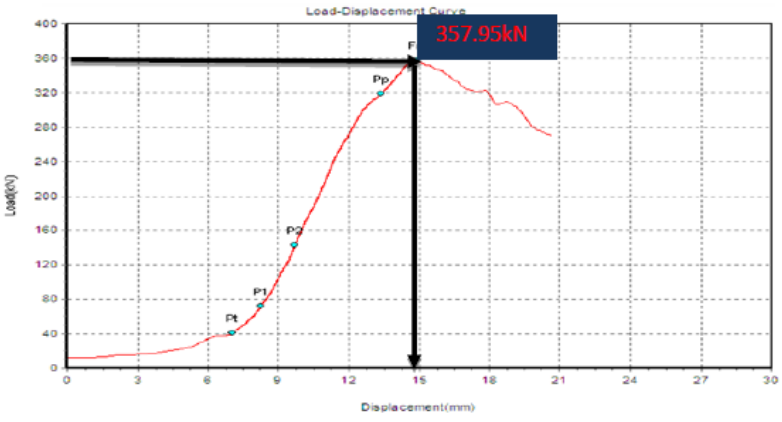
UTILIZATION OF PLASTIC WASTE BOTTLES IN MANUFACTURING OF PLASTIC SAND BRICKS

Abstract

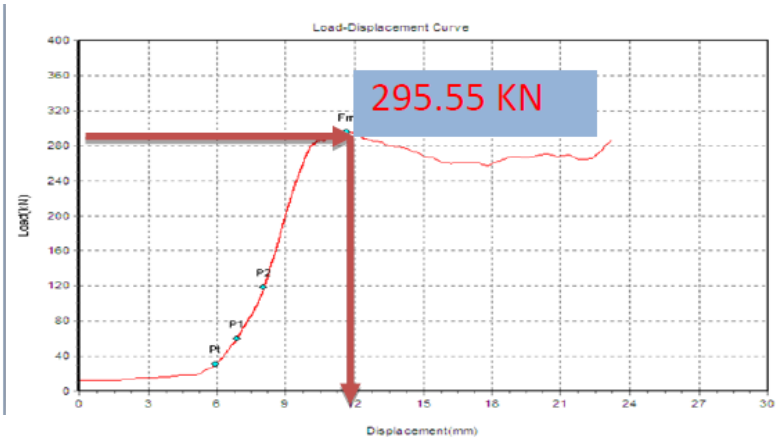
The aim of this project was two fold: one, to attain the strength, cost, water consumption of plastic sand bricks and two, to find an alternative of Plastic waste, which otherwise is disposed off in our environment causing considerable environmental issue.

In this project, brick was created with the help of plastic waste bottles which were first crushed into small pieces and boiled at the temperature of 400-450-degree Celsius to convert it into a molten state. After that specific amount of sand is added to it and stirred continuously to make it saturated and, in the end, it was poured in a mould to give the shape of a brick.

Final results showed that the strength of brick is increased by almost 22% from normal used bricks, while the cost is reduced by 10%. Industrialization of the whole process can further reduce the cost of plastic sand brick.



Maximum Strength of Plastic Sand Brick



Maximum Strength of Ordinary Brick