DEPARTMENT OF BUILDING

UNIVERSITI TEKNOLOGI MARA

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STRUCTURE IN BUILDING: COLUMN

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ABSTRACT

A column is a vertical structural member intended to transfer a compressive load. Columns are typically constructed from material such as cement, aggregate, sand, water, reinforcement bar, timber and so on, which have a good compressive strength. The main purpose is to observe and learn how this company manage a strategy of working in terms of time constraint to completing a construction work and the right way to do a construction work. The objective is to learn how the column installation works are done properly and according to the specified conditions. In addition, to observe problems and challenges when column installation work is carried out or after the installation works are done completed but before the re-alignment work started. Based on experience in preparing this case study, I carried out construction work at the site with the appropriate tools and complete equipment. Therefore, as a site supervisor, a basic knowledge of the working in construction work is needed either in terms of technical experience, supervise work experience and little knowledge on security issues is indispensable site.

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INTRODUCTION

1.1 Introduction

A structure as whole system is divided into number of different parts mainly comprising of footing, beam, column and slab. Columns are basically vertical members which span from substructure to superstructure and play a crucial role in transfer of load from top of structure to bottom footing. (Gharpedia,2019)

Columns are basically rigid vertical structural members designed primarily to support axial compressive loads coming from beams and slabs and then transfer it to ground through footing. Different loads that are generated in a structure are transferred by column to footings and footing to soil. So, column plays an important role in whole load transfer mechanism and if without the column the structure will doesn't exists. (Gharpedia,2019)

However, every vertical member cannot always be a column. A column is a member whose length is more than 3 times its least cross sectional dimension. If this criterion is not followed then that vertical member is called as strut. (Gharpedia,2019)

The strength of a column depends on largely strength of material used, geometry, shape and size of cross section, length and position of column with respect to support condition at both ends. (Gharpedia,2019)

Columns are therefore very important members of a structural system. The failure of a beam or slab will not be sudden and will give you time for either moving out or repairing but the failure of a column sometime may lead to sudden failure of the building. Hence column need meticulous design and careful construction. (Gharpedia,2019)