

Make Money from Waste. How a Rice Miller can earn Extra Income in Extraction of Sodium Silicate from Rice Husk Ash (RHA) Project

Description:

Rice husk ash (RHA), a by-product from the rice industry, was used as principal source of amorphous silica for the production of sodium silicate solution used for the replacement of standard commercial sodium silicate in the mix-design of metakaolin based geopolymer composites. Three initial concentrations of NaOH were considered with the aim to investigate on the optimum dissolution and formation of silica oligomers capable to act as binder during the geopolymerization. Results (FT-IR and XRD) showed that RHA-NaOH sodium silicate solutions have characteristics similar to that of standard commercial sodium silicate and the residual carbonates present in the viscous pastes can be monitored during the preparation of geopolymers using the mix-design. Combined 25% standard sodium silicate solution with vol% of RHA-NaOH based sodium silicate solution conducted to good polycondensation, densification, high flexural strength and low porosity similar to that of the standard matrix of metakaolin based composites. The new approach is found promising for the significant reduction of the Global Warming Potential of Geopolymers.

Rice husk / hull ash (RHA) contains:

- Biogenic Amorphous Silica
- Carbon
- Un-burnt rice husk / hull

Sodium silicate products are manufactured as solids or thick liquids, depending on proposed use. For instance, water glass functions as a sealant in metal components. Finally, even though, sodium silicate manufacture is a mature industry, there is current research for new applications given its heat conductive properties.

The future demand for sodium silicate is a function of growth of the end-user industries, mainly soap and detergent factories, pulp and paper mills, paint, pigment and adhesive factories.

For more details download PDF file.

Keywords: How to Make Sodium Silicate, How to Make Sodium Silicate from Rice Husk, Sodium Silicate Processing Business Ideas, Preparation of Project on Sodium Silicate from Rice Husk, Sodium Silicate From Rice Husk, Start Your New Business Just How To Start Your Own Business, Conversion of rice hull ash into soluble sodium silicate, Preparation of Sodium Silicate from Rice Husk, Production of Sodium Silicate from Rice husk, sodium silicate project report form Rice husk, manufacture of sodium silicate fro

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