and lower surface will gain higher pressure. Hence value of coefficient of lift will increase and coefficient of drag will also increase but the increasing in drag is low compare to increasing in lift force.

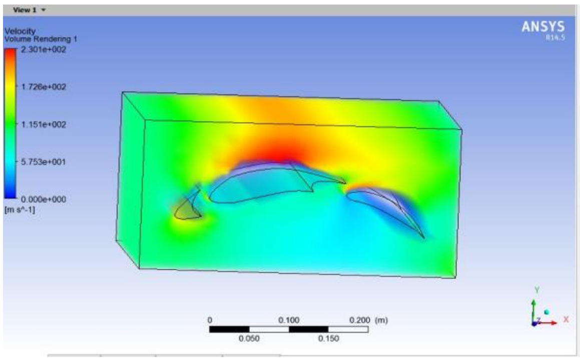

Figure 9: Velocity contour at zero flap angle

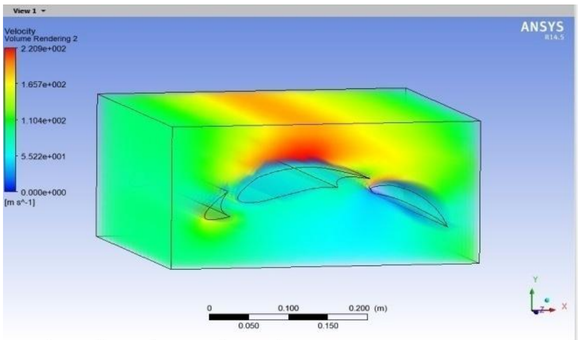

Figure 10: Velocity contour at 16 degree flap angleat 30 degree flap angle

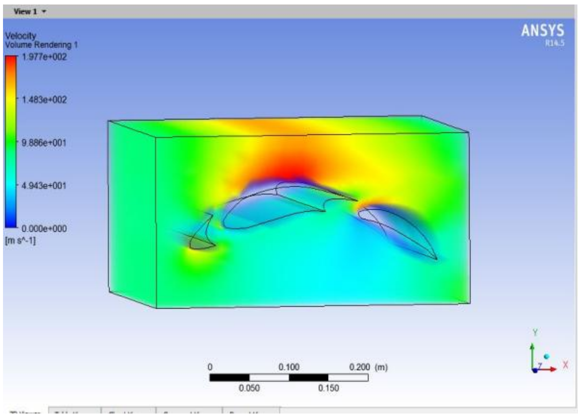

Figure 11: Velocity contour at 30 degree flap angleat 30 degree flap angle

5. Results

Table 2

AoA	FLAP ANGLE	LIFT COFFIENT	DRAG COFFIENT
8.53	0	108.7	2.51
8.53	16	340.7	17.99
8.53	30	405.3	37.2

6. Conclusion

When flap is lowered, it increases the effective angle of attack and generates increased lift. The effect of flap on the CL curve is to offset it in vertical direction. Lowering flap reduces critical angle of attack. From the results obtained the lift coefficient is gradually increasing as the flap angle increases and same in the drag value. so it can be concluded that with flap angle change where the chord length changes resulting in the change in lift and drag. Flap angle with medium value can be used in takeoff condition and further more flap angle value conditions can be used in landing as the drag value is comparatively more.

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Author Profile

B.Shishira Nayana pursuing Master's degree in Aerospace engineering from M.L.R college of Engineering and Technology (2013-2015). She recevied Bachelor's degree in Aeronatical Engineering from Malla Reddy Engineering and Technology, JNTU hyderabad in 2012. Intresed in Aerodynamic analysis and undergonethe internship program in CFD with ALTAIR Acuslove in 2013.

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