

误差方程为

$$\frac{1}{12} \left(\frac{e_{i+1}^{h+1} - e_{i+1}^h}{\tau} + 10 \frac{e_i^{h+1} - e_i^h}{\tau} + \frac{e_{i-1}^{h+1} - e_{i-1}^h}{\tau} \right) \\ = \frac{1}{2} \left(\frac{e_{i+1}^{h+1} - 2e_i^{h+1} + e_{i-1}^{h+1}}{h^2} + \frac{e_{i+1}^h - 2e_i^h + e_{i-1}^h}{h^2} \right) + R_i^h, \quad 1 \leq i \leq M-1, 0 \leq k \leq N-1,$$

$$e_i^0 = 0, \quad 0 \leq i \leq M,$$

$$e_0^h = 0, \quad e_M^h = 0, \quad 1 \leq k \leq N$$

② 迭代 $\frac{1}{12} (e_{i+1}^{h+1} + 10e_i^{h+1} + e_{i-1}^{h+1}) + \frac{1}{12} (e_{i+1}^h + 10e_i^h + e_{i-1}^h)$, 并对 i 从 1 到

$M-1$ 迭代。