

Mechanical Engineering

Partner organisation	SASOL FOUNDATION
Country	KENYA
Fieldwork period/year	2012
Disciplines	Mechanical Engineering
Title of the assignment	Briquette machine
Area of work, region, housing, accommodation, transport	Students will be working and accommodated at Mulango polytechnic. Transport by public service vehicles (matatus) or by taxi where possible organised by SASOL. SASOL, Kitui Community, Mulango community
Organisation(s) (NGO, training education institute, community	
Context, situation, problem(s) (regarding sector program)	Other sources of fuel in the community are becoming too expensive and this is why we are adopting briquette machine technology which is environmentally friendly. The technology advocates use of waste from the biodegradable materials hence promoting recycling of waste which are available in every home stead. So far, two briquette machines have been fabricated, the second one being the improvement of the first machine. This was done by the same team of students. Still the second machine needs some improvements to increase its efficiency. This is from the recommendations which were given by the previous team. Therefore there is need to design and fabricate an improved briquette machine by implementing the recommendations given.
Objectives (project and program level)	1. Designing and fabricating an improved briquette machine.

Brief project description including major activities

2. Designing and fabricating a briquette machine as a practical experience for mechanical engineering students.

A briquette is a machine used to press biodegradable materials to produce briquettes for provision of alternative source of fuel e.g saw dust, charcoal powder, Tobacco dust, Particle board chips, cotton stalks Rigid PVC dust, coconut fibres and Paper scraps.

Activities under objective 1

1. Evaluation of the previous team recommendations on piston, lever, cylinder etc.
2. Coming up with an advanced design of the briquette machine.
3. Material mobilization
4. Fabrication of the briquette machine.
5. Testing the efficiency of the fabricated briquette machine.
6. Monitoring
7. Reporting

Activities under objective 2

1. Guidance, supervision and discussions with technical supervisors
2. Involvement and discussions at all steps and levels by both Dutch and Kenyan students for exchange of knowledge
3. Participation in multicultural events
4. Reporting

Expected results (project and program level)

1. Fabrication of an advanced briquette machine.
2. Students should be able to design and fabricate a briquette machine.
3. Students should have the ability to communicate and relate across cultures.
4. Exchange of knowledge between Dutch and Kenya students and

Project phasing

Level Dutch and Kenyan students/graduates

Supervision and guidance (name(s), function)

also between all the students and the community.

5. Give recommendations for next team.
6. A draft report.

First week – Orientation

In between weeks – Project activities

Last two weeks – Report writing

University, Higher Education, Secondary Vocational Education – graduates or undergraduates, Polytechnic students

Evaluation and progress meetings done after every two weeks by SASOL staff.