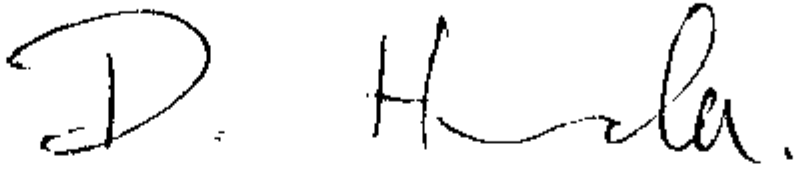



THESIS TITLE : COMPARISON OF ALLOWABLE STRESS DESIGN AND LOAD AND  
RESISTANCE FACTOR DESIGN OF STEEL STRUCTURE IN  
THAILAND

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### ABSTRACT

The purpose of this study is to compare the quantity of materials in steel structures that are designed by two different methods, which are "Allowable Stress Design Method (ASD)" and "Load and Resistance Factor Design Method (LRFD)" of American Institute of Steel Construction (AISC). The criteria of design are that dead load to live load ratio (DL/LL) of steel structures in this study are between 0.25 to 4.00 and all steel section is allowable in Thailand industrial standard (TIS). In this study, there are 25 samples in 4 types of structure consist of 2D Truss, 3D Truss, 2D frame and 3D Frame.

The results of this study indicate that the quantity of material of the structure which are designed by LRFD Method is less than ASD Method by 6.54 - 14.50 percent. Although, for the LRFD Method, the high DL/LL ratio structure used the quantity of material less than the lower ones.