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## **Potential alkali-silica reaction in some Malaysian rock aggregates and their test results**

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It is widely known that the deterioration of concrete due to alkali-silica reaction will occur when aggregates containing pessimum amounts of reactive silica minerals are used with high alkali cement. Petrographic examination and expansion tests on several natural rock aggregates collected throughout Peninsular Malaysia indicate some to be potentially alkali-silica-reactive. Petrographic evidences confirm that potential alkali silica reactive minerals in the aggregates consist of chalcedonic (spherulitic) quartz in volcanics, chert clasts in sandstone, strained quartz in quartzite and

microcrystalline and cryptocrystalline quartz in hornfels, volcanics and schists, are the likely causative factors in the expansion of the concrete bar used in the tests.

The hot and humid climatic conditions of this country is conducive for the occurrence of ASR in concrete. Therefore, an appropriate precaution should be taken when using the Malaysian aggregates for production of concrete to avoid the risk of alkali-silica reaction.

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