Automating the Production of Industrial Tubes

(CS) Abdulrahman | **(ISE)** Omar & Yazeed | **(ME)** Hussain & Ali | **(EE)** Abdullah

Advisor: Yasser Almoghathawi

KING FAHD UNIVERSITY OF PETROLEUM & MINERALS
1963 ١٣٨٣

Team: 50

Introduction

Create → **Cutting** → **Rolling** → **Welding** → **Done**
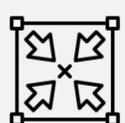
Problem Statement

Develop an automated sleeves production line for customizable, effective, and accurate sleeves, optimizing space, speed, and final output.
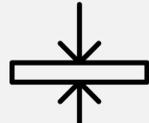
Specifications

| Compact | Diameter 33-50cm | Thickness 6mm | 12/24V & 1/5A | Force 6000N |

Constraints

Mass production | Size | Price | Microcontrollers

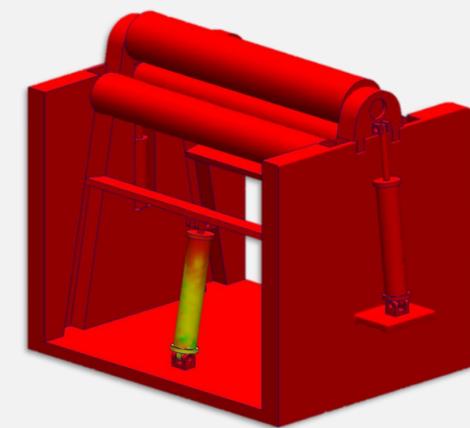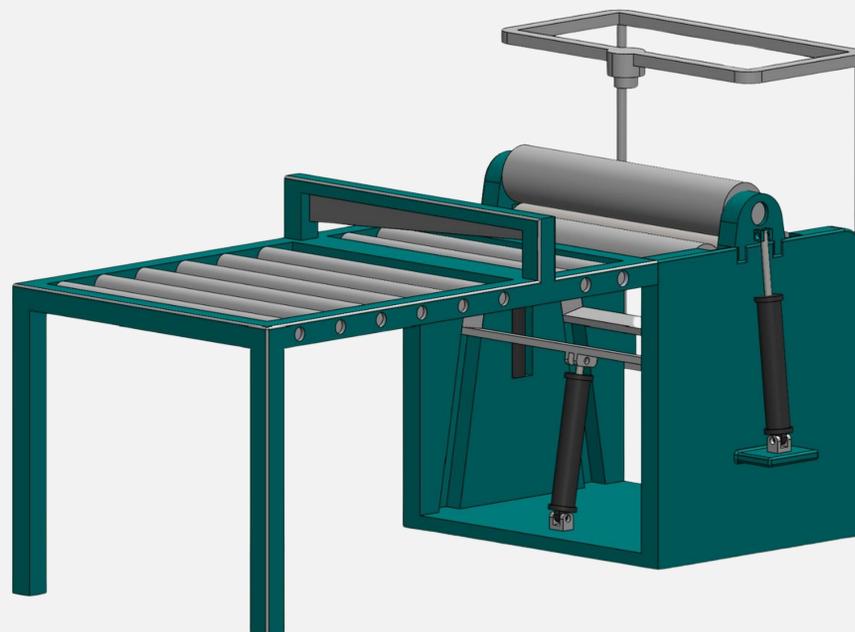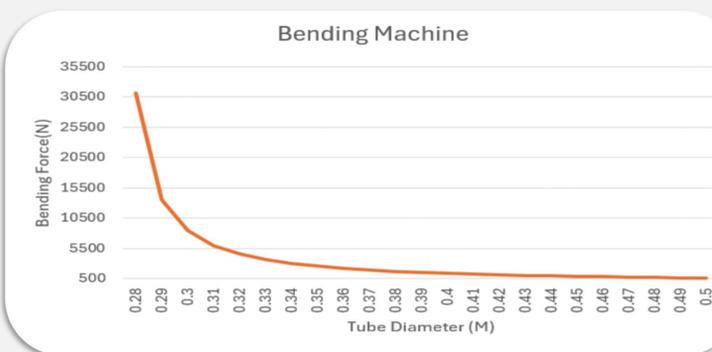### Impact

Environmental | Societal | Economical

Prototype Design

Min
FOS = 1.4

Bending Machine

Testing

Compatibility tests between most of the electrical and mechanical components have been passed according to the specifications.

Arduino microcontroller was able to control the power flow through the relays correctly.

Conclusion

- The project's goal of automating the production of metal tubes has been successful.
- the project's blueprint is flexible enough to allow additions and modifications.