

# Q Rating Concrete

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## In Quest of Quality Concrete



### Alternative to Natural Sand

#### **PRESIDENT'S MESSAGE**

Sand, also termed as fine aggregate, is a vital ingredient in making concrete as well as cement mortar. Traditionally, river sand, formed by natural weathering of rocks over numerous years, has been the preferred fine aggregate for mortar and concrete. However, as the economic development fuelled the growth of infrastructure and housing projects, demand for building materials such as sand has been continuously increasing. This, at times, has led to indiscriminate mining of sand from riverbeds posing a serious threat to environment with the erosion of riverbed and banks, triggering landslides, loss of vegetation on the bank of rivers, and lowering the underground water table.

With a view to guarding against the indiscriminate mining of sand from riverbeds, several local authorities /governments across India have restricted or banned sand mining from riverbeds. Such controlling measures have, to a great extent, shifted sand sourcing sites. Crushed Stone Sand (CSS), which is obtained by crushing the parent rock, is emerging as a viable alternative to river sand.

CSS has been in use for a long time in many developed countries. In India too, CSS has been used - either as standalone fine aggregate or as a blend with river sand - on many big construction projects such as concrete dams, industrial complexes, concrete pavements, etc. The quality norms for CSS

have been appropriately defined in the Indian Standard specification (IS 383).

The ready-mixed concrete industry has been using CSS for a quite some time. In fact, RMCMA member companies have now acquired sufficient expertise in designing concrete mixes using CSS, either as a standalone fine aggregate or as a blend of CSS and river sand. Of course, the RMCMA member companies do exercise strict control on the quality of CSS to ensure that it conforms to the requirements of IS 383.

It is however sad to realise that many specifiers and end users still insist on using river sand. This means that awareness to use CSS in place of river sand is still lacking. In this issue of Qrating Concrete, we are therefore including simple, easy-to-understand FAQs on alternative to natural sand. We hope that this would go a long way in clarifying certain basic reservations in the use of CSS. We take this opportunity to also publish the updated list of the Quality Council of India (QCI) Certified Plants. It is heartening to note that number of QCI certified plants are growing and with the footprints crossing 300 mark. It is also heartening that the QCI certified units are now spread across more than fifty cities in the country.

**(Ramesh Joshi)**  
**President, RMCMA**