
 كلية المدربين التقنيين Technical Trainers College	Department	Vocational Pedagogy	Student's Name / ID	Abdullatif Al-ibrahim	202331161
	Module	Teaching Unit Planning			
	Unit	VP-9 / Action Plan week 4 Of tensile test.			
	Course	MPT – PT-7	Date of delivery	03 / Dec / 2014	
	Lecturer	Dr. Gerke, Rainer			

Worksheet -1-

A circular shaft of steel has diameter of 12mm, was loaded  $m=600\text{kg}$

Find the value of stress in Pa.

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Worksheet -1- answer:

$$\sigma = \frac{F}{A_o}$$

$$a = 12mm = 0.012m$$

$$A_o = \frac{\pi * d^2}{4} = \frac{\pi * (0.012m)^2}{4}$$

$$A_o = 1.13 * 10^{-4}m^2$$

$$F = m * g = 600kg * 10m/s^2 = 6000N$$

$$\sigma = \frac{6000N}{1.13 * 10^{-4}m^2}$$

$$\sigma = 53097345 Pa$$