

Influences Of Surplus SO₃ On Formation Of Belite-Rich Sulfoaluminate Clinker

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ABSTRACT

When FBC fly ash, usually rich in SO₃, is used in high proportion in the raw mixture for belite-rich sulfoaluminate clinker, the surplus SO₃ besides forming calcium sulfoaluminate (C₄A₃ \bar{S}) would affect the formation and hydration of the clinker. This study revealed that surplus SO₃ resulted in much calcium silicosulfate (2C₂S \bar{CS}) remaining in the clinker fired at temperatures below 1250°C and that the sintering temperature for the clinker should be within 1250°C to 1350°C. In order to acquire steady strength development of cement, the mole ratio of CS to C₄A₃ \bar{S} and C₄AF with clinker should be kept as low as possible and at most no more than 1.3.