

PROJECT ONE: MILESTONE 3B – COVER PAGE

Team Number: Mon-31

Please list full names and MacID's of all *present* Team Members

Full Name:	MacID:
Avery Thurston	thurstoa
Gurleen Dhillon	dhillg25
Kavishalini Gurunathan	gurunatk
Olutayo Oluwasegun	olutayoo

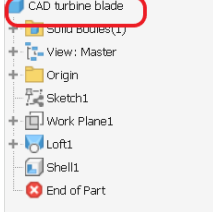
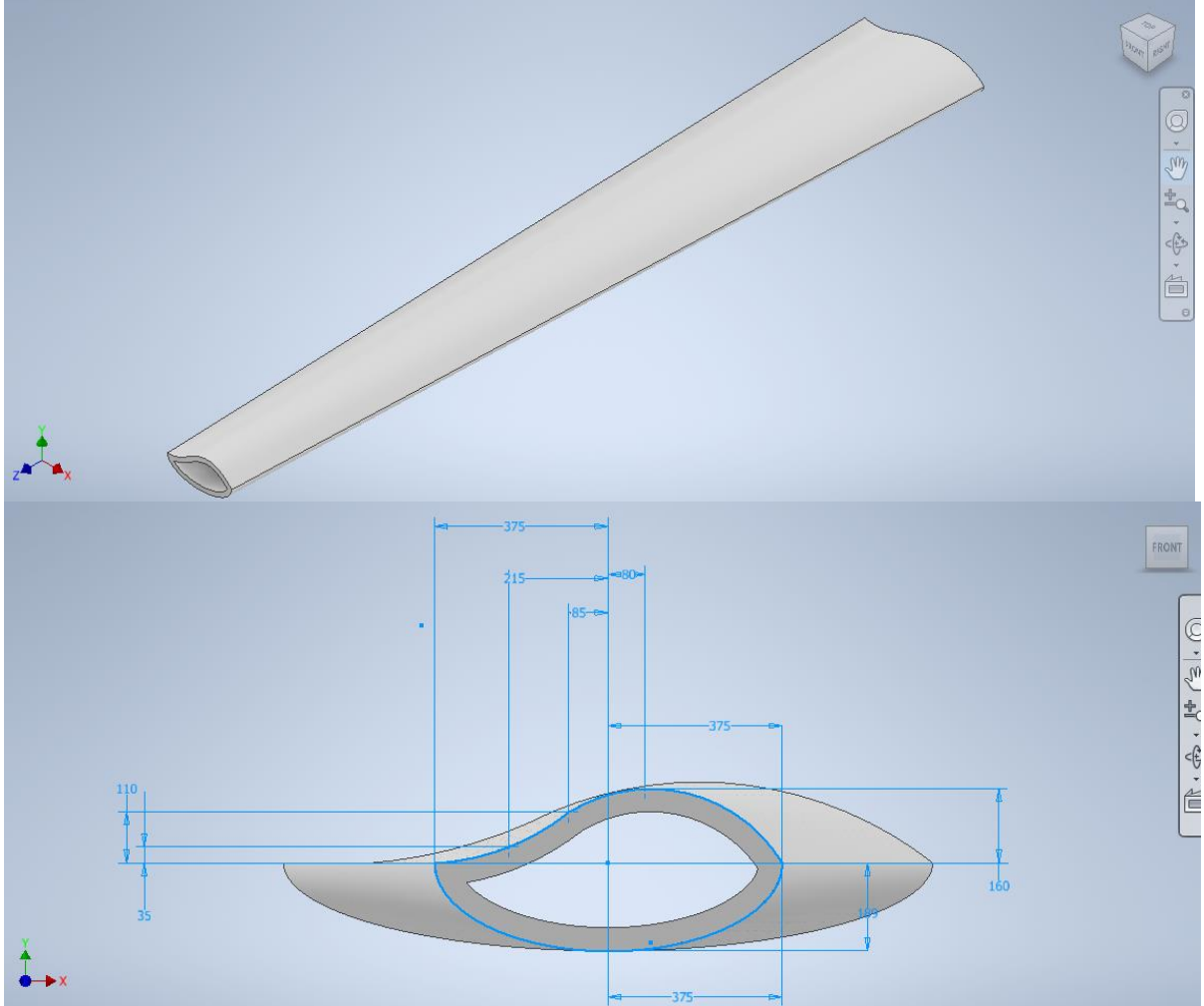
MILESTONE 3B – DESIGN EMBODIMENT

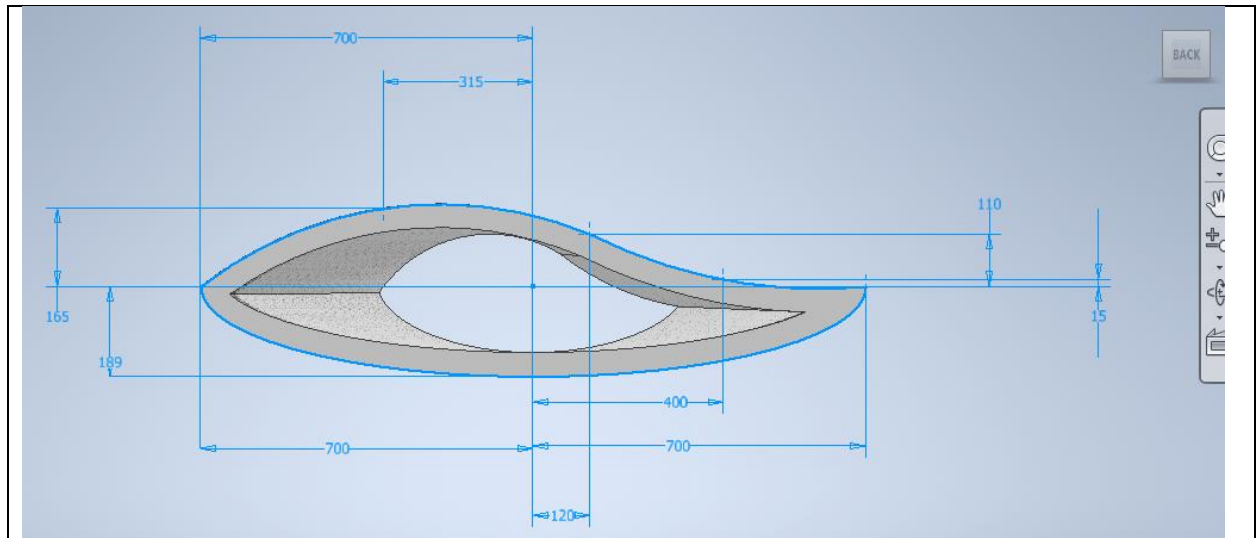
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1. Deflection Estimation (Stage 1)

Estimate deflection δ (mm):	9.39mm
<i>Insert calculation or photo of hand calculation in the space below.</i>	
$I = \frac{\pi}{4}[a^3b - (a - t)^3(b - t)]$	
$I = \frac{\pi}{4}[(0.189m)^3(0.375m) - (0.189m - 0.05m)^3(0.375m - 0.05m)]$	
$I = 1.30 \times 10^{-3}m^4$	
$\delta = \frac{pbL^4}{4EI}$	
$\delta = \frac{(3000Pa)(0.375m)(8.5m)^4}{4(1.2 \times 10^{11}Pa)(1.30 \times 10^{-3}m^4)}$	
$\delta = 9.39 \times 10^{-3}m$	

2. Solid Model of Turbine Blade (Stage 2)

Volume (mm³):	923319930.106 mm³ (Relative Error = 0.485201%)
	<p>Steps to find the volume:</p> <ol style="list-style-type: none">1. Right-click on 3D part (see picture to the left)2. Click on "iProperties"3. Click on the tab called "Physical"4. Click on "Update" to show the volume
<p><i>Insert screenshots of your team's solid models in multiple views (please show evidence of accurate CAD modeling by showing measurements).</i></p> 	



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3. Deflection Simulation (Stage 3)

Simulated deflection δ (mm):	10.58mm
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Insert screenshots of your team's deflection simulation and provide evidence of the simulated deflection.

