1 For symmetric reflection

1.1 q_x

$$q_x = cos(\theta_B + \Delta\varepsilon - \Delta\omega) - cos(\theta_B + \Delta\omega) \tag{1}$$

$$q_x = cos(\theta_B) \cdot cos(\Delta\varepsilon - \Delta\omega) - sin(\theta_B) \cdot sin(\Delta\varepsilon - \Delta\omega) - cos(\theta_B) \cdot \cancelto{1}{cos(\Delta\omega)} + sin(\theta_B) \cdot \cancelto{\Delta\omega}{sin(\Delta\omega)} =$$

$$\begin{gathered}
= cos(\theta_B) \cdot [\cancelto{1}{cos(\Delta\omega)} \cdot \cancelto{1}{cos(\Delta\varepsilon)} + \cancelto{\Delta\omega}{sin(\Delta\omega)} \cdot \cancelto{\Delta\varepsilon}{sin(\Delta\varepsilon)}] - \\
- sin(\theta_B) \cdot [\cancelto{\Delta\varepsilon}{sin(\Delta\varepsilon)} \cdot \cancelto{1}{cos(\Delta\omega)} - \cancelto{1}{cos(\Delta\varepsilon)} \cdot \cancelto{\Delta\omega}{sin(\Delta\omega)}] - \\
- cos(\theta_B) + \Delta\omega \cdot sin(\theta_B) =
\end{gathered}$$

$$= cos(\theta_B) + \cancelto{0}{\Delta\omega \cdot \Delta\varepsilon \cdot cos(\theta_B)} - \Delta\varepsilon \cdot sin(\theta_B) + \Delta\omega \cdot sin(\theta_B) - cos(\theta_B) + \Delta\omega \cdot sin(\theta_B)$$

$$q_x = (2\Delta\omega - \Delta\varepsilon) \cdot sin(\theta_B). \tag{2}$$

1.2 q_z

$$q_z = sin(\theta_B + \Delta\varepsilon - \Delta\omega) + sin(\theta_B + \Delta\omega) - 2sin(\theta_B) \tag{3}$$

$$q_z = sin(\theta_B) \cdot cos(\Delta\varepsilon - \Delta\omega) + cos(\theta_B) \cdot sin(\Delta\varepsilon - \Delta\omega) + sin(\theta_B) \cdot \cancelto{1}{cos(\Delta\omega)} +$$

$$\begin{gathered}
+ cos(\theta_B) \cdot \cancelto{\Delta\omega}{sin(\Delta\omega)} - 2sin(\theta_B) = \\
= sin(\theta_B) \cdot [\cancelto{1}{cos(\Delta\omega)} \cdot \cancelto{1}{cos(\Delta\varepsilon)} + \cancelto{\Delta\omega}{sin(\Delta\omega)} \cdot \cancelto{\Delta\varepsilon}{sin(\Delta\varepsilon)}] + \\
+ cos(\theta_B) \cdot [\cancelto{\Delta\varepsilon}{sin(\Delta\varepsilon)} \cdot \cancelto{1}{cos(\Delta\omega)} - \cancelto{1}{cos(\Delta\varepsilon)} \cdot \cancelto{\Delta\omega}{sin(\Delta\omega)}] + \\
+ sin(\theta_B) + \Delta\omega \cdot cos(\theta_B) - 2sin(\theta_B) = \\
= sin(\theta_B) + \cancelto{0}{\Delta\omega \cdot \Delta\varepsilon \cdot sin(\theta_B)} + \Delta\varepsilon \cdot cos(\theta_B) - \Delta\omega \cdot cos(\theta_B) + \\
+ sin(\theta_B) + \Delta\omega \cdot cos(\theta_B) - 2sin(\theta_B)
\end{gathered}$$

$$q_z = \Delta\varepsilon \cdot cos(\theta_B) \tag{4}$$