

Fig. 4.66 Side view flow photos taken at the cross plane $\theta=0^{\circ}$ & 180° for various temperature difference at $Re_j=270$ ($Q_j=2.0\text{slpm}$) and $H=40.0\text{ mm}$.

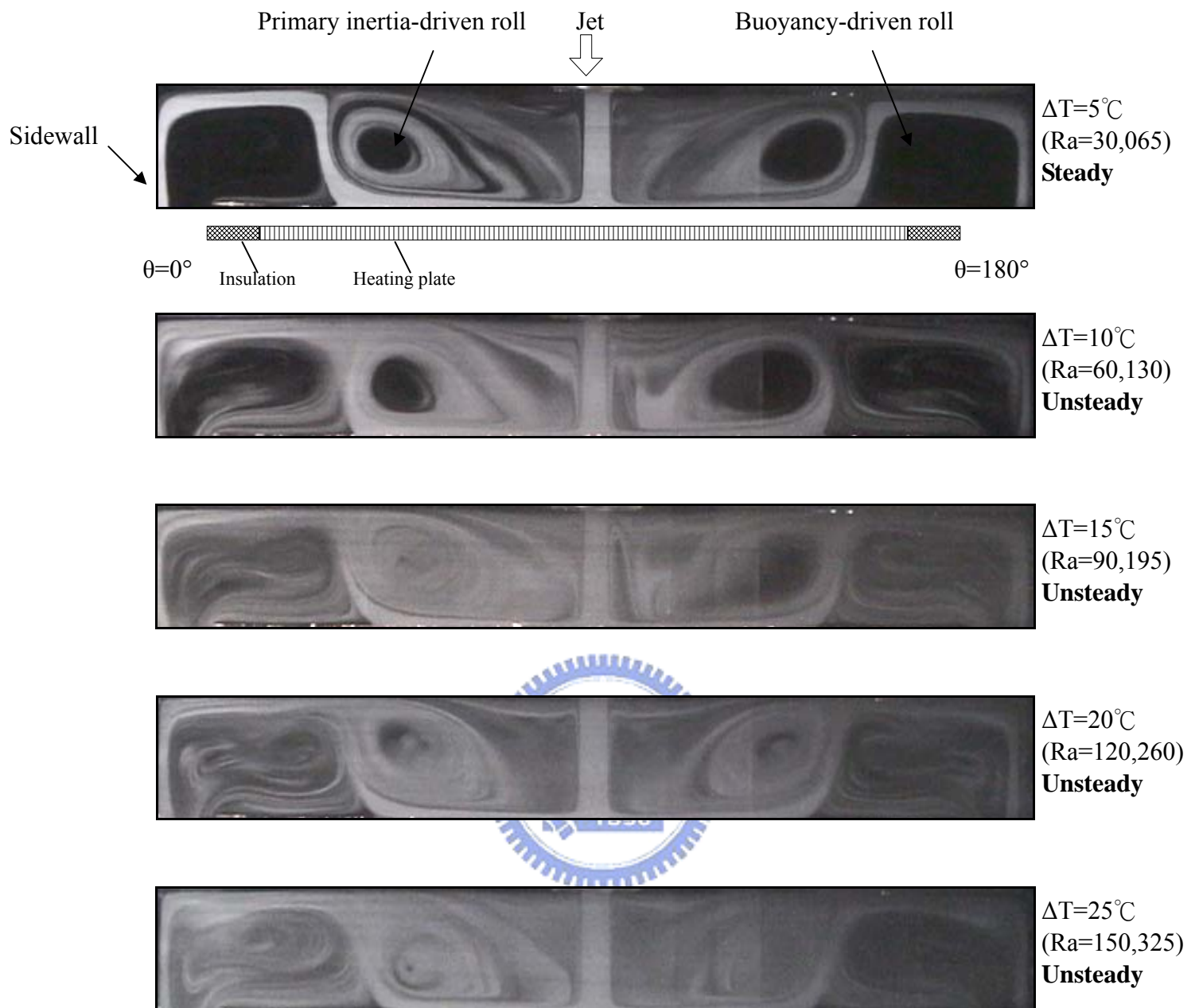


Fig. 4.67 Side view flow photos taken at the cross plane $\theta=0^{\circ}$ & 180° for various temperature difference at $Re_j=406$ ($Q_j=3.0\text{slpm}$) and $H=40.0\text{ mm}$.

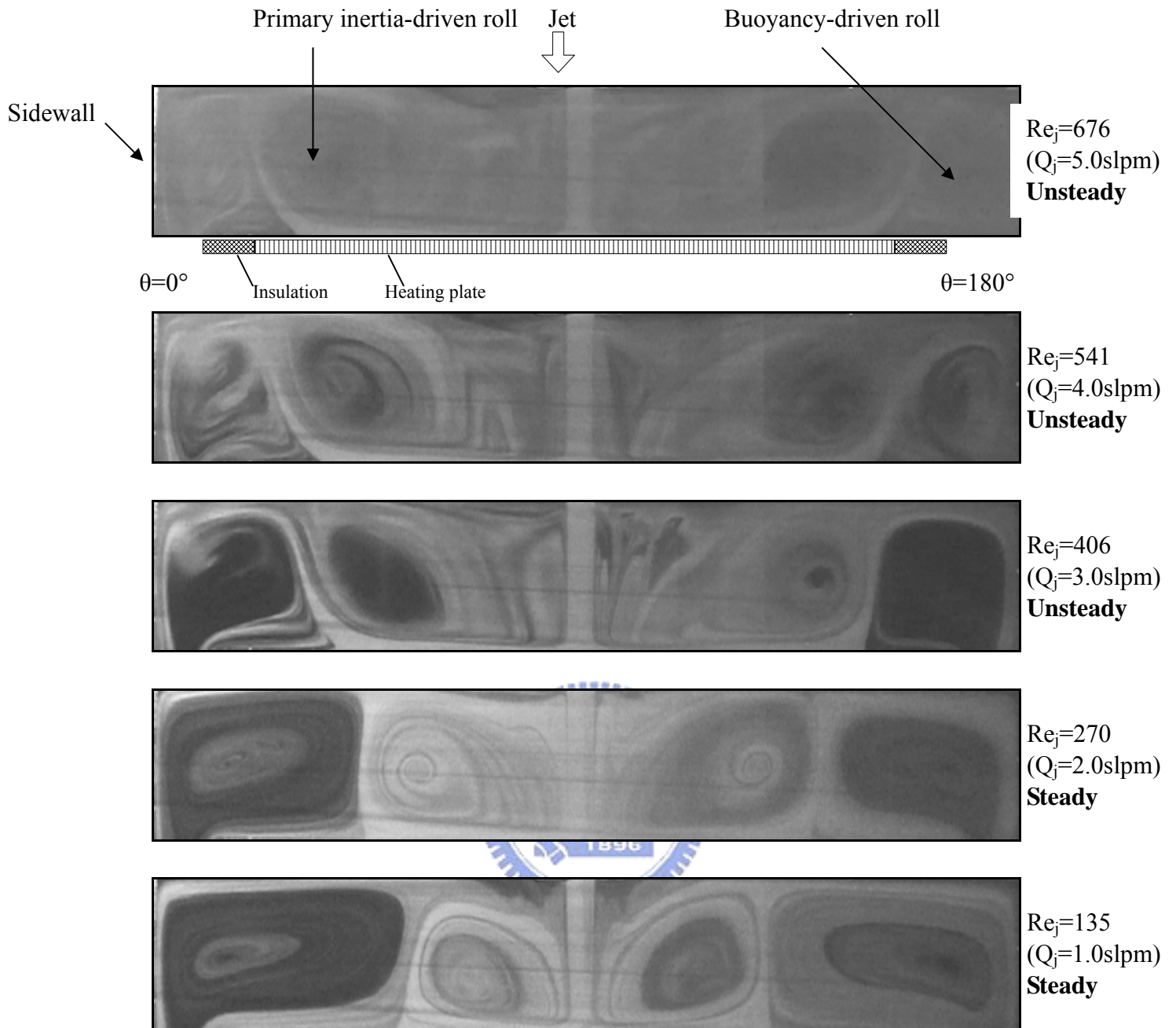


Fig. 4.68 Side view flow photos taken at the cross plane $\theta=0^\circ$ & 180° for various jet Reynolds numbers at $Ra=58,721$ ($\Delta T=5^\circ\text{C}$) for $H = 50.0$ mm.

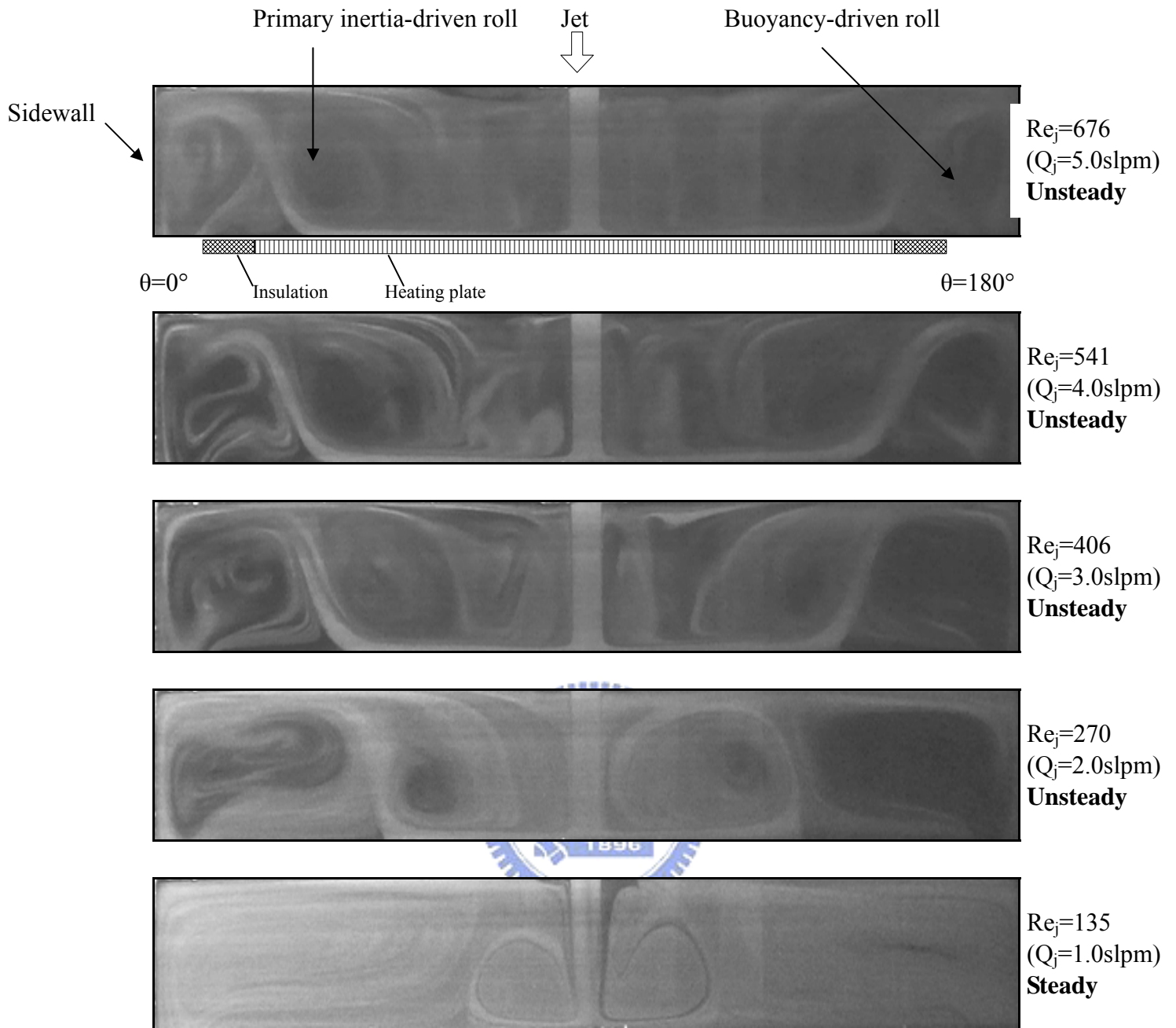


Fig. 4.69 Side view flow photos taken at the cross plane $\theta=0^\circ$ & 180° for various jet Reynolds numbers at $Ra=117,442$ ($\Delta T=10^\circ\text{C}$) for $H = 50.0$ mm.

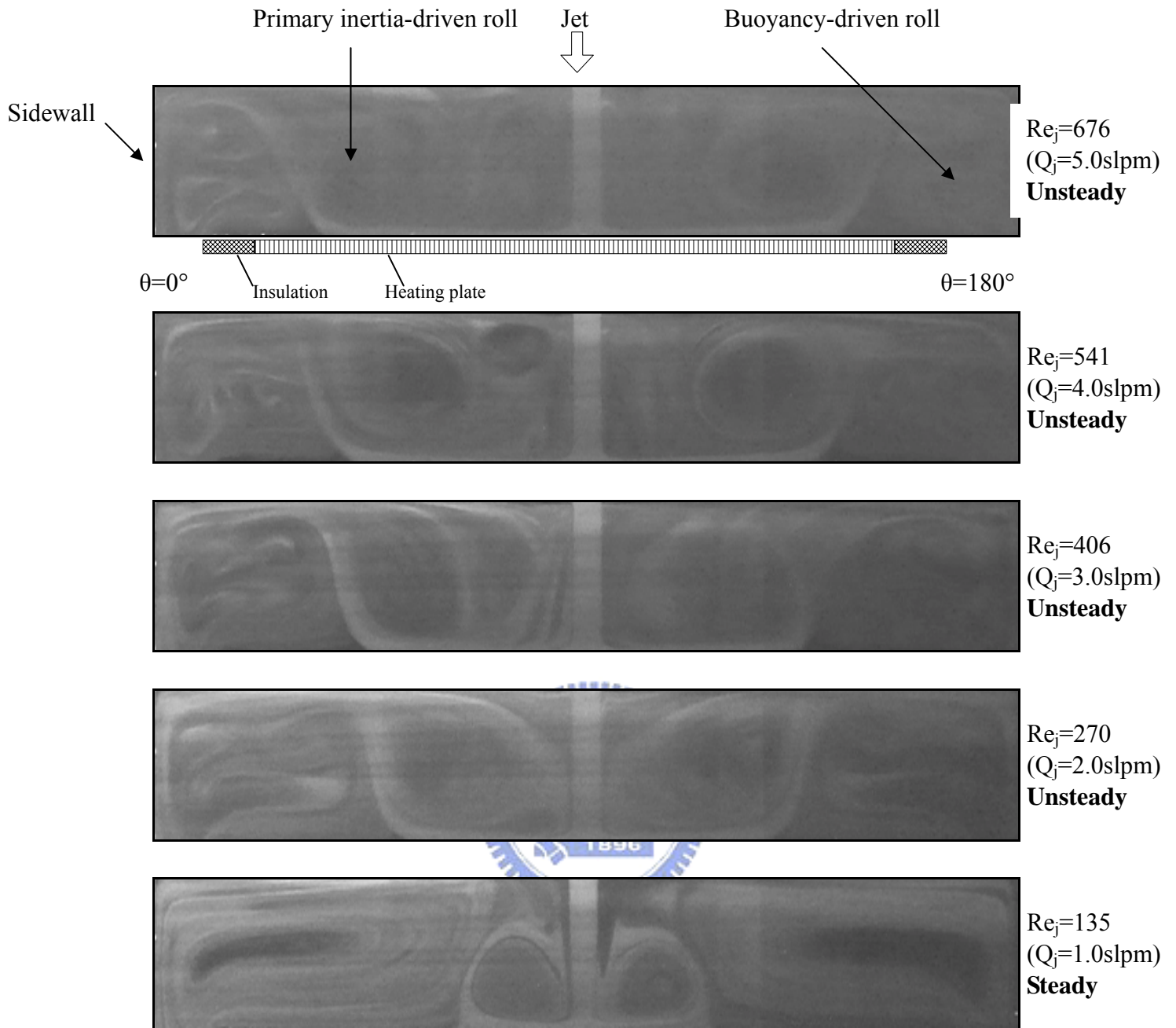


Fig. 4.70 Side view flow photos taken at the cross plane $\theta=0^\circ$ & 180° for various jet Reynolds numbers at $Ra=176,162$ ($\Delta T=15^\circ\text{C}$) for $H = 50.0$ mm.

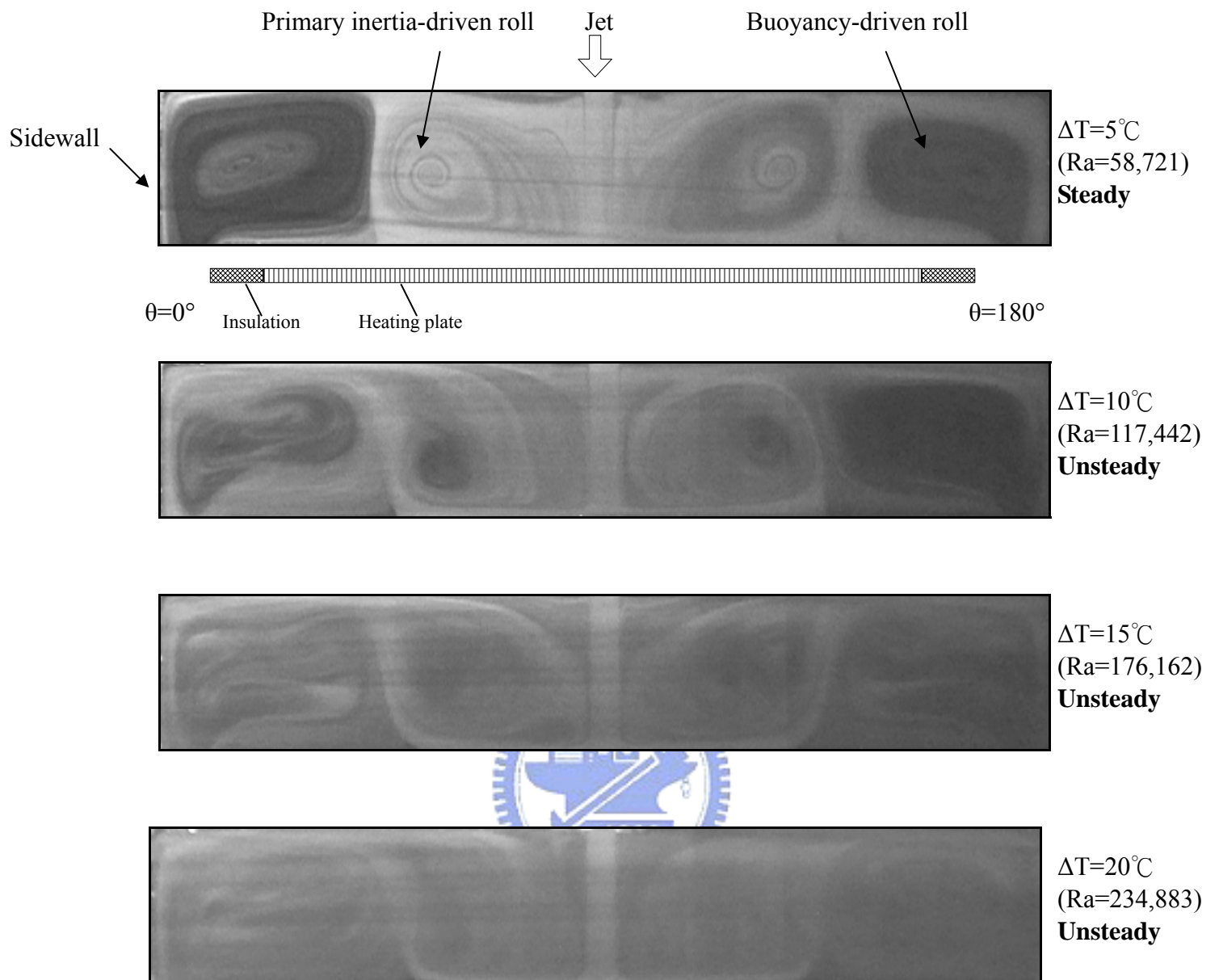


Fig. 4.71 Side view flow photos taken at the cross plane $\theta=0^{\circ}$ & 180° for various temperature difference at $Re_j=270$ ($Q_j=2.0\text{slpm}$) and $H = 50.0\text{ mm}$.

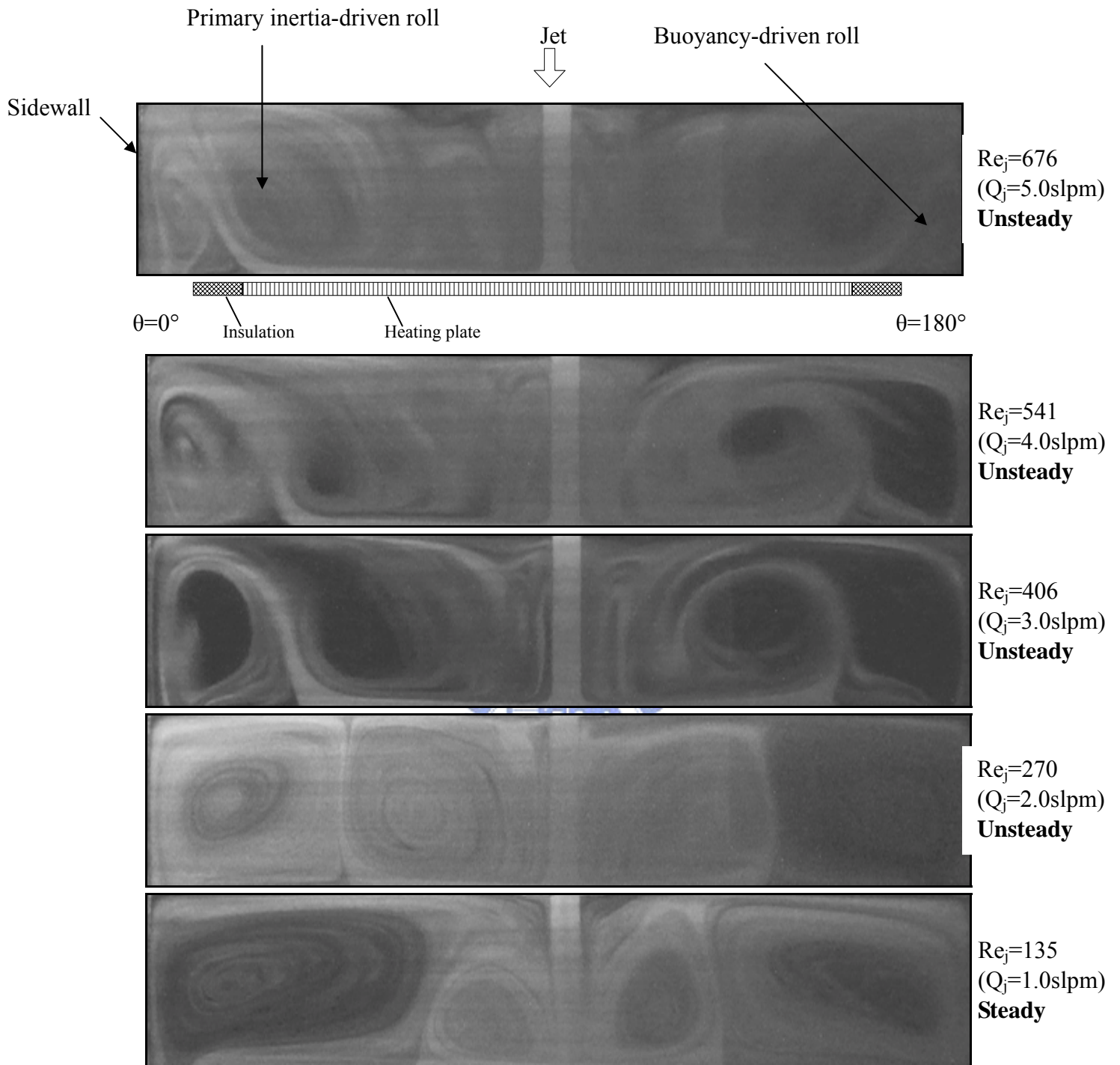


Fig. 4.72 Side view flow photos taken at the cross plane $\theta=0^\circ$ & 180° for various jet Reynolds numbers at $Ra=101,470$ ($\Delta T=5^\circ\text{C}$) fo $H = 60.0$ mm.

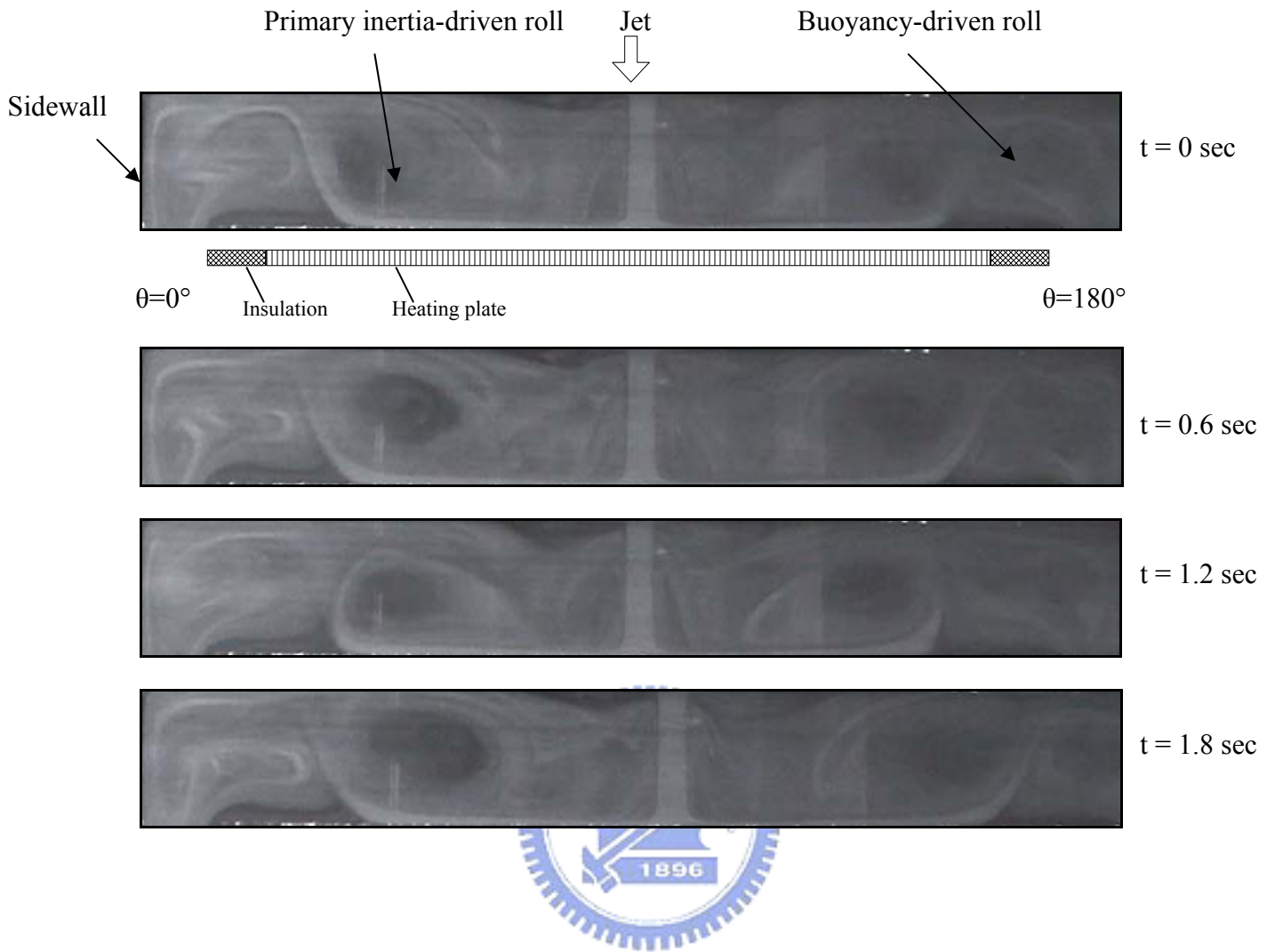


Fig. 4.73 Time-periodic vortex flow illustrated by side view flow photos taken at the cross plane $\theta = 0^\circ$ & 180° at selected time instants for $H = 40$ mm and $Ra = 90,195$ ($\Delta T = 15^\circ\text{C}$) at $Re_j = 676$ ($Q_j = 5.0$ slpm) with $t_p = 1.82$ sec .

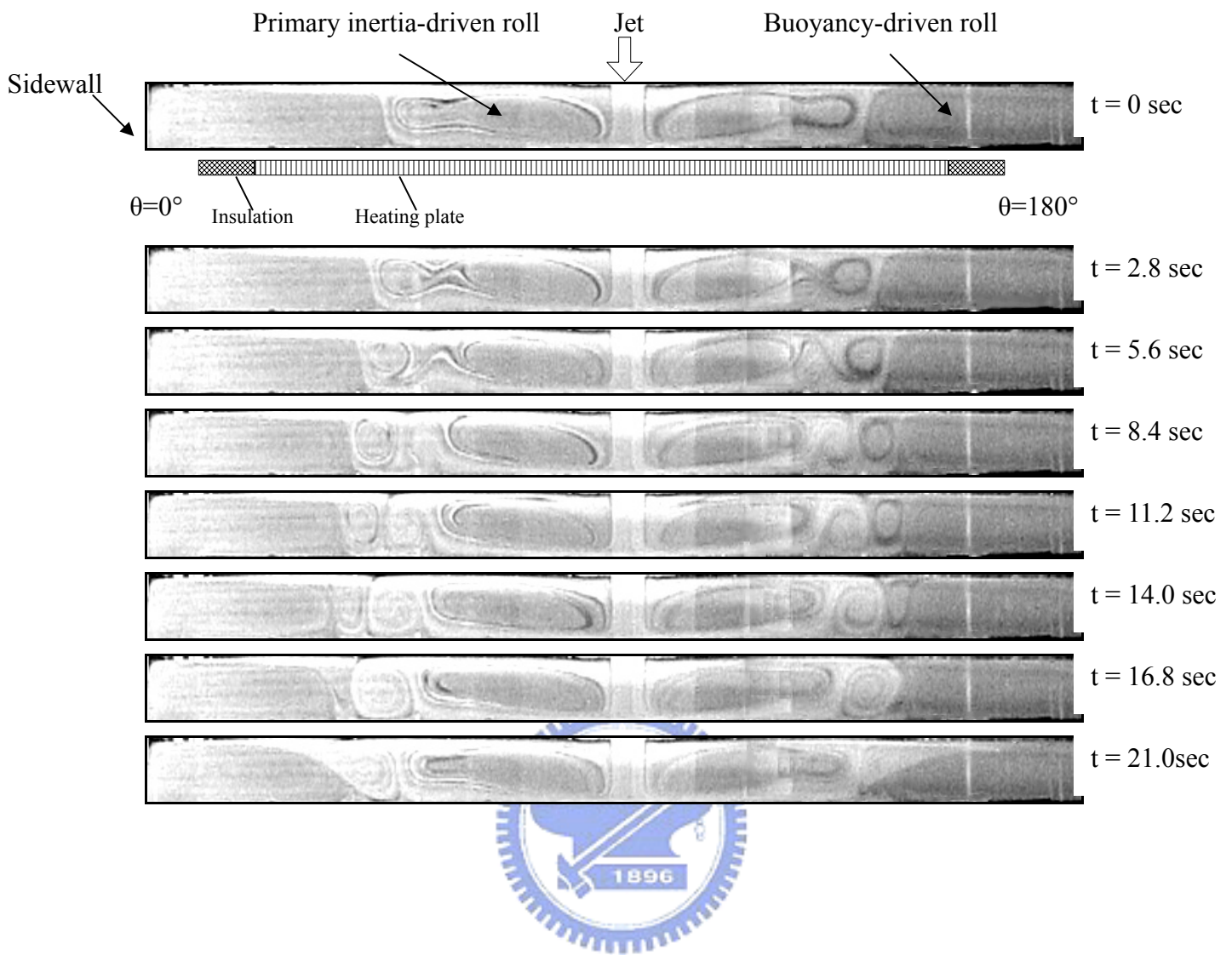


Fig. 4.74 Time-periodic vortex flow for $H=20.0$ mm and $Ra=11,270$ ($\Delta T = 15.0$ °C) at $Re_j=135$ ($Q_j=1.0$ slpm) illustrated by side view flow photos taken at the vertical plane $\theta = 0^\circ$ & 180° at selected time instants.

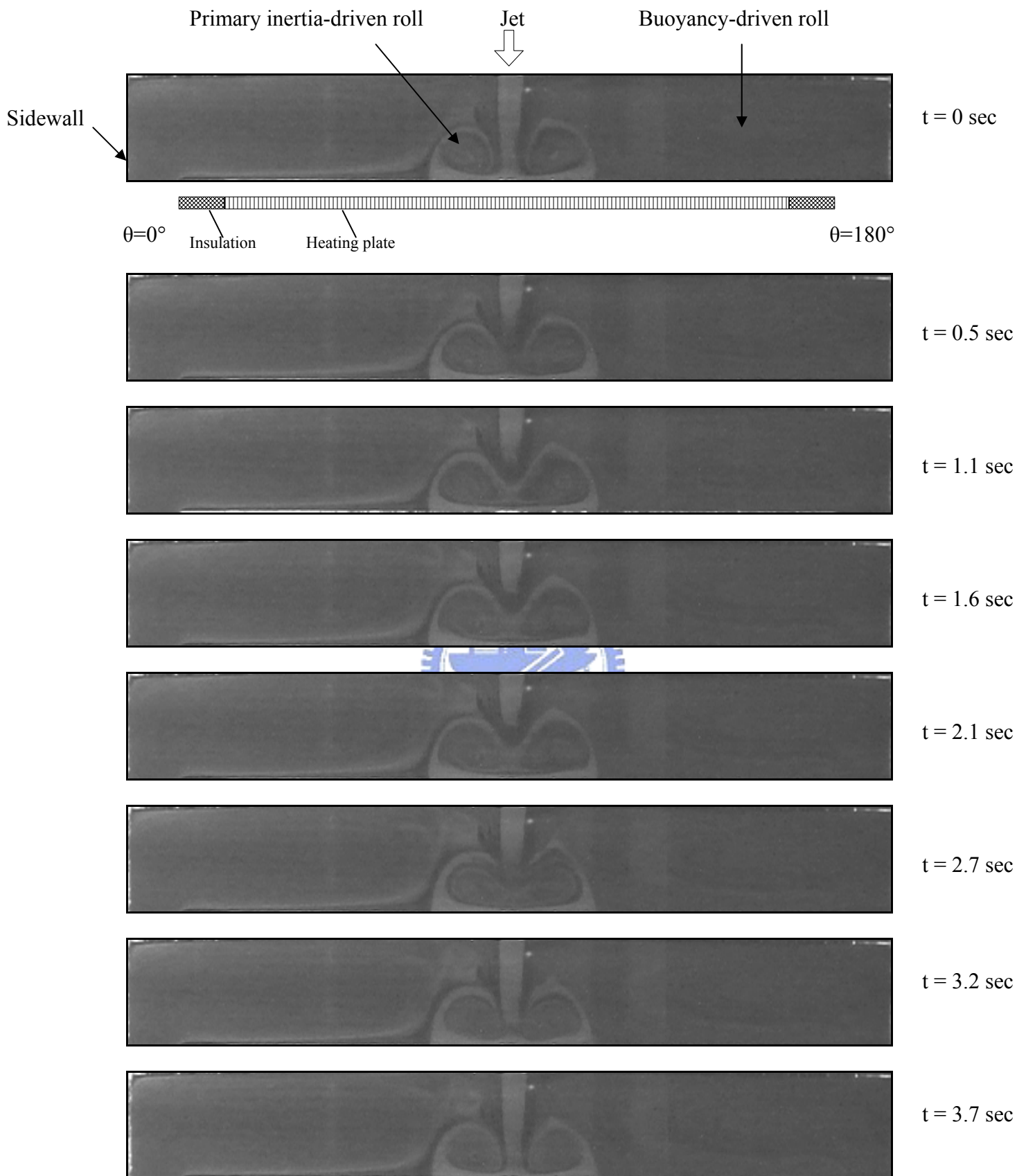


Fig. 4.75 Nonperiodic vortex flow for $H = 40.0 \text{ mm}$ and $Ra = 90,195$ ($\Delta T = 15^\circ\text{C}$) at $Re_j = 41$ ($Q_j = 0.3 \text{ slpm}$) illustrated by side view flow photos taken at the cross plane $\theta = 0^\circ$ & 180° at selected time instants.

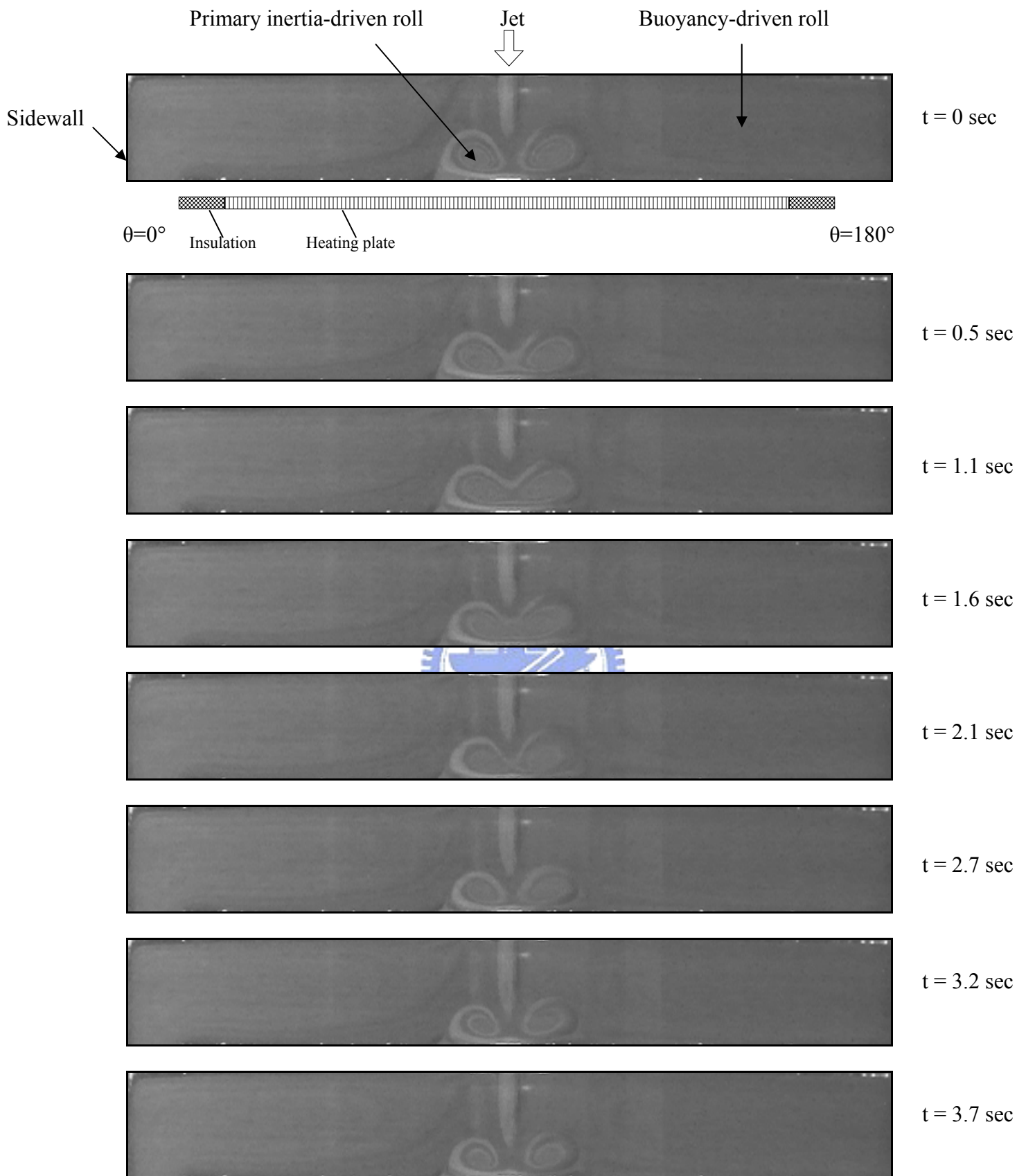


Fig. 4.76 Nonperiodic vortex flow for $H = 40.0 \text{ mm}$ and $Ra = 90,195$ ($\Delta T = 15^\circ\text{C}$) at $Re_j = 27$ ($Q_j = 0.2 \text{ slpm}$) illustrated by side view flow photos taken at the cross plane $\theta = 0^\circ$ & 180° at selected time instants.

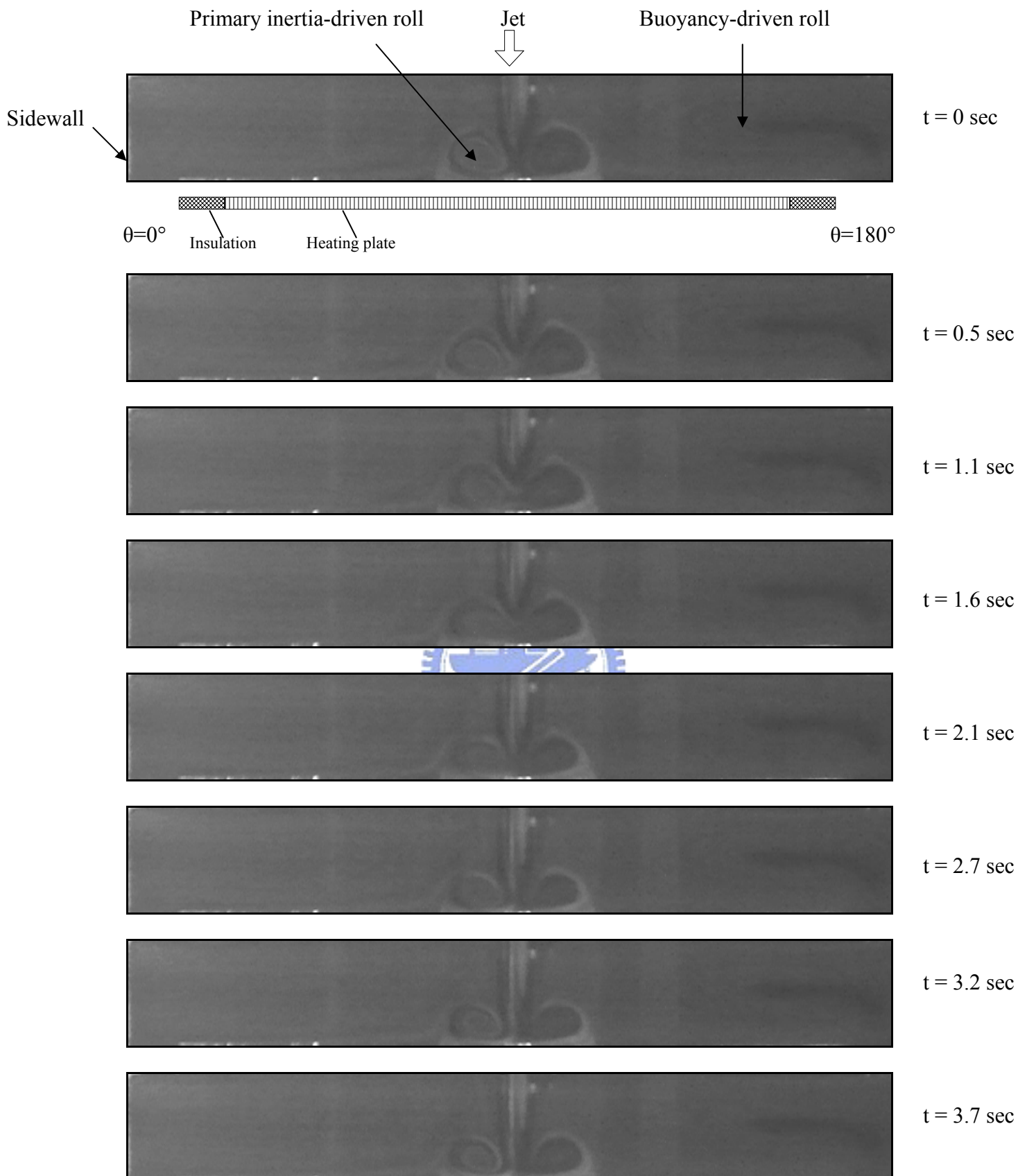


Fig. 4.77 Nonperiodic vortex flow for $H = 40.0 \text{ mm}$ and $Ra = 120,260$ ($\Delta T = 20^\circ\text{C}$) at $Re_j = 41$ ($Q_j = 0.3 \text{ slpm}$) illustrated by side view flow photos taken at the cross plane $\theta = 0^\circ$ & 180° at selected time instants.

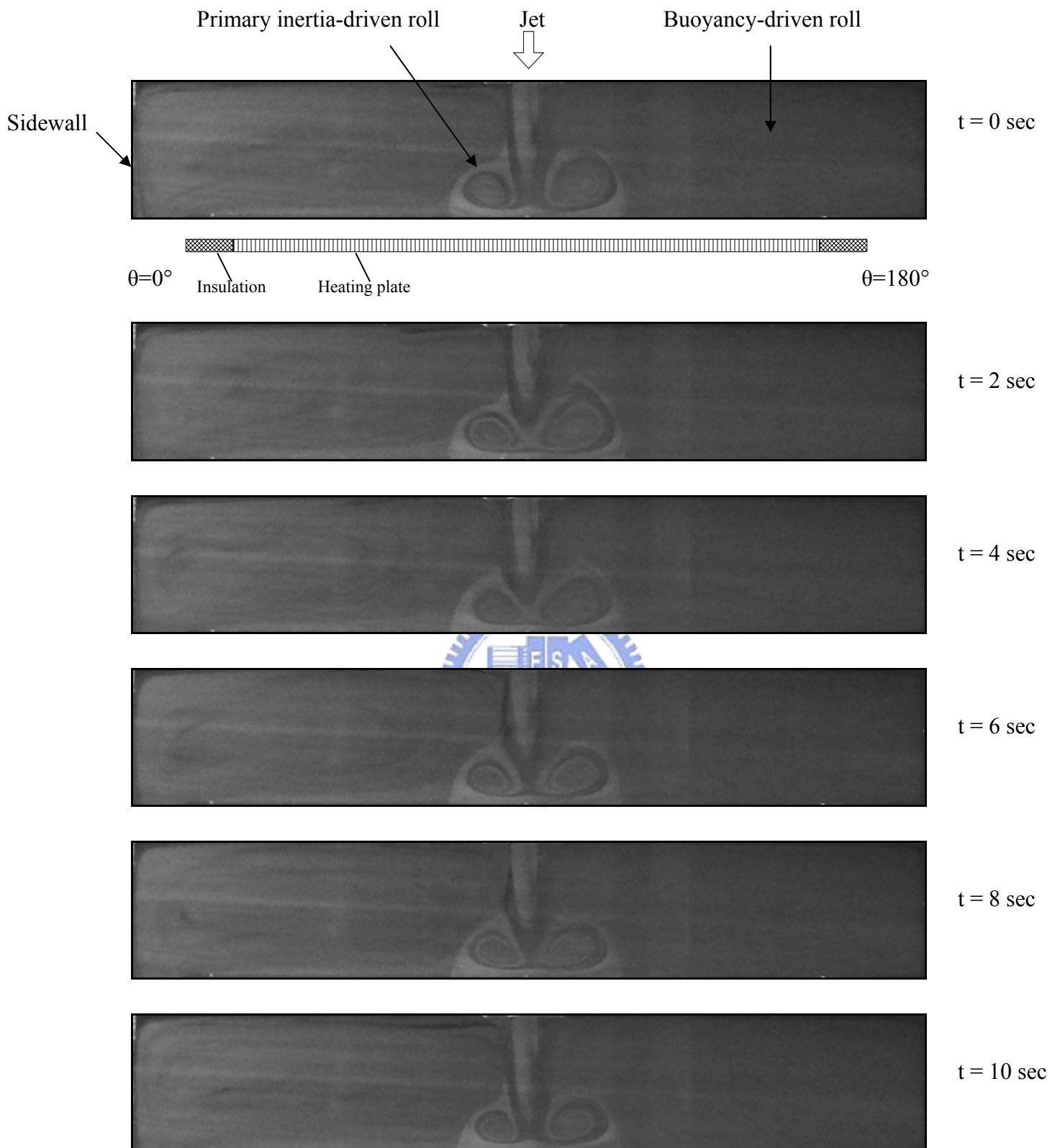


Fig. 4.78 Nonperiodic vortex flow for $H = 50.0 \text{ mm}$ and $Ra = 58,721$ ($\Delta T = 5^\circ\text{C}$) at $Re_j = 54$ ($Q_j = 0.4 \text{ slpm}$) illustrated by side view flow photos taken at the cross plane $\theta = 0^\circ$ & 180° at selected time instants.

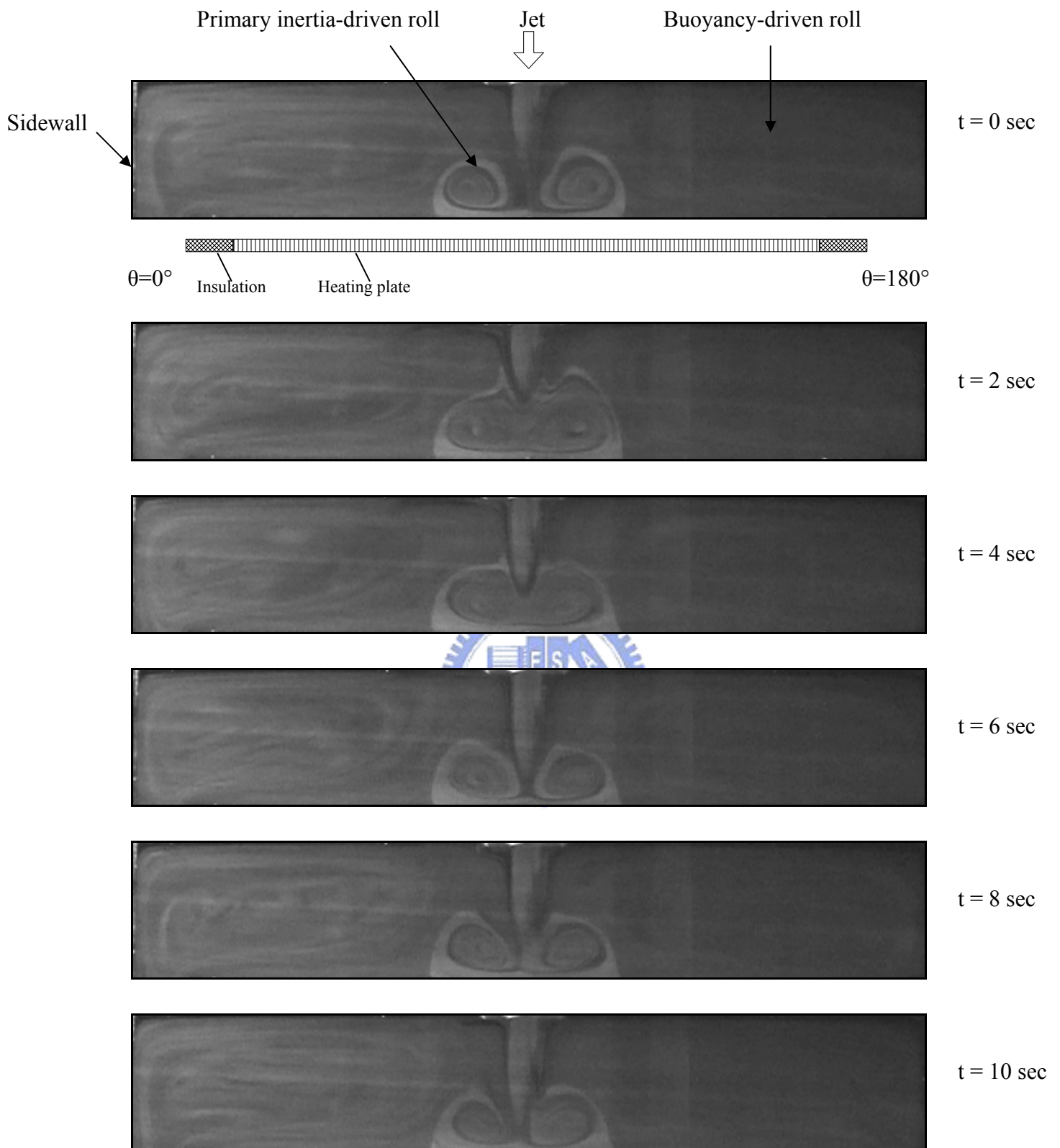


Fig. 4.79 Nonperiodic vortex flow for $H = 50.0 \text{ mm}$ and $Ra = 58,721$ ($\Delta T = 5^\circ\text{C}$) at $Re_j = 68$ ($Q_j = 0.5 \text{ slpm}$) illustrated by side view flow photos taken at the cross plane $\theta = 0^\circ$ & 180° at selected time instants.

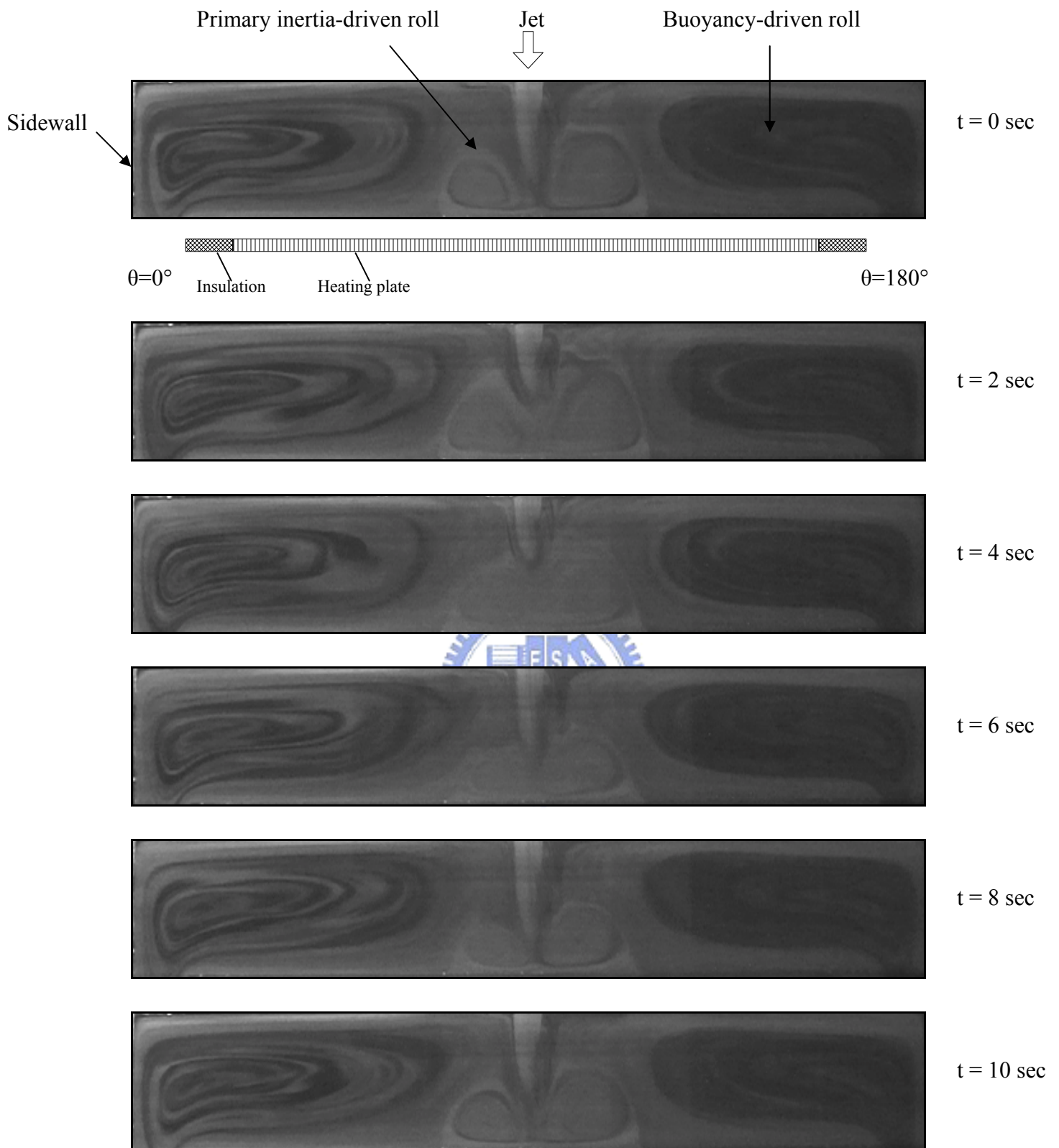


Fig. 4.80 Nonperiodic vortex flow for $H = 50.0 \text{ mm}$ and $Ra = 117,442$ ($\Delta T = 10^\circ\text{C}$) at $Re_j = 68$ ($Q_j = 0.5 \text{ slpm}$) illustrated by side view flow photos taken at the cross plane $\theta = 0^\circ$ & 180° at selected time instants.

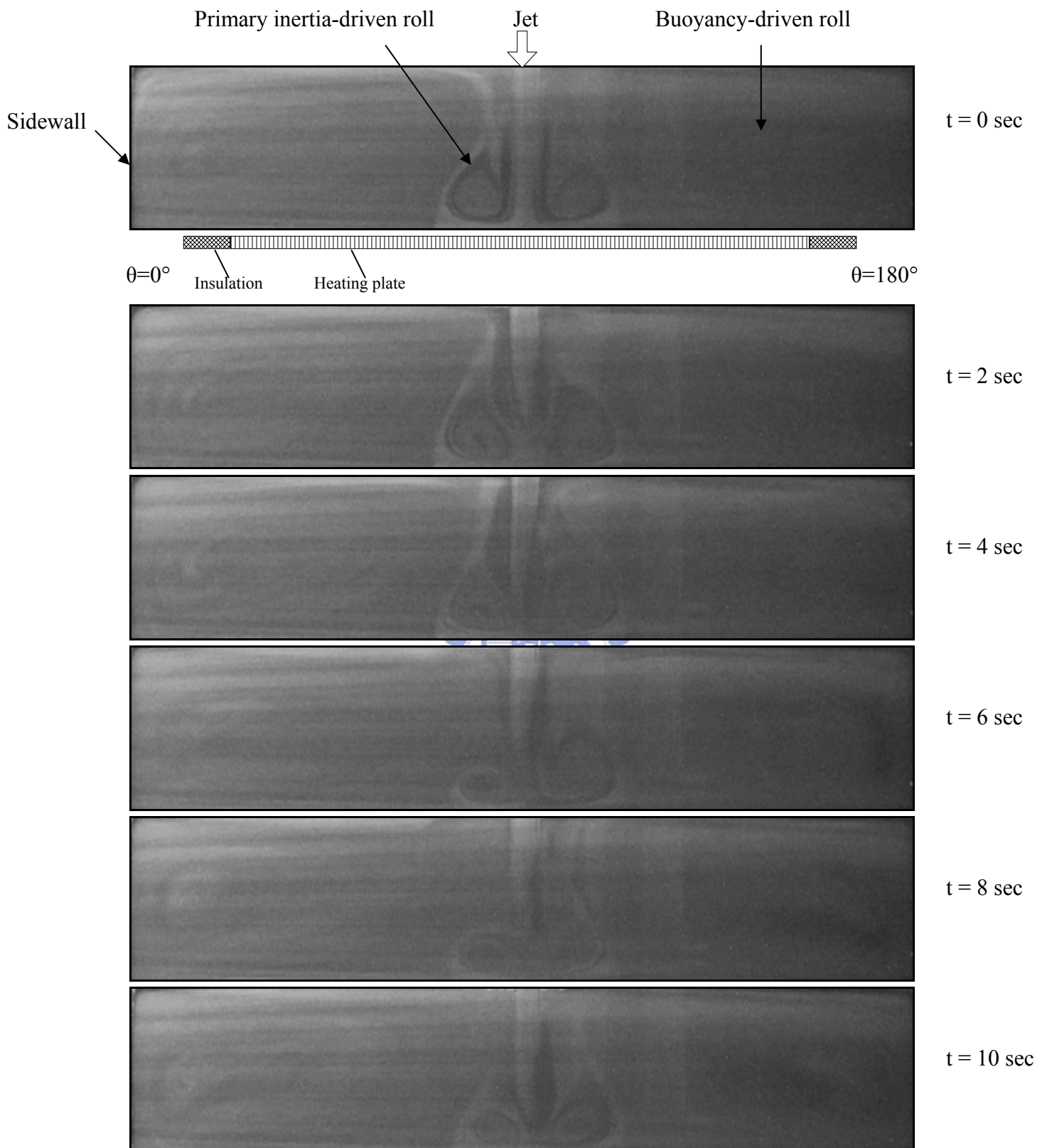


Fig. 4.81 Nonperiodic vortex flow for $H = 60.0 \text{ mm}$ and $Ra = 202,939$ ($\Delta T = 10^\circ\text{C}$) at $Re_j = 68$ ($Q_j = 0.5 \text{ slpm}$) illustrated by side view flow photos taken at the cross plane $\theta = 0^\circ$ & 180° at selected time instants.