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Steffy

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Harvey

Primary Examiner: Poer; James*Attorney, Agent or Firm:* Watson, Cole, Grindle & Watson

Claims

We claim:

1. A process for making heat-insulating firebricks which display low shrinkage and low deformations when fired, yet high strengths, said method comprising
 - (a) mixing together 50-90 parts by weight of a refractory aggregate and 50-10 parts by weight of a refractory clay so as to form a first mixture,
 - (b) adding granular foamed polystyrene to said first mixture in an amount sufficient to provide pores in the heat-insulating firebricks, thereby preparing a second mixture,
 - (c) adding 1 to 3 parts by weight, based on 100 parts by weight of combined refractory aggregate and refractory clay, of an alumina cement to said second mixture, said alumina cement having an alumina content of 8 to 75% by weight, thereby preparing a third mixture,
 - (d) adding to said third mixture an aqueous solution of a water-soluble styrene maleic resin to form a fourth mixture, the amount of water-soluble styrene maleic resin added to said third mixture being between 0.1 and 0.3 parts by weight, based on 100 parts by weight of combined refractory aggregate and refractory clay, and the amount of water added to said third mixture being no more than 50% by weight, based on the weight of the combined refractory aggregate, refractory clay and granular foamed polystyrene,
 - (e) kneading said fourth mixture,
 - (f) casting said kneaded fourth mixture in a mold to form the heat-insulating firebricks, and
 - (g) drying and firing said cast heat-insulating firebricks.
2. The process as defined in claim 1, wherein said refractory aggregate is selected from the group consisting of alumina, alumina silica, silicic acid, magnesia and zirconia.
3. The process as defined in claim 2, wherein said refractory aggregate is an alumina silica containing 37% alumina and 57% silica.
4. The process as defined in claim 1, wherein said kneaded fourth mixture is cast in the molds in step (f) for no more than 6 minutes.

Description

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to a process for making heat insulating firebricks especially heat-insulating firebricks which are comparatively light in weight.

2. Description of the Prior Art

