

Project title: “Primary research on possibility of producing anti fire materials from rice husk”

❖ **Objectives:**

1. Producing anti fire materials mainly based on rice husk ash
2. Using the materials for ship building Contents at the NTU Institute for Shipbuilding
3. Converting agricultural waste into industrial products, improving economic effectiveness for farmers and solving some environmental problems.

❖ **Contents:**

1. Collecting rice husk in Khanh Hoa province
2. Drying rice husk
3. Designing and manufacturing sensor (0 – 1200°C)
4. Firing rice husk in natural conditions with different scales (10 kg – 50 kg)
5. Collecting, grinding and analyzing chemical and physical constituent of the ash.
6. Collecting chemical and additive substances: NaOH, Na₂SiO₃, kaolin...
7. Pilot producing principal material (geopolyme) for anti fire composite
8. Checking physical and structural of the solid principal material
9. Checking possibility of firing and structure of the principal material after firing at different temperature scales in a furnace
10. Reporting the project

❖ **Implementation period:** 4/2012-4/2013

❖ **Implementation person:**

Dr. Tran Doan Hung, Department of Academic Affairs

❖ **Results:**

1. Geopolyme of ash (collected from rice husk burned at different temperature scales) as primary material of anti fire materials
2. An artical published on a recognized journal

❖ **Applied places:**

1. Department of Mechanics and Materials, Faculty of Civil Engineering (using the research results for a pilot project on producing of anti fire materials)
2. Institute for Shipbuilding: using anti fire materials