



## **ABSTRACT**

Rubber tire gantry crane has three kind of moves, there are hoisting, trolley, and travelling. Dimension of rubber tire gantry is 19 meters height with maximum height of hoisting is 15 meters, width of trolley 6.4 meters, and length of this crane 23 meters. Capacities maximum of container that can hoisted by this crane is 40 tons with dimension of height 8 ft, width 8 ft, and length 40 ft. Container hoisted by spreader telescopic with twist lock pin to lock container and flipper to guide locked process.

Speed of hoisting is 20 m/min, speed of trolley is 30 m/min, and speed of travelling is 135 m/min. Power had been supplied by generator diesel AC with 420 volt, 50 Hz. There are five motors that used to move the container, one motor in hoisting system, two motors in trolley system, and two motors in travelling system.

Speed of hoisting system reduce with gear transmission, speed of trolley system reduce with gear transmission and sprocket to move four wheels of trolley, and speed of travelling system reduce with gear transmission and sprocket to move eight tire of travelling.

## **PREFACE**

In the name of ALLAH SWT, most merciful and most compassionate let His blessing is upon His entire prophet Mohammed SAW who brings the truth and struggle for righteousness.

This final project presented as one rules and regulations to get bachelor degree at Mechanical Engineering Department, Faculty of Engineering of Gadjah Mada University.

During written this final project writer has received much guidance and aid from many people, thus writer would like to thank you for:

1. Mr. Ir. Sutrisno, MSME., Ph.D., as Chairman of Mechanical Engineering Department of Engineering Faculty of Gadjah Mada University.
2. Mr. Ir. Greg Harjanto as Counselor lecturer as long as writers finish this thesis.
3. Mr/Mrs. Lecturer, laboratory assistant, and all staff of Mechanical Engineering Department of Engineering Faculty of Gadjah Mada University.

Yogyakarta, October 2005

Writer,

Helmi Anshary