

## **Manufacturing of Internal Fuel Based Eco-Friendly And Energy Efficient Burnt Clay Bricks With Criss-Cross Setting**

### **Societal Impact**

- i) Utilization of cheaper fuels like agriculture waste and reject coal etc. It will also solve the problem of open burning of agricultural residue in the fields.
- ii) External fuel consumption may be reduced from 40 to 100 %. Thus increase in the profitability of the entrepreneurs by reducing the energy requirement as well as energy losses due to leakage in the kiln.
- iii) This design will reduce the emission of particular matter from stack to provide better working environment for the workers. SPM emission level reduction to a level below 100 mg/Nm<sup>3</sup>.
- iv) Reduction in emission of green house gases to a significant level
- v) This design will help to save the natural resource like coal as fuel.
- vi) No external feeding of fuel will help to stop the use of illegal fuel i.e. plastic and rubber waste. Further, it will save the money given to labour for external firing of bricks.
- vii) It will protect the human health by reducing the lungs related diseases.
- viii) Engineering properties like strength & water absorption of bricks get improved
- ix) This design will help to achieve the new standards of SPM emission (250 mg/m<sup>3</sup>) from stack as per CPCB guidelines.
- x) The technology will help to reduce carbon foot print by reducing the CO<sub>2</sub> emission by burning of coal as an external fuel.
- viii) It will improve the ambient as well as indoor air quality for the human being.