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**Mechanical Design 1**

**Class Section 01**

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# **Problem 1**

图示

描述已自动生成

**Solution:**

For this question, we are asked to find a suitable thickness for the link using a design factor and determine whether the bearing stresses at and are of any significance.

Because , we can use Johnson formula.

Assume

Verify:

This is Good.

Therefore, the suitable thickness for the link using a design factor is equal to .

No, the bearing stresses at and are not of any significance.

# **Problem 2**

图表, 雷达图

描述已自动生成

**Solution:**

For this question, we are asked to find a suitable preferred thickness and the resulting factor of safety for this thickness.

Therefore, when , reaches the maximum.

Assume ,

Verify:

This is Good.

Therefore, suitable preferred thickness is equal to .