

RICE HUSK ASH

PRESENTATION



needs-ngo

RHA INTRODUCTION

- Rise Husk Ash is an agricultural Wastage abundantly available in rice producing countries like India, China, Brazil, and South East Asia.
- The annual rice husk production in India amounts is generally approximately 12 million tons.
- Rice Husk Ash is an international crisis of environmental degradation. Rice husks contain high amounts of silicon dioxide which is an essential component in concrete. Though scientists have been trying to utilize the silicon in rice husks (for use in concrete) for decades, the resulting ash created, when the rice husks are burned, has been too high in carbon to be useful as a cement substitute.
- In Kanchipuram District 136 modern rice mills, about 5.672 lakh MT paddy produced, is generating RHA. It is a great environmental threat causing damage to land, water and air.
- RHA enhances the workability, strength and impermeability of concrete mixes strength by 20%. It reduces the water penetration by 60%. Amorphous silica market is met. by import.

- **Milling the Paddy Grains** 25% of the rice husk is converted into RHA. RHA in turn contains around 85% amorphous silica. Every 1000 kgs of paddy milled, 220 Kgs (22%) of husk is produced, when this husk is burnt in the boilers, about 55 kgs (25%) of RHA is generated. RHA can be used along with cement by tapping its super pozzolanic behavior, offers immense opportunity for CDM protocol and earn substantial carbon credits.

Table I: Typical composition of Rice Husk Ash on dry basis.

Element	Mass Fraction, %
Silica (SiO ₂)	80 - 90
Alumina	1-2.5
Ferric oxide	0.5
Titanium dioxide	Nil
Calcium oxide	1-2
Magnesium oxide	0.5-2.0
Sodium oxide	0.2-0.5
Potash	0.2
Loss on Ignition	10-20

RHA PROBLEM IN KANCHIPURAM



WATER POLLUTION



SOIL POLLUTION





AIR POLLUTION



BRICK MAKING AND ENVIRONMENT PROBLEM





ECO FRIENDLY RHA

BRICK MAKING PROJECT

ECO FRIENDLY RHA BRICK MAKING

SOLUTION - 1



SOLUTION - 2



SOLUTION - 3

