Design of a Travelling Crane

Project report submitted by

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SUMMARY

The design of a Travelling crane should be conform to FEM Standards in order to construct reliable designs.

FEM which means Federation of European Hoist Manufacturers is a standard code for the design of cranes.

Also the designer should follows some design considerations like strength, reliability, corrosion, cost safety, life and others in order to design the suitable crane.

The material to be selected which has to do with the strength, depends upon the choice. The choice should be economical as possible but mainly available to handle two times the required weight.

The above design consideration deals with the safety of the design because always there are people which don't follow the working weight and apply more weight to finish faster the job.

The following design of a Travelling cane which handles up to 0.5tonnes, travels 4m and raises and lowers weights up to 4m is flexible because can be dismantled and reassembled in different work places due to its weight. Can be controlled as an overhead crane with a control hanging from the trolley.

Calculations for each member selected and necessary welds at th necessary spots and also calculation and selection the screws to connect the main members.

Degree of safety is high because the designer should prevent the trolley falling from the rail, with buffers and also emergency switches are placed to stop the trolley at the correct distance limits.

Also the operator should control the crane away from the crane because the travelling speed of the trolley will oscillate the handling weight and this might wound him.

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