

## CHARACTERISTICS OF ONSHORE WINDS IN THE COASTAL THERMAL INTERNAL BOUNDARY LAYER

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The thickness of thermal internal boundary layer(TIBL) was formed near 10m height which was the intersected point of potential temperature profile over the ground at 100m away from the Songsan-Po coastline.

Friction velocities have the magnitudes of 0.13m/s to 0.43m/s with the surface roughness of 0.01cm to 0.1cm within the internal boundary layer, and above the internal boundary layer they are in the range of 0.05m/s to 0.23m/s with the surface roughness of 0.0003cm and 0.0005cm.

The correlation coefficients between  $U^*$  and  $L$  within the internal boundary layer are in the range of 0.96 to 0.97, and above the internal boundary layer are about 0.9. Richardson number  $R_i$  is in proportion to  $Z/L$  within TIBL, and a parabolic orbit from the relationship of  $Z/L$  to  $R_i$  is found. The drag coefficient is the range of  $0.47 \times 10^{-3}$  to  $2.56 \times 10^{-3}$  for wind speed at 10m height including temperature difference between two levels within and above internal boundary layer with good correlation. Wind variances above and within internal boundary layer have the magnitudes of  $0.09\text{m}^2/\text{s}^2$  to  $0.28\text{m}^2/\text{s}^2$  and  $0.18\text{m}^2/\text{s}^2$  to  $0.53\text{m}^2/\text{s}^2$ .