

## **Cementing material from rice husk-broken bricks-spent bleaching earth-dried calcium carbide residue**

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**Abstract:** A cementitious material, coded CSBR (Carbide residue Spent bleaching earth Broken bricks and Rice husks), was made from dried calcium carbide residue (DCCR) and an incinerated mix of rice husks (RH), broken bricks (BB) and spent bleaching earth (SBE). Another material, coded SBR (Spent bleaching earth Broken bricks and Rice husk ash), was made from mixing separately incinerated RH, SBE and ground BB in the same ash ratio as in CSBR. When CSBR was inter-ground with Ordinary Portland Cement (OPC), it showed a continued decrease in  $\text{Ca}(\text{OH})_2$  in the hydrating cement as a function of curing time and replacement levels of the cement. Up to 45 % replacement of the OPC by CSBR produced a Portland pozzolana cement (PPC) material that passed the relevant Kenyan Standard. Incorporation of the CSBR in OPC reduces the resultant calcium hydroxide from hydrating Portland cement. The use of the waste materials in production of cementitious material would rid the environment of wastes and lead to production of low cost cementitious material.

**Key words:** Calcium Carbide Residue, Spent Bleaching Earth, Broken Bricks, pozzolana.