

Introduction

Blended cements are usually, but not always, blends of portland cements with other finely ground materials. The most common ingredients for blending with portland cements are pozzolans and latent hydraulic materials, such as, ground granulated blast-furnace slags, but other materials, such as ground limestone, may be also used. Blended cements without portland cement are sometimes made, an example being slag cements made from ground, granulated blast-furnace slag and slaked lime or gypsum.

Blended cements have been manufactured in many countries but, at least in the United States, the volumes manufactured have been small compared to the volumes of portland cements. A renewed interest in blended cements came about in the United States following the oil embargo in 1973. This was because portland cement manufacture is energy-intensive and blended cements generally require less energy per unit volume to manufacture. The ASTM specifications for blended cements which existed in 1973 were not as well-developed as the portland cement specifications. This probably was the result of less interest and greater complexity in defining the product. The blended cement standards appeared to be too restrictive in terms of the ingredients permitted and in the range of acceptable proportions. However, in the absence of adequate data on factors affecting the performance of blended cements, the specifications have been difficult to change.

This volume presents the papers which were presented at the ASTM Symposium on Blended Cements sponsored by Committees C-1 on Cement. The Symposium was organized to provide more information on blended cements of all kinds, so as to aid the standards development process. We hope and believe it will achieve its purpose.

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