

“Rice husk ash used in making of concrete canoe”

By

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The Michigan Tech Concrete Canoe Team named their 2005 concrete canoe **The MacInnes** after the legendary Michigan Tech hockey team. Their black, 20ft long, 175 lb concrete canoe carried the team to a third place finish and earned them a \$1500 scholarship.



The success of the team relied on dedication, teamwork, and perseverance. But unique materials added to the mix.

Rice Husk Ash (RHA), a natural silica, was tested as an alternative to silica fume. The product was procured from N. Singhania in India.



Similar to silica fume, RHA possesses a small particle size that lowers the porosity of concrete and is a highly reactive pozzolan.

However, previous experience has shown that silica fume decreases the initial set time of concrete and increases the amount of shrinkage in the mix.

RHA does not possess these undesired characteristics. Furthermore, RHA has a greater amount of surface area per unit weight than silica fume, helping to increase the overall strength of the mix.



For these reasons, the team elected to replace silica fume with RHA. A pie chart depicting the distribution of the materials used in **The MacInnes** follows.

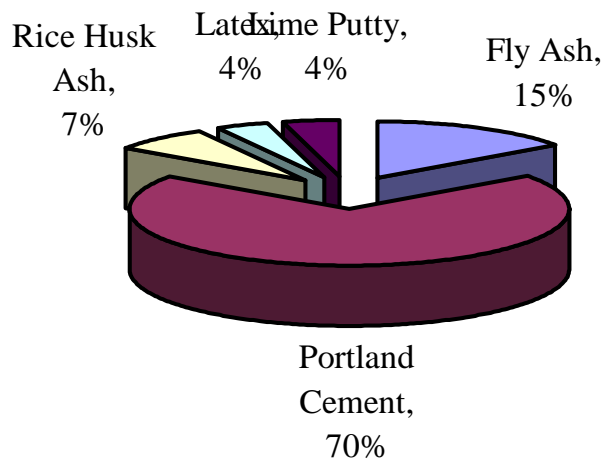


Figure 3.1:
Slapshot Binder Composition

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