

## CONSTRUCTION OF A GRAVEL ROAD USING BAUXITE RESIDUE

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### *ABSTRACT*

Results from research efforts over many years by the Highway Laboratory of Civil Engineering Department of Aristotle University of Thessaloniki (AUTH) and other academic or research institutions on behalf of "Aluminium of Greece" have demonstrated the potential use of bauxite residue in the construction industry as bricks, in the ceramic industry, for restoring abandoned surface mines and road construction.

This paper details the construction of a gravel road using bauxite residue on the road "St.Nikolas-Kiriaki" in the site of the "Aluminium of Greece". The final layer included the addition of bauxite aggregates to provide an additional road carrying capacity.

The aim of the project was to construct a trafficable surface for trucks and other vehicles with adequate resistance to heavy traffic loads and external factors as changing climatic conditions or soil erosion due to the rain. The construction is the right balance between technically excellent result and economically feasible. The prospect of using bauxite residue for similar road construction, or in general road construction, remains open.

*KEY WORDS:* Bauxite residue, embankment, by-product