

**ASSESSMENT ON X - BRACING SYSTEM AND V - BRACING
SYSTEM OF STEEL BUILDING.**

By

NURUL IWANI BINTI ROSLAN

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DECLARATION

I Nurul Iwani binti Roslan , 2003479832 confirm that the work is my own and that appropriate credit has been given where reference has been made to the work of others.

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ABSTRACT

This study focused on the comparing the lateral stiffness of several frames provided by concentrically braced frames (inverted V bracing system and X bracing system using available softwares in the market. This study is limited to a rigid frame connection only, performing two dimensional analysis, having uniform sections and isotropic materials. At the end of this study, the results finally conclude the effectiveness of the bracing system (inverted V bracing system and X bracing system), lateral stiffness of the analysed frames, production of regression analysis equation to predict the displacement for specified section and range of size.

CHAPTER 1

INTRODUCTION

1.1 Background

The steel framework structures are the most popular structural system that has been used for factories construction in Malaysia. In order to predict accurately the behaviour of such frames requires the full understanding from the three dimensional point of view. However engineers will establish several assumptions in order to analyse and design the structures, usually the three dimensional behaviour will be reduced to a two dimensional analysis due to its simplicity and practical.

The major assumption that will influence the analysis of steel framework will be the beam – column behaviour. Usually the design methodology for frames is based on the member – level rather than the entire frame itself, i.e. the structural frame selection is merely based on the selection of member. In actual way, a frame should be designed based on an interactive system rather than on a collection of individual behaviour of beam – columns.