



INTERLOCKING PLASTIC BLOCK – A REVIEW

**Mrs. Sheetal Nalbilwar¹, Atharva Bhapkar², Karan Patil³, Shivraj Jagadale⁴,
Krushna Khandare⁵, Sujal Shinde⁶**

*Lecturer¹, Student², Student³, Student⁴, Student⁵, Student⁶
Y. B. Patil Polytechnic, Akurdi, Pune, India*

ABSTRACT

The plastic waste is the hazardous problem in today's world. This is most dangerous problem in front of World. The most hazardous type of wastes are HDPE and PTE and the plastic below 50micron is also causing a serious problem. This plastic mixed in the soil; it directly effects on fertility of the soil. Nowadays, the large amount of plastic is deposited into sea. This plastic wastes gives hazardous effect on the aquatic life and quality of seawater also polluted by this plastic. So, we try to finding efficient way to solve this problem of plastic waste. So, we added this plastic wastes into the bricks and create the bricks by using plastic wastes. It is most economical solution present in the construction industry and it is also economical and environment friendly solution of the Plastic Wastes. This material is made of a combination of single use plastics mixed with eco-friendly industrial waste. By using these blocks, construction costs are reducing from savings made by the material itself and from labour. Interlocking designs make it easy to build with and requiring less manpower to do so. The same principle can also be used in building sidewalk pavers, interlocking posts, fences and other construction materials.

INTRODUCTION

Plastic began to gain traction as an important consumer good. Plastic has now not only replaced numerous items made of wood, leather, paper, metal, glass, and natural fibres in various uses, but it has also aided in the development of whole new product categories, the environmental impacts of which vary greatly. Plastic bags discarded carelessly clog drains, impede soil pores, and disrupt ground water recharge. If used correctly, this resource has the ability to usher in a new era for you, society, and the globe as a whole. This easily accessible resource might provide a great source of cash for our community. By reducing plastic pollution, decreasing the need for new plastic items, and eliminating the Plastic garbage, as a source of raw materials, has the potential to significantly improve worldwide lifestyles.

It is estimated that the pace of expansion doubles every ten years because to fast population increase, urbanisation, developmental activities, and changes in lifestyle, which result in widespread littering on the environment. Hence, the disposal of waste plastic is a huge worldwide concern since it is non-biodegradable, and studies have discovered that plastic components can exist on Earth for 4500 years without breakdown.

Throughout the last two decades, new techniques have been added to the brick-making process to mitigate the disadvantages of previous ones. One such technology is the interconnecting brick. This is seen as an alternate component for sustainable development in specific applications, such as building or dwellings and water infrastructure. But, in order to present an example, Sustainable technology must be employed in its manufacturing to ensure a straightforward, environmentally friendly, time- and energy-efficient approach. This is expected to result in superior interlock bricks that are also more sustainable in a variety of ways.

SCOPE OF WORK

- Provision of a Sustainable Source of Raw Materials.
- Reducing hazardous material from the environment.
- Sustainable development with scrap plastic waste.
- Development of construction with scrap.
- Advance utilization of scrap in construction.



MATERIAL AND METHOD

3.1 Material

1) **Waste Plastic:** Plastic trash, also known as fictile waste, is the build-up of plastic objects (such as plastic bottles) in the earth's ecosystem, which has a negative impact on animals, wildlife habitat, and people. It also refers to the large volume of plastic that is not recycled and ends up in landfills or, in the developing world, in uncontrolled dump sites.

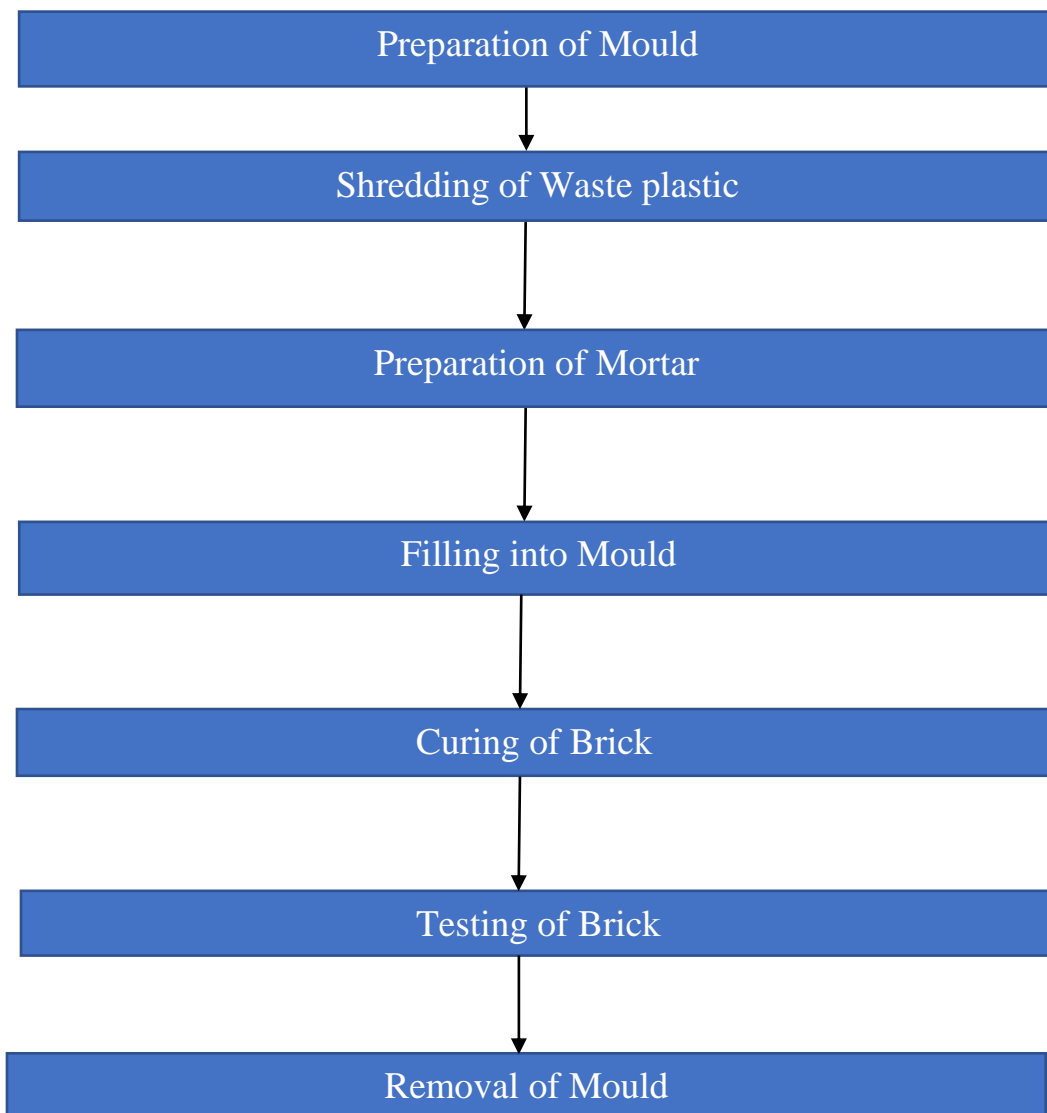
2) **Mould:** A container into which a liquid or material is poured. The liquid then solidifies (sets) into the same form as the container. In our capstone project, we're making use of a stainless steel mould.

3) **Cement:** - A cement is a binder, a chemical substance used for construction that sets, hardens, and adheres to other materials to bind them together. In this our capstone project we use M53 grade of cement.

4) **Fine Aggregate:** - Fine aggregates are essentially any natural sand particles won from the land through the mining process. Fine aggregates consist of natural sand or any crushed stone particles that are 1/4" or smaller. This product is often referred to as 1/4" minus as it refers to the size, or grading, of this particular aggregate.

5) **Water:** - We use locally available water for mixing our mortar.

METHODOLOGY





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3. IUG Student, Department of Civil Engineering, Pace Institute of Technology & Sciences, Ongole. 2Associate Professor Department of Civil Engineering, Pace Institute of Technology & Sciences, Ongole. 2019 www.irjet.net
4. 1R. KRISHNA MOHAN, 2N. SRIKANTH, 3SK. SHAHENSHA, 4M. SAI TEJA, 5M. AKHIL BHARAT 1Associate professor, 2,3,4,5 U.G. Students Mechanical engineering department, Godavari Institute of Engineering and Technology, Rajahmundry, Indi (JETIR) www.jetir.org
5. 1,2,3,4,5Students 6Assistant professor Department of Civil Engineering, Rungta college of Engineering and Technology , Bhilai , India, 490023 Email:mohd.sultan25@gmail.com