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The Engineering Design of the Temple of Dendera in the City of Qena, Egypt

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Abstract : Introductory statement: The temple is characterized by a unique engineering design. This study aimed to explain the means that were used to reach this design. Background of the Study: Temple of Dandara consists of 24 columns with a height of 18m and a diameter of 2m. This paper is about the engineering method for constructing these huge columns. Two experiments were conducted at the temple. The first experiment used AutoCAD to compare the similarity of the columns in terms of dimensions. The second experiment used a laser rangefinder to measure the extent of the match between the heights between the columns. The Major Findings of the Study: (1) The method of constructing the columns was through several divided layers. It is divided into two halves and built opposite each other to maintain the integrity of the columns. (2) The match between the heights of the columns, which reached the error rate between one column and another, is only 1 mm. Concluding Statement: Both experiences will be explained through 2D and 3D.

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