

Step 1. Obtain M_{LES} from $M_{LES} = \frac{\sum_{i=1}^n T_{i,LES}}{\tau_{w0} S} + \beta_{LES}^2$

Step 2. Obtain ζ_{LES} from $\zeta_{LES} = \frac{M_{LES}-1}{1-\beta_{LES}}$

Step 3. Obtain β from $C_T^* \frac{\lambda}{c_{f0}} \beta^2 + \beta^2 = 1 + \zeta_{LES}(1 - \beta)$

n.b. C_T^* in Eq. (4) is multiplied by $1/N^2$ to account for LES resolution effects

Step 4. Obtain η_{FS} from $\eta_{FS} = \beta^3$

Step 5. Obtain η_{TS} from $\eta_{TS} = \frac{1}{\beta^3} \times \frac{C_{p,LES}}{C_{p,Betz}}$

n.b. $C_{p,Betz}$ in Eq. (7) is multiplied by $1/N^3$ to account for LES resolution effects