

Problem Set 5

Problem 5-1. Casting

- (a) I would like to make one bronze casting of my face, life size, and hollow. How would you do this?
- (b) As I fill the mold, what two parameters of the sand casting operation effect the hydrostatic pressure in the mold cavity. What does this pressure determine?

Problem 5-2. Riser

- (a) What is the purpose of a riser in sand casting?
- (b) What are the design parameters for a riser, and what are the design constraints that you need to satisfy given your answer in (a)?
- (c) Assuming you are using a sand casting process, determine the appropriate relationships between the design parameters for your riser that result in the longest solidification time.