

Design and Development of Plastic Bottle Crushing Machine

**Prof. Mangesh A. Ahire, Shrinath S. Kumbhar, Durgeshwar Wangekar,
Vivek B. More, Devansh C. Gite**

Rajarshi Shahu College of Engineering, Pune, India

Abstract: One of the environmental problems faced by most of the developing countries is waste management. Plastic waste, such as polyethylene terephthalate (PET) bottles and other plastic materials, is one of the waste products that affect the structure and beauty of our environment. This is the result of illegal dumping and indiscriminate burning of waste. The environmental pollution from its constant disposal and incineration is necessary for the creation of plastic shredders to recycle the plastic waste produced in our environment. The main parts of the machine are the hopper, the crushing cavity, the outlet, the counterweight, the horizontal vane transmission shaft and the shaft. The machine works with a 3-phase 5Hp medium-speed electric motor. The efficiency of crushing based on polymers processed, like HDPE, LDPE, PVC and PET bottles.

Keywords: *Polyethylene Terephthalate (PET), High Density Polyethylene (HDPE), Polyvinyl Chloride (PVC), Low Density Polyethylene (LDPE), Plastic Waste Management etc.*

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