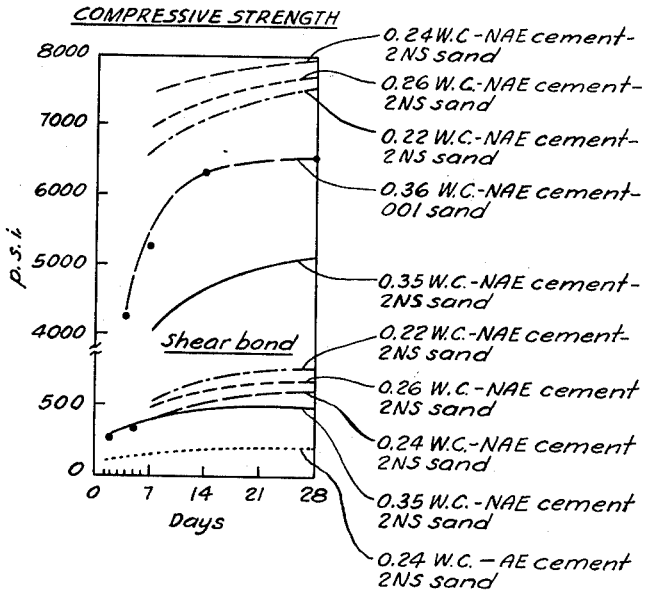
[57] **ABSTRACT**

Process for repairing concrete compositions using cement mortar compositions which are capable of being pneumatically sprayed and which provide unexpectedly enhanced bonding capabilities and resistance to slump; said compositions comprising essentially a substantially non-air entraining portland cement, mineral aggregate, a styrene-butadiene copolymer latex present on a solids basis in an amount of from about 5 to about 25 percent by weight of cement, and water in an amount sufficient to provide a total water to cement ratio of from 0.22 to 0.26.

8 Claims, 1 Drawing Figure