

淡江大學 98 學年度碩士班招生考試試題

54

系別：機械與機電工程學系

科目：機 械 製 造

本試題共 壹 頁，拾 大題

1. Explain what is meant by structure-sensitive and structure-insensitive properties of metals. (10%)
2. Describe the events that occur when a specimen undergoes a tension test. Sketch a plausible stress-strain curve and identify all significant regions and points between them. Assume that loading continues up to fracture. (10%)
3. What is squeeze casting? What are its advantages? (10%)
4. How are seamless tubes produced? (10%)
5. What is a dead-metal zone? (10%)
6. Describe the difference between compound, progressive, and transfer dies. (10%)
7. Define normal anisotropy and explain why it is important in determining the deep drawability of a material. (10%)
8. Describe briefly the production steps involved in making powder-metallurgy parts. (10%)
9. Can rapid-prototyped parts be made of paper? Explain. (10%)
10. What is the high-efficiency machining range? Why is it so called? (10%)