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.