Compressive strength of concrete made from mixtures of Portland cement and combusted Piceance Basin oil shale fly ash

Roger Moore
Retired, USA

Burned oil shale is used with cement in countries outside the United States. Combusted oil shale is a potential by-product of shale oil production. In 1990, Occidental Oil Shale Inc., under a contract from the Department of Energy, combusted oil shale from the C-b tract at two fluid bed boiler manufacturing test facilities. The combusted fly ash was tested as a cement additive by the University of Pittsburgh with good strength results. In July 2011, the fly ash was tested again as a cement additive achieving high strength concrete. The results are presented for 100% shale fly ash and mixtures of cement and shale fly ash.