**EXPERIMENTAL INVESTIGATION OF PARTIAL REPLACEMENT OF CEMENT WITH DOLOMITE POWDER**

**ABSTRACT**:

The main aim of this experimental investigation is to focus on the possibilities of utilizing dolomitepowder (DP) in cement and concrete production. Cement is one of the most important constituents of concrete. Most of the properties of concrete depend on cement. Cement is manufactured by calcining argillaceous and calcareous materials at a high temperature. During this process, large amount of CO2 is released into the atmosphere. India is the second largest producer of cement in the world. It is estimated that the production of one ton of cement results in the emission of 0.8 ton of CO2. The reduction in the consumption of cement will not only reduce the cost of concrete but also the emission of CO2. Dolomite powder obtained by pulverising the sedimentary rock forming mineral dolomite can be used as a replacement material for cement in concrete up to certain percentage. Dolomite powder has some similar characteristics of cement. Using dolomite powder in concrete can reduce the cost of concrete and may increase the strength to some extent. This paper examines the possibility of using dolomite powder as a partial replacement material to cement. The replacement percentages tried were 0%, 5%, 7.5%, 10% and 15% by weight of cement. The compressive and split tensile strength of concrete with dolomite powder was compared with those of the reference specimens. The results indicate that replacement of cement with dolomite powder increases the compressive and split tensile strength of concrete.