

FEASIBILITY STUDY OF INDUSTRIAL UNIT FOR PREPARATION AND RECYCLING OF MARBLE & GRANITE WASTES

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Abstract: In these work, Industrial unit for treatment of marble and granite wastes by physical methods was designed. It treats both wet and dry wastes. After treatment, wastes are used as filler or reinforcement for composite materials industries. Metal molds are used in manufacturing for good surface finish and dimension stability. The molds have heaters and gas cooling system. Heating and cooling rates depends on the properties required in the final products. Final products have different shapes, properties, dimensions, thicknesses, lengths and colors. The unit treats the wastes of the natural marble and granite with all of their types and preparing them in a physical way in order to preserve their characteristics and keep them valid as products. The general characteristics of the product were tested, the objectives of recycling process of marble and granite were established, market analysis and competition factors were studied, the manpower and expected job opportunities were evaluated. The economical feasibility study for the case study in Egypt was done, capital cost, working costs, operation costs, direct and indirect costs were calculated. Expected risks and crisis are evaluated. Results depends on the case study were taken into account. General conclusions and recommendations are mentioned.

[Dr.eng Hebatalrahman, A. **FEASIBILITY STUDY OF INDUSTRIAL UNIT FOR PREPARATION AND RECYCLING OF MARBLE & GRANITE WASTES**. Researcher. 2011;3(12):17]. (ISSN: 1553-9865). <http://www.sciencepub.net>

Key words: feasibility study, wastes , marble, granite , recycling, preparation