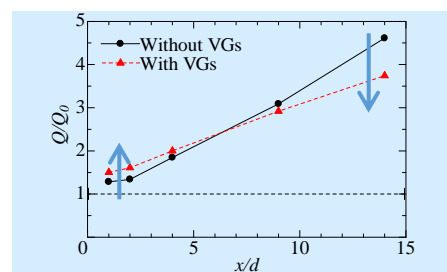
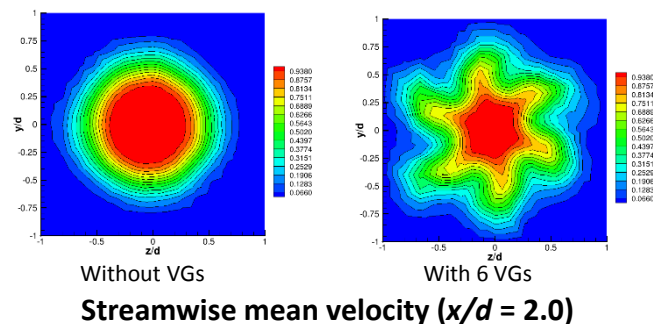
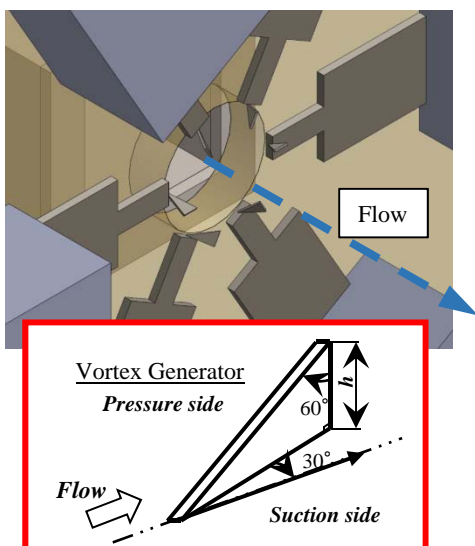


Flow control of round jet by vortex generator

Abstract

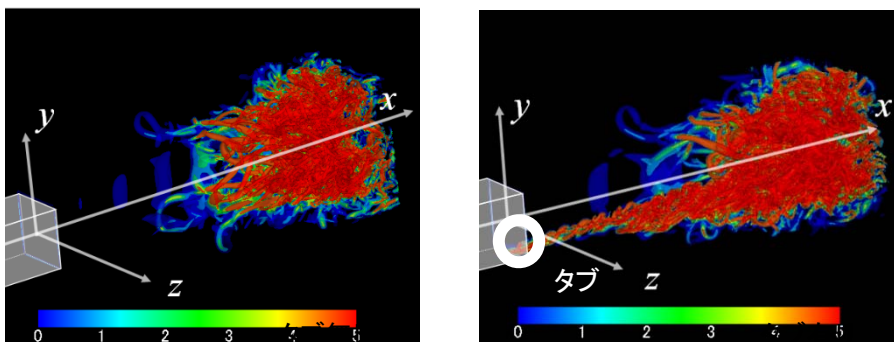
Control of mixing and diffusion in jets is very important in many industrial applications. In this study, we control jet mixing and diffusion by inserting small vortex generators in the shear layer. We found that this technique enhances entrainment in upstream region and suppress entrainment in downstream region.

Measurement of velocity field by hot wire anemometry in round jet with vortex generator



Change in entrainment

Visualization of the effect of vortex generator by DNS



Vortical structure (q value)

1. 三浦他, 半デルタ翼形状を有するボルテックスジェネレータによる軸対称噴流の制御に関する研究 (第1報: 速度場の統計量による評価), 機論(2015)