Abstract  
Kenya is currently facing a housing deficit due to an increasing middle class and a slow  
rate of construction of houses. Some of the reasons causing this deficit are the high cost of  
construction, long time taken to finish projects due to unpredictable weather conditions, varying  
workmanship on site and unexpected hiking of material costs. Introduction of new building  
technology, that uses expanded polystyrene panels, has led to reduction of the time and costs  
spent in construction of houses while producing housing products with innovative, modern and  
green credentials. This method of housing was officially approved by the Kenyan government in  
2004 and has brought higher output capacity enabling realization of important projects.  
This project sought to investigate the extent of use of the expanded polystyrene panels for  
construction in Kenya and assessed the strength of expanded polystyrene wall and slab panels. It  
also compared the time and cost incurred when constructing using the expanded polystyrene  
panels and conventional methods using machine cut masonry stone, and how this method of  
construction conserves the environment. The study approaches that were used are questionnaires,  
site visits and photography, interviews, desktop studies and minor lab tests to ascertain the

information received about the strength of the expanded polystyrene panels. .  
It was concluded that the use of the expanded polystyrene panels for construction in  
Kenya is yet to gain momentum. The study proved that expanded polystyrene wall and slab  
panels are strong enough to be used for construction of walls and floor slabs in buildings and  
conserves the environment. A time saving of 50% and cost saving of 30% though labor, transport  
and hiring of construction equipment and formwork, are being achieved.