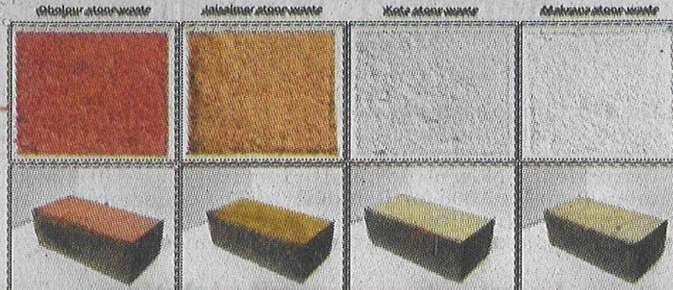


IIT INDORE DEVELOPS COLOURED BRICKS THAT SAVE 35% COST



OUR STAFF REPORTER
Indore

Indian Institute of Technology Indore has developed a new low-cost coloured bricks using stone waste. These bricks will result approximately 35 per cent savings in cost as there will be no need for plaster and paint over masonry.

The institute's Center for Rural Development and Technology has developed these special bricks jointly with the department of civil engineering, mechanical engineering and physics in the institute's brick laboratory.

Institute's faculty members, Dr Sandeep Chaudhary, Dr Rajesh Kumar and Dr Ankur Miglani and research scholars Vivek Gupta and Devesh Kumar have developed the durable bricks using inherently coloured dimensional stone waste available in millions of tons in dumping areas.

The bricks are specially designed keeping in the view the rural needs and utilisation in low-cost rural housing. At the initial level, four stone wastes from western India - from Dholpur, Jaisalmer, Kota and Makrana have been used.

In a recently published research work in an international journal Construction & Building Materials (CBM), students of IIT Indore have transformed the inherently coloured stone waste and one another waste material of the steel industry into durable and coloured composite using chemical binders, which can be used for brick manufacturing.

To reduce the cost due to

chemicals, they have used coloured composite in a limited thickness in bricks. In these bi-layered bricks, the top layer consists of coloured composite mortar, whereas the bottom layer uses same mortar used for regular fly ash bricks.

Chaudhary said, "Intensive research work is going in the institute in the field of pre-manufactured products and gainful utilisation of waste materials for last four years." The time-to-time interactions held with people from brick manufacturing industries had let the research group know that still in today's time, in rural markets, red-coloured fired bricks are being preferred due to their auspicious bright colour instead of eco-friendly grey-coloured fly ash bricks.

The fired bricks adversely affect the environment, and many states in our country have banned its manufacturing. The fly ash bricks can be imparted colour using synthetic colours; however, that would increase the cost. "Therefore, research scholars have used waste materials and developed coloured bricks using dimensional stone waste, which is strong and durable," Chaudhary added.

These bi-layered bricks can be manufactured at an industrial scale at a cost of less than five rupees per brick. The bricks can be manufactured in machines used for normal fly ash brick manufacturing with minor alterations, which can directly benefit the country's approximately 20,000 fly ash brick manufacturing units.

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