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(54) Title: CEMENTITIOUS FOAMS AND FOAM SLURRIES

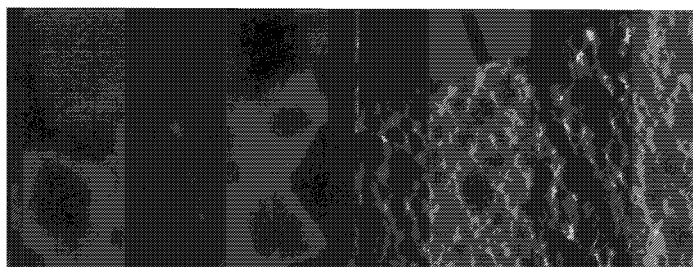


Figure 6

(57) Abstract: Lightweight cementitious foams of the invention have excellent dynamic and dimensional stability due to use of foaming system comprising polycarboxylate surfactant foam generating agent, foam stabilizer (e.g., PVOH), and shrinkage reducing admixture to inhibit plastic shrinkage and micro-cracking of cement. The foaming system can be used in conventional cement mortars or concretes as well as with exemplary cementitious slurry systems of the invention, which include an expansive agent, a cross-linking agent for the foam stabilizer. Microfibers can be used in the foam, slurry, or both, to prevent micro-cracking. Cementitious foams can be made without use of autoclave or lightweight aggregates to achieve enhanced compressive strength and thermal insulation properties that compare favorably with conventional foams and insulation materials at comparable densities.

