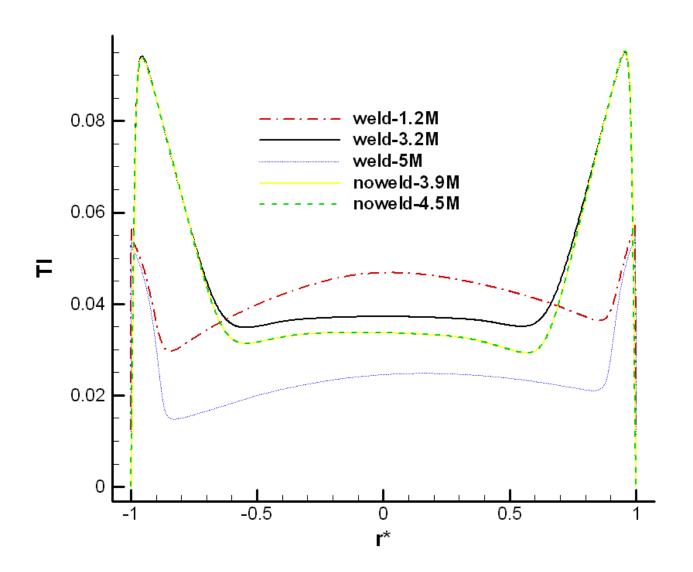
# Turbulence Intensity Comparisons with/without Welds

Oct. 18, 2012 Yan Zhan

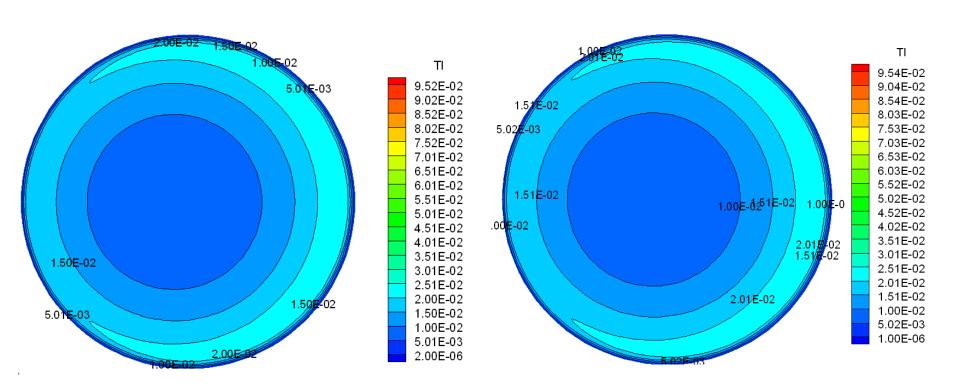
## Line Plot of TI at the Pipe Exit



#### Contour of Turbulence Intensity ( $\theta 1 = 0$ )

(a-1)  $\theta$ 1 = 0 (with a weld - 3.2M)

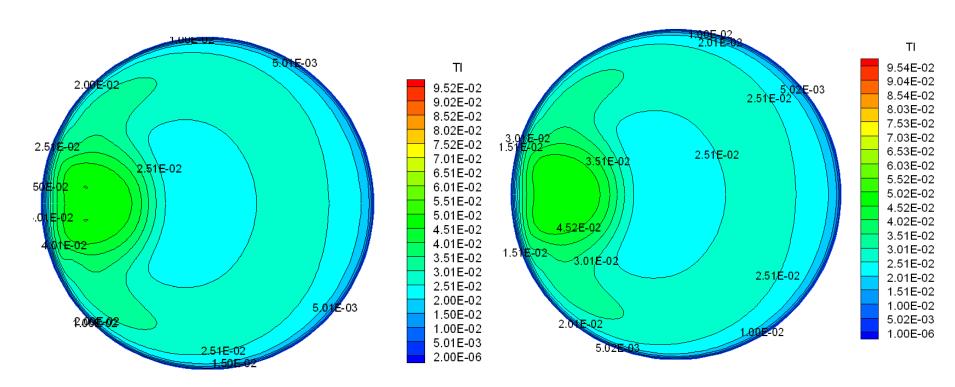
(b-1)  $\theta$ 1 = 0 (without a weld - 3.9M)



#### Contour of Turbulence Intensity ( $\theta 1 = 90$ )

(a-2)  $\theta$ 1 = 90 (with a weld - 3.2M)

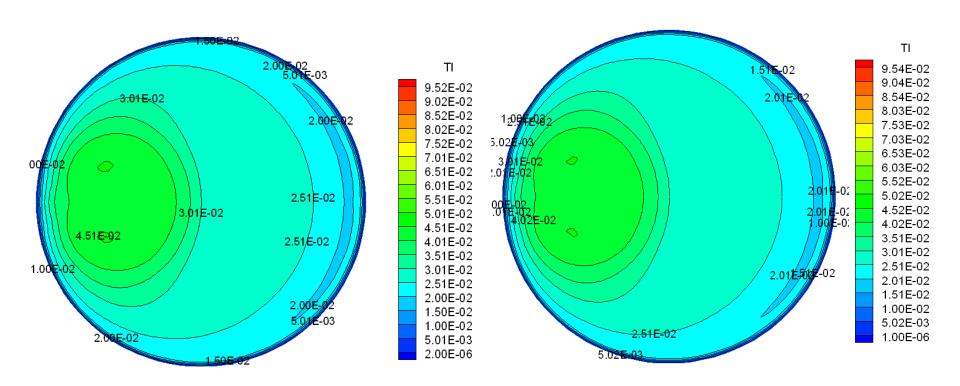
(b-2)  $\theta$ 1 = 90 (without a weld - 3.9M)



### Contour of Turbulence Intensity ( $\theta 2 = 0$ )

(a-3)  $\theta$ 2= 0 (with a weld - 3.2M)

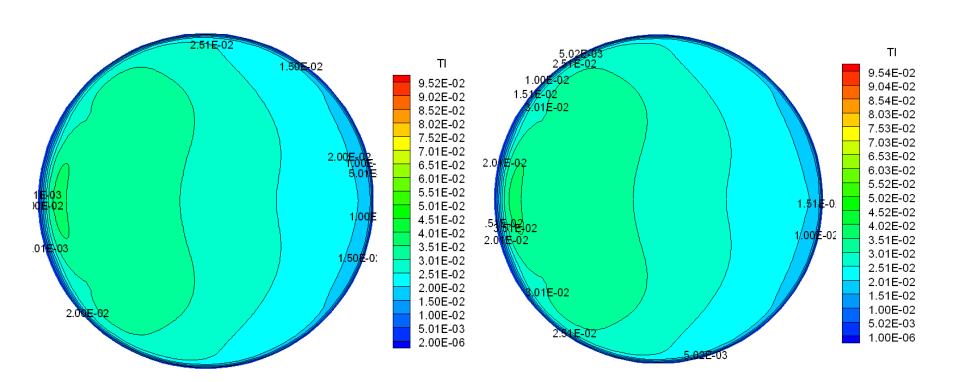
(b-3)  $\theta$ 2= 0 (without a weld - 3.9M)



### Contour of Turbulence Intensity ( $\theta 2 = 90$ )

 $(a-4) \theta 2 = 90 \text{ (with a weld - 3.2M)}$ 

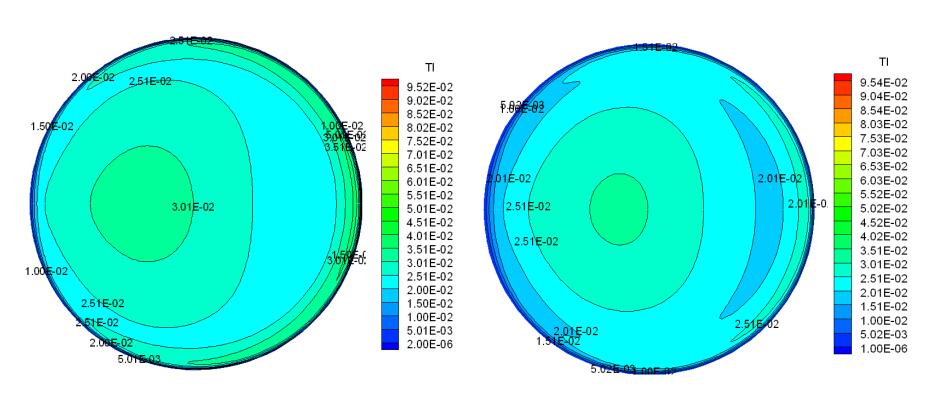
(b-4)  $\theta$ 2 = 90 (without a weld - 3.9M)



#### Contour of Turbulence Intensity (s= 3.36)



#### (b-5) s= 3.36 (without a weld - 3.9M)



#### Contour of Turbulence Intensity (s= 8.3375)

(a-6) s = 8.3375 (with a weld - 3.2M)

(b-6) s= 8.3375 (without a weld - 3.9M)

