Exercise of "Mock Urban Setting Test –MUST" -45 degree
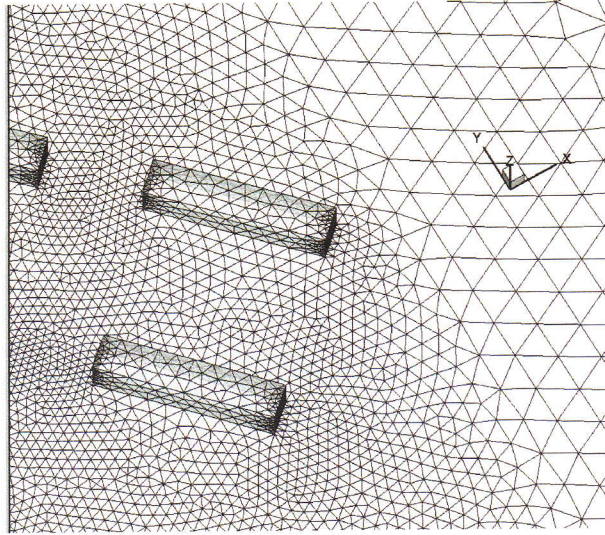
H = 0.8m

W = 4m
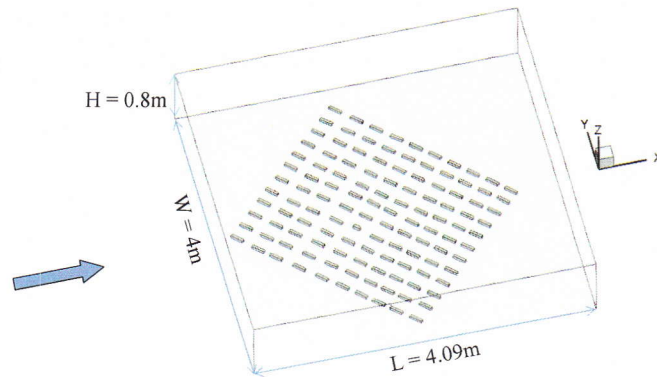
L = 4.09m

- L: 4.09m

- W: 4m   the width of the wind tunnel
- H: 0.8m   the height of the peak point of the approaching flow measurement is 0.692m

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Standard calculation conditions

Computational Domain	4.09m × 4m × 0.8m
Grid resolution	1,828,397 unstructured mesh
Turbulence model	Standard k-ε model
Upper and side surface of computational domain	symmetry
Building wall and ground surface	Wall function
Inlet boundary condition	Get values of U,V,W and k from the experimental approaching flow $E = C\mu^{1/2} \cdot k \cdot dU/dz$, $C\mu = 0.09$
Outlet boundary condition	Outflow
Code	Fluent

3. Mesh   Unstructured mesh

- Mesh of ground

Total 18
towers
498 points

Fluent

U/Uref - Model

U/Uref - Wind tunnel

y = 1.3572x - 0.3141
R² = 0.8815

Fluent

W/Uref - Model

W/Uref - Wind tunnel

y = 0.3955x + 0.0167
R² = 0.6892

Fluent

TKE/Uref - Model

TKE/Uref² - Wind tunnel

y = -0.0139x + 0.0307
R² = 0.0006

- z<1.275
- 1.275>=z<2.55
- 2.55>=z<5.1
- z>=5.1

FLUENTske_DiSabatino
all towers

U/Uref - Model

U/Uref - Wind tunnel

y = 1.285x - 0.240?
R² = 0.909

FLUENTske_DiSabatino
all towers

W/Uref - Model

W/Uref - Wind tunnel

y = 0.4954x + 0.017
R² = 0.7855

FLUENTske_DiSabatino
all towers

TKE/Uref - Model

TKE/Uref² - Wind tunnel

y = 0.5193x + 0.011
R² = 0.3957

- z<1.275
- 1.275>=z<2.55
- 2.55>=z<5.1
- z>=5.1

参考　Sabatinoさんの結果