
Registration Seminar

Seminar Title	: Recycling of Polished Tile Waste in Ceramic full body Vitrified Tiles
Speaker	: Khodidas Govindbhai Kundariya (Rollno : 920cr5006)
Supervisor	: Prof.(Ms.) Sunipa Bhattacharyya
Venue	: Seminar Room, Ceramic Department (both online offline mode)
Date and Time	: 10 Jun 2024 (10AM)
Abstract	: The fabrication of ceramic full-body vitrified tiles can be innovatively achieved by recycling polished tile waste, which presents a significant disposal challenge for the industry. By incorporating this waste material into the tile manufacturing process, it is possible to partially substitute feldspar with polished tile waste. This eco-friendly approach not only mitigates land pollution but also reduces production costs due to the use of local raw materials. The experimental compositions were formulated with varying proportions of tile waste at 5%, 10%, 15%, and 25%, replacing equivalent amounts of feldspar in the standard tile composition. Throughout the fabrication process, meticulous attention was given to ensure that there was no compromise in vitrification or other essential properties of the tiles. Remarkably, the water absorption of the tiles produced using this method was determined to be 0.027%, closely comparable to the standard tile composition that does not utilize polished tile waste. Further analyses of the microstructure and phase composition were conducted using field emission scanning electron microscopy (FESEM) and powder X-ray diffraction (XRD) techniques, confirming the viability of this sustainable and cost-effective approach.