Name : Mr.Suthee Piyaphipat

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Thesis Advisors : Mr.Panom Chaiyasit , Mr.Somsak Kampliew
Mr.Wittaya Wipawiwat

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Abstract

In the design of a steel structure it is common to assume a section and check whether it is able to resist applied loading according to standard design criteria. This process usually is very complex and time consuming.

This thesis provides a design program for steel structures in BASIC language for a microcomputer. It is able to facilitate the steel design precesses of tension members, compression members, bending members, combined axial force and bending members, and connections. After data entry, designing is automatically processed by calculating and checking section properties until a suitable section is found to be able to resist applied loading safely and economically. The program will provide design output in terms of calculation. The designer can select several kinds of sections from this program.

The limitation of the program are that it can only design for shape steel sections and it refers to AISC (American Institute of Steel Construction) standard and steel building standard of E.I.T. (The Engineering Institute of Thailand under H.M. The King's Patronage)