

<u>Pelft University of Technology</u>
<u>Faculty Mechanical, Maritime and Materials Engineering Transport Technology</u>

## J. Pronk Het bedienen van hoogbouwmagazijnen.

Literature survey, Report 98.3.TT.5067, Transport Engineering and Logistics.

Since the 1960's high-bay warehouses are being built and developed to increase size, speed and complexity.

This report is written to make an survey of equipment that is used in these warehouses.

There are two main groups of equipment, high-bay trucks and storage retrieval sytems (SRS). The first group is mainly a further developed counter balanced truck, the second is specially built to transport goods in and out the racks very fast. These systems are being designed together with the layout of the total system.

After that several strategies to store goods in racks are mentioned. The conclusion is that the most complex system, the ABC-analysis, gives the best results concerning speed and reduction of meters to drive.

In the last two chapters the equipment's power and control are mentioned. Power is supplied by electric engines, both AC and DC machines are being used. Since the fact equipment is driving though high, small aisles, guidance are being used. This guidance can be done either mechanically by rail or electronically by induction.

Measuring of the positions takes place using incremental or absolute measuring systems. The control historically used slow speeds, but nowadays more and more continuous control systems are being used.

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