Table 3 CFD Model Cases List

Case No.	Fire Place	Smoke layer height /m	Highest temperature/^{0}C	Wind speed/ m/s	Windows Open
1	First Floor	1.10	70	2.0	Four windows open
2		0.75	135	0.8	E、W and S
3		1.00	76	2.5	E、W and N
4		0.80	137	0.6	E、W
5	Thirteenth Floor	1.15	46	2.8	Four windows open
6		0.70	118	1.0	E、W and S
7		0.85	56	3.0	E、W and N
8		0.75	130	0.5	E、W
9	twenty-fourth floor	0.90	83	1.5	Four windows open
10		0.70	153	0.4	E、W and S
11		1.20	83	2.3	E、W and N
12		0.75	151	0.6	E、W

* **N:**North; S:South; E:East; W:West

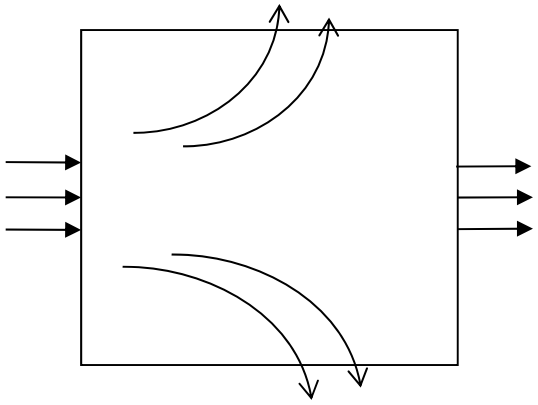

Fig.5 Flow pattern of upcoming wind

4. CONCLUSION

In this paper, an experimental facility was designed and placed in a wind tunnel. The wind effects on the indoor-air flow pattern were studied. The wind speed, distance between the barrier and other parameters were varied. CFD model was created and

some results were presented.

It can be concluded that upcoming wind speed would give effects on the vortex intensity. Higher wind speed would result a higher interface layer. Due to the drag force to upcoming wind, the cases for the four windows open and E、W and N windows open would give the higher smoke layer and lower smoke temperature. During the fire happens, the windows leeward must be closed.

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