

Steel

$$\alpha = 11.75 \times 10^{-6}$$

$$K = 19 \text{ W/mK}$$

$$E = 200 \text{ GPa}$$

$$A = 0.0009 \rightarrow 0.1$$

1) Write Paper

- Type out notes for
 - 1D Thermoelasticity
 - 1D Heat Transfer
 - Final Nondimensionalization
 - Notes
- Background Section / Literature review
- Results
 - Final Equation
 - Plotting
 - Fitting
- Conclusion

2) Presentation

- Introduction
- Summary of Eqs
- Solutions
- Plots
- Fit
- Conclusion

3) Plots of Solutions

- T vs. x
- u vs. x
- σ vs. x
- ϵ vs. x

4) Fitting result

- P vs. R

with fit, look at R^2

- Test fit with other $g_0/T_0/L$

5) Finish

- constant wall temperature no resistance transient
 - in contact
 - out of contact
- (As with constant flux)