**IE-352**

**Section 1, CRN: 5022/5030/5041**

**Section 2, CRN: 32997/32999/32998**

**Second Semester 1433-34 H (Spring-2013) – 4(4,1,1)   
MANUFACTURING PROCESSES – 2**

**Wednesday, Mar 13, 2013 (01/05/1434H)**

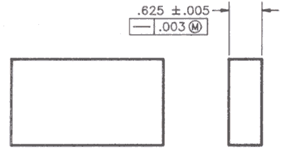
**Exercise: Geometric Tolerance (Straightness of a Center Plane)**

|  |  |  |
| --- | --- | --- |
| **Name:** | **Student Number:**  **4** | **Section:**  **8:00 / 10:00** |

**Straightness of a Center Plane**

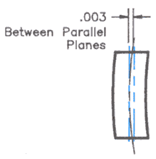
Examine the dimensioned plane shown on the right (units in *mm*). Calculate the geometric tolerance for cross sections in the plane having the following sizes:

1. 0.632
2. 0.628
3. 0.621
4. 0.619

****

**Given:**

* + ⇒
  + ⇒
  + **⇒**
  + Note, this is the allowable range of sizes (or size zone) along the different cross sections of the plane



1. Feature control frame:
   * Straightness geometric tolerance (plane)
   * (i.e. allowable GT at MMC is 0.003 mm)
   * ⇒ Virtual Condition:
   * ⇒ @ LMC:
   * **⇒**
   * This is the allowable GT range (or GT zone) for this feature

**Required:**

**Solution:**

* + Check if within size limits: ⇒ **part is rejected** (note, remachining may be possible here)
  + Check size: ⇒ part is acceptable
  + Check if within GT limits: (⇒ ok)
  + Check size: (⇒ ok)
  + Check GT: (⇒ ok)
  + Check size: ⇒ **part is rejected** (note, remachining is not possible in this case)