

The Multipurpose Glue Industry

A Solution For Unemployment

Tabora Boys Secondary School

Daudi Costantine Msenga and Yusuph Rajabu Abdallah



Abstract:

The purpose of this project was to design an industry that aimed at producing multipurpose glue using buoys and petrol.

The main project question was that is it possible to manufacture the multipurpose glue using petrol and buoys and hence solve the problem of unemployment?

The objectives of the project were; first was to design glue industry .second objective was production of the multipurpose glue by using buoys and petrol and testing the applications of the glue on various materials. Third objective was to carry out different experiments to determine efficiency and effectiveness of multi-purpose glue.

The project was experimental, Data was collected using several experiments and analyzed by using Microsoft excel and presented using tables, pictures and diagrams.



Method:

Materials used were; small plastic buckets, bottle lids, old pens, tape, plastic pipes, small plastic bottles, screws, nails woods, and silicon glue, transistors resistors, light emitting diodes, capacitors motors, wires batteries, and aluminum foils were used in industry designing. The Metal sheets, plastics, papers, glasses, woods, shoes and stones were used to test the applicability of multipurpose glue. The slotted masses, measuring cylinder, G-clamp, kerosene stove, thermometer and electronic balance were used in testing efficiency and effectiveness of multipurpose glue.



Picture showing some materials used in determining the applicability of glue
The third objective materials used were, 200g slotted masses, wooden bars, strings, G-clamp, measuring cylinder, kerosene stove, water, candle, glass rod, and electronic balance as shown in



Picture showing some materials used for determining the efficiency and effectiveness of glue



Making mixing tank

- First, two holes at the base walls of small bucket was made to make glue outlets.
- Second, petrol tank was fixed at the mixing tank through small hole at the upper side of mixing tank.
- Third, the buoy outlet was joined to the mixing tank.
- Fourth, the three finished tanks systems were fixed together making complete glue production tanks systems.



Picture showing materials used in glue industry designing.
For the second objective materials were; Shoes, plastics, papers, stone, glasses, wood sheets, and sponges. These materials were used to determine the applicability of the shown in picture below



The picture showing the three tanks systems

Results:

The findings of the project were as follows; first it is possible to design glue industry using locally available material. It is possible to manufacture the multipurpose glue using petrol and buoys which can be used to bond different kinds of materials. The multipurpose glue produced is effective, efficient and water proof.

Testing water proof

From the experiment, it was founded that the bond of multipurpose glue to the two pieces of woods which was soaked in water for 30 days resisted applied separation forces. Therefore, the multipurpose glue is water proof

Testing effect of temperature

From the experiment, it was founded that glue bonding effectiveness and efficiency decreases as the temperature of surrounding raised above room temperatures. Also the viscosity of glue on woods bonds decreases as temperature rose. Therefore, temperature affects both physical state and bonding efficiency of the multipurpose glue.

Conclusions:

There is possibility of manufacturing multipurpose glue using petrol and buoys and yet solving the problem of unemployment in our society this is because people can produce and sell the multipurpose glue to many working fields such as carpentry and shoes making manufacturing industries to get income.

Also through glue production by using a designed industry, it influences the industrial economy as many people they can be employed in multipurpose glue production industries.

The findings from this project have shown the possibility of manufacturing the multipurpose glue by using local available materials which are cheaper, easily available and friendly to the environment, therefore the government and industrial managers should encourage the use of these materials in production of glue/adhesive in order to solve the problem of unemployment and pollution which caused by the action of burning or burying buoys since the buoys can be used as raw materials together with petrol to manufacture the multipurpose glue.

References:

Jack F, (1982). *Organic chemistry, An introduction*, Prentice-Hall. London

Tie.(2016). *Chemistry for secondary schools form five*, Tanzania instate of education, Dar es Salaam.

Acknowledgments:

We give thanks to the almighty God for helping us in our project .We also thank our supervisor sir George Kazi for his constructive advice and guidance. Also we thank all teachers and students of Tabora boys' secondary school for their endless help