In this paper, 2D flow through a three-bucket Savonius rotor is studied by Fluent 6.0 computational fluid dynamics software. The flow physics encompassed in the flow around the rotor is analyzed with the help of pressure, velocity and vorticity contours. The objective of the present study is to optimize the performance of this design of Savonius rotor under different overlap conditions through the evaluation of its flow physics at these conditions. The overlap in the three-bucket Savonius rotor has been increased with the help of nuts and bolts (like 15.38% & 16.88%). In CFD various flow parameters such as dynamic pressure, static pressure, turbulence intensity and vorticity are studied (Ref: Sharma KK, Biswas A, Gupta R. Flow Physics Analysis around three-bladed Savonius Wind Rotor. *Indian Journal of Engineering*, 2014, 11(25), 6-17).
In this paper, 2D flow through a three-bucket Savonius rotor is studied by Fluent 6.0 computational fluid dynamics software. The flow physics encompassed in the flow around the rotor is analyzed with the help of pressure, velocity and vorticity contours. The objective of the present study is to optimize the performance of this design of Savonius rotor under different overlap conditions through the evaluation of its flow physics at these conditions. The overlap in the three-bucket Savonius rotor has been increased with the help of nuts and bolts times (like 15.38% & 16.88%). In CFD various flow parameters such as dynamic pressure, static pressure, turbulence intensity and vorticity are studied.

*Indian Journal of Engineering, 2014, 11(25), 6-17*