

## SESSION KEYNOTE

CMR02-73

## Silica Sand Processing

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Sources of silica sand in Malaysia may come from beach sand, tailing sand, sea sand, and river sand. These sands can be used directly, or may need some beneficiation before it can be used by the various industries. Processing methods that are frequently used by the silica sand producers include sizing, the removal of impurities by spiral concentrator, attrition scrubbing, magnetic separation, high tension separation and froth flotation.

Silica sand deposits in Malaysia are not suitable for use in the glass industry until it has been beneficiated to certain limits of coloured mineral such as iron oxides, and minimum refractory minerals such as zircon and rutile. Besides that, size and shape of the silica sand particles also play an important role in the making of glass.

The availability of high grade silica sand deposit in Malaysia, at a relatively low price, is almost non-existing. Potential deposits need a series of processing methods to up-grade its silica content before this commodity can be sold at a reasonable market price. This is because the various stages of processing, to upgrade its quality, directly increase the operating cost and time.

This paper discusses the research on a few silica sand deposits found in Malaysia. The techniques used in this work are batch processes, and may be combined in various ways to complete the processing circuit until the quality of the silica sand products have achieved the market requirements.