SUMMARY

This thesis describes an expert system, known as the ESLD, for the design of lift system in buildings. It combines the conventional lift traffic analysis with the expert system technique to guide the designer to obtain a suitable solution for the building under consideration.

The ESLD is provided with "why" and "how" explanation facilities. It has also incorporated the "what if" capability to help the designer to evaluate other alternative solutions.

One of the main features of the ESLD is that all the parameters of the lift system are stored in a tree structure. Each parameter is represented as a node. Depth first search technique is used to search through the tree for solutions.

The knowledge of the ESLD is represented by production rules and the expert system is implemented in Turbo Prolog.

The ESLD can be used by engineers and architects in the planning of lift systems for buildings or as a training tool to familiarize the students with the lift system design process.

The lift system obtained for the ESLD is manufacturer independent. If this system is used as an input to other
manufacturer specific programs, then a detailed parts and component specification can be obtained.