Resiblock Based by Marble Powder

Lopez Galeana, Mayte (School: Colegio de Bachilleres del Estado de Puebla Plantel 6)
Romero Romero, Jesica (School: Colegio de Bachilleres del Estado de Puebla Plantel 6)

Today, the largest economic activity in the Mixtec region of Tepexi de Rodriguez, Puebla is the marble industry. This has brought great benefits to its inhabitants. However, large amounts of marble dust are generated as waste, due to this activity. This has caused serious environmental damage in the region, as well as health among the inhabitants. This translates into a social and economic problem. That is why this research focuses on the development of a building block. Which is built taking advantage of the residues and waste of the region. This project is based on the old adobe buildings in the Ixcaquixtla area, those that were only factories of mud and wheat straw and whose useful life is up to 100 years approximately. The materials used to manufacture the block are marble dust, nejayote (calcium oxide substrate), wheat straw, sand, and cement. The procedure is to collect, empty and mix the materials; later compact and place the block in molds for drying. To determine the mechanical resistance of the block, compression tests were carried out under the Mexican standard NMX-C-036-ONNCCE-2004. To know the absorption index of the blocks, absorption tests were carried out under the Mexican regulation NMX-C-037-ONNCCE-2005. In this way, a resiblock based by marble dust is built, with good durability, resistance, and aesthetics. In addition, the use of waste allows the creation of an economic block with a lower cost than commercial blocks, up to 40%. Likewise, it contributes to the reduction of environmental and health problems. In this way, a sustainable project is developed with the manufacture of RESIBLOCK.

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