$$\begin{bmatrix} C_2 \\ C_4 \end{bmatrix} = \begin{bmatrix} \frac{1}{3\omega_1} & \frac{4}{3\omega_1} \\ \frac{2}{3\omega_2} & -\frac{4}{3\omega_2} \end{bmatrix} \begin{bmatrix} \vec{v}_0 \end{bmatrix} \tag{5.43}$$
$$= \begin{bmatrix} \frac{1}{3\omega_1}(v_{01} + 4v_{02}) \\ \frac{1}{3\omega_2}(2v_{01} - 4v_{02}) \end{bmatrix}$$