

Study of scope of Agricultural waste based briquette Industries as a source of thermal energy and alternatives to the coal in Nagpur Region

¹Miss. Anchal Shende, ²Dr. Achal S. Shahare

¹Supervisor, III Semester Industrial Engg., G.H. Raisoni Academy of Engineering and Technology, Nagpur

²Prof. & HOD, Department of Mechanical Engineering G.H. Raisoni Academy of Engineering and Technology, Nagpur

Abstract- To study the total agriculture waste produce in and around Nagpur region and to use that Agriculture waste for preparation of briquettes so that these briquettes can be use as a source of thermal energy and an alternative to the coal. Compared to coal; the use of biomass briquettes has been steadily increasing as industries. Briquettes provide higher calorific value than coal, Along with higher calorific value, biomass briquettes on average saved 30–40% of boiler fuel cost. Having a high combustion rate, these can substitute for coal. These can be burnt clean and therefore are eco-friendly, Study the Industries of Nagpur Region where boilers are used, Study the fuel used in the boilers and its impact on environment, Quantify the demand of fuel to these Industries, Detail study of Type of Agriculture waste produced around Nagpur region, Quantified the waste Produced. Study of existing use of Agriculture waste by Farmers. Impact of Agriculture waste on Farmers Income. Study of use of waste for producing briquettes. Study the advantages of briquettes over conventional fuel. Scope of Briquettes Industries in and around Nagpur region.

INTRODUCTION

Globally, 140 billion metric tons of biomass is generated every year from agriculture. This volume of biomass can be converted to an enormous amount of energy and raw materials. Equivalent to approximately 50 billion tons of oil, agricultural biomass waste converted to energy can substantially displace fossil fuel, reduce emissions of greenhouse gases and provide renewable energy to some 1.6 billion people in developing countries, which still lack access to electricity.

HELPFUL HINTS

A. Figures



fig.1: Bio briquette Machine

CONCLUSION

- Recycling biomass materials of Nagpur region into fuel briquettes contributes to solving rural and urban needs by generating income, providing a new and cheap alternative source of cooking energy, avoiding excess waste disposal on insufficient land, avoiding having to cut down more forests for fuel wood, and ultimately promoting a sound environment.
- Fuel briquettes making is an environmentally friendly technology, which needs adoption and promotion by both rural and urban groups/individuals. After the training each group/individual is required to own a fuel briquettes press to start an enterprise.

- This, therefore, means that fuel briquettes can address the multiple needs of our society and our environment.

REFERENCES

- [1] "Biomass Briquette." Wwww.gcmachines.com. Web. 30 Nov. 2010
- [2] "Biomass Briquetting: Technology and Practices - Introduction." Centre for Ecological Sciences INDIAN INSTITUTE OF SCIENCE BANGALORE. Web. 04 Dec. 2010.
- [3] "Technology to Produce Energy Biomass Briquettes." Chohfi, Cortez, Luengo, Rocha, and Juan Miguel. Techtp.com. Web. 30 Nov. 2010
- [4] "Biomass Briquettes for Green Electricity Production." Bionomicfuel.com. 4 May 2009. Web. 30 Nov. 2010.
- [5] AGICO - Biomass Briquette Machine." AGICO Biomass Briquette Machine. Web. 30 Nov. 2010
- [6] "Greenhouse Gas Emissions." US Environmental Protection Agency. 19 Oct. 2010. Web. 08 Dec. 2010