

Alkali Silica Reaction (ASR) potential of sand and gravels from NW-Himalayan rivers and their performance as concrete aggregate at three dams in Pakistan

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Concrete aggregates derived from the river bed materials of many of the streams originating from the NW-Himalayan region and draining into Pakistan are found reactive in terms of Alkali-Silica Reaction (ASR). This paper describes the long term ASR related performance of concrete at three dams i.e., Warsak, Tarbela and Mangla where material from such streams has been used as concrete aggregates. On Warsak an aggressive and at Tarbela a mild ASR has been detected while at Mangla dam ASR free concrete is reported. The anomaly of occurrence and non-occurrence of ASR in concrete manufactured using aggregate derived from the same provenance has been described.