**YOUR PROJECT TITLE HERE**

Data Set Number, Student Number, Surname, Name

Çankaya University

Faculty of Engineering

Department of Mechanical Engineering

ME307 Machine Elements I, Term Project

FALL 2016

**Abstract.** (Define the aim of your project shortly.)

**Introduction**

(Define telescopic boom mini crane, using areas, its main components etc. Give short information about its historical past. Please do not forget to give references.)

**Section 1**

(You can use as many sections and sub-sections as you need.)

Some hints:

+ You can define your problem clearly in section one.

+ You can define your solution method in section two.

+ You can give the results in section three.



Figure 1. Mini boom crane [1]

Table 1. Data Sets

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Materials of the links | 1040 | 1030 | 1040 | 1030 |
| Material of pins | 1060 | 1060 | 1060 | 1060 |
| Material of the shaft | 1080 | 1095 | 1080 | 1095 |
| Material of the key | 1035 | 1010 | 1010 | 1035 |

$σ=\frac{F}{A}$ (1)

+ Please obey the font type and font size (Times New Roman – 12pt).

+ For all equations you used please write down with using Word equation editor.

+Please draw all free body diagrams with using software (Word, Photoshop etc.).

+ Please draw all diagrams with using software (Excel, MATLAB, Mathematica etc.).

+ Please give the technical drawings using CAD tools (AutoCAD, Inventor etc.). For more information, please read the project papers.

+ Please give references for all information, tables and figures you take from outsources.

**Conclusion**

(Here, summarize your project.)

**References**

[1] <http://hird.co.uk/products/valla-pick-carry-cranes/25el/> (Last Access: 1.12.2016, 11:16)

[2] Chin, C., Nayfeh, A. H., and Abdel-Rahman, E. "Nonlinear dynamics of a boom crane." *Journal of Vibration and Control* 7(2) (2001): 199-220.