

Supplementary Materials: Three-dimensional numerical analysis and operational optimization of high-efficiency sedimentation tank

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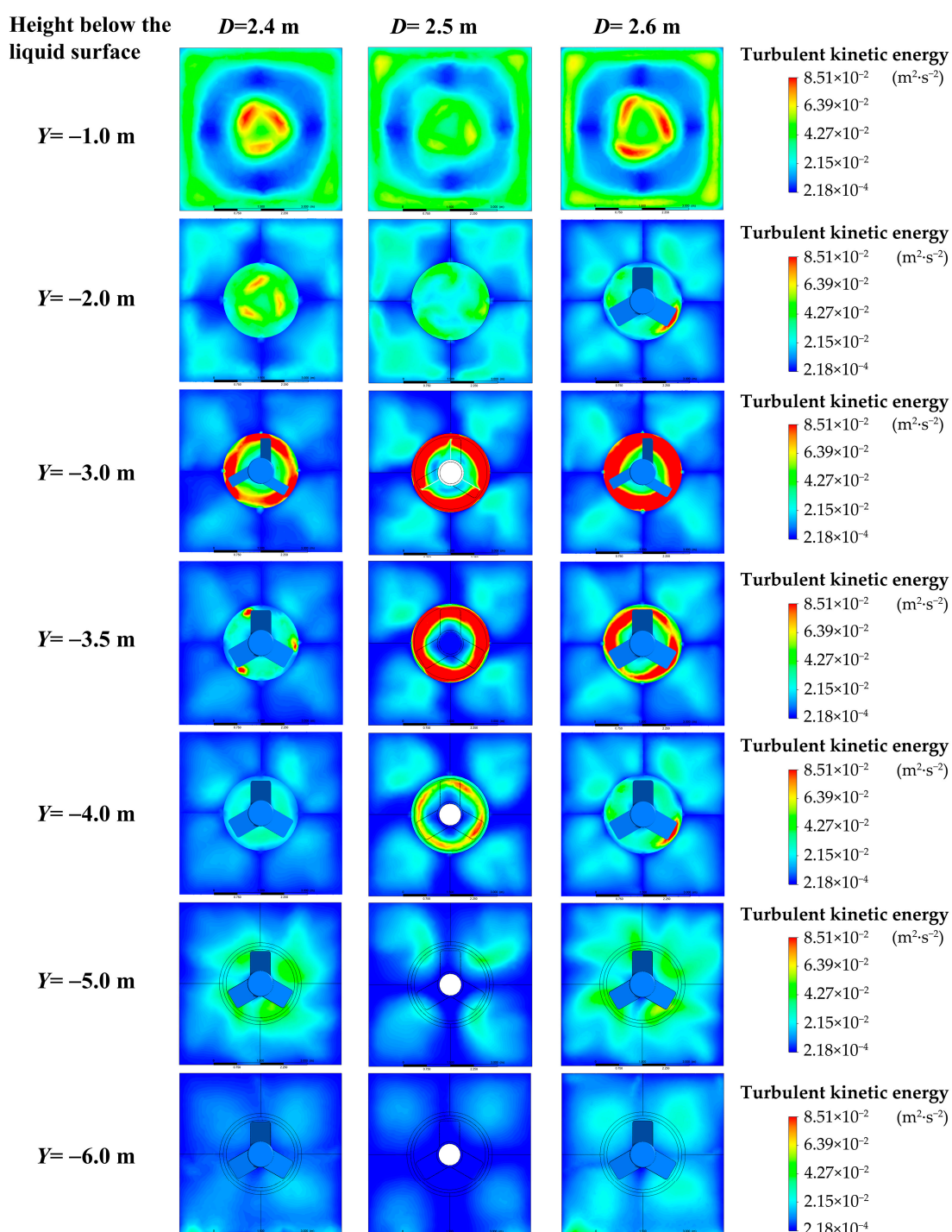


Figure S1. Distributions of turbulent kinetic energy in different cross-sections for various draft tube diameters D .

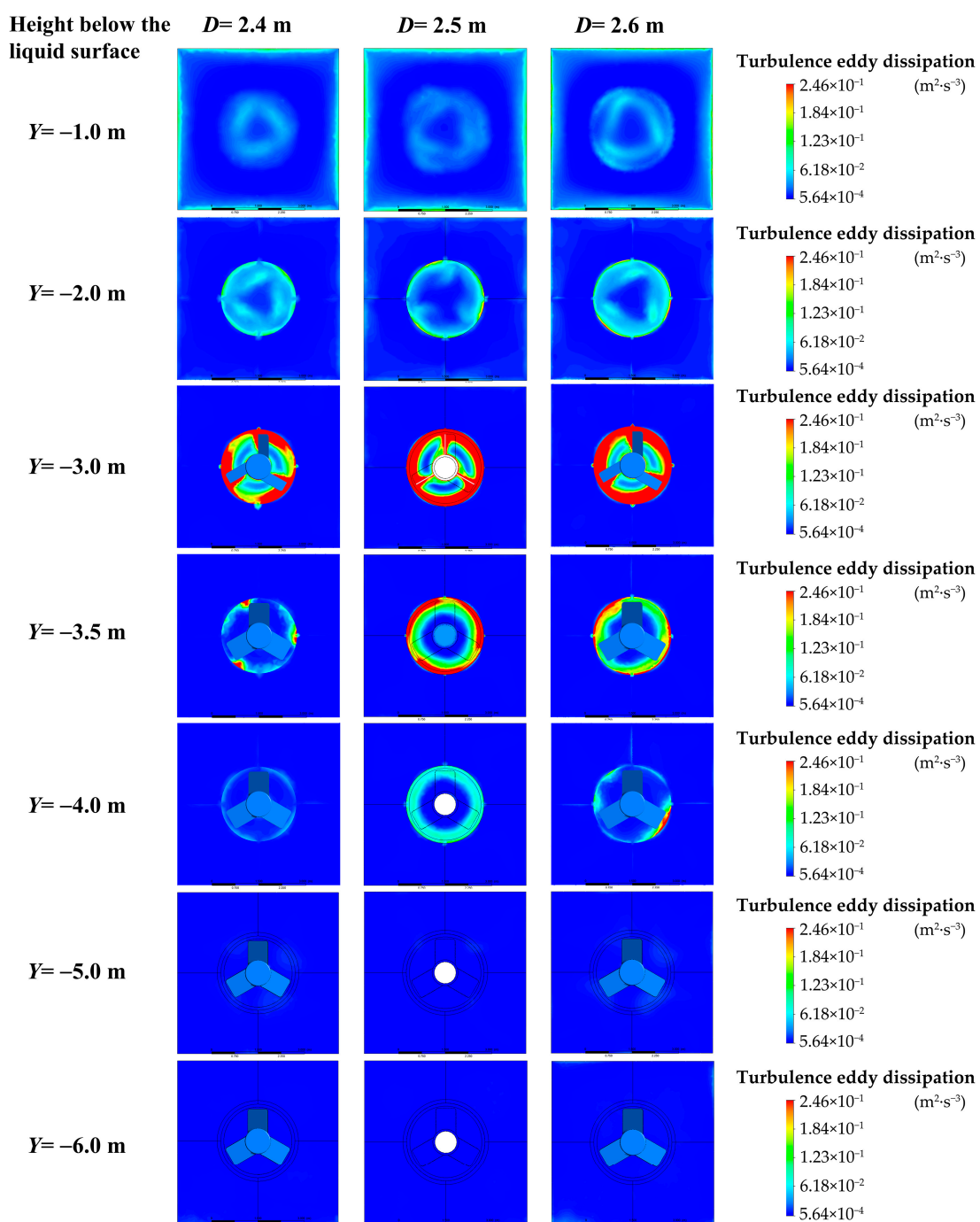


Figure S2. Distributions of turbulent kinetic energy dissipation rate in different cross-sections for various draft tube diameters D .

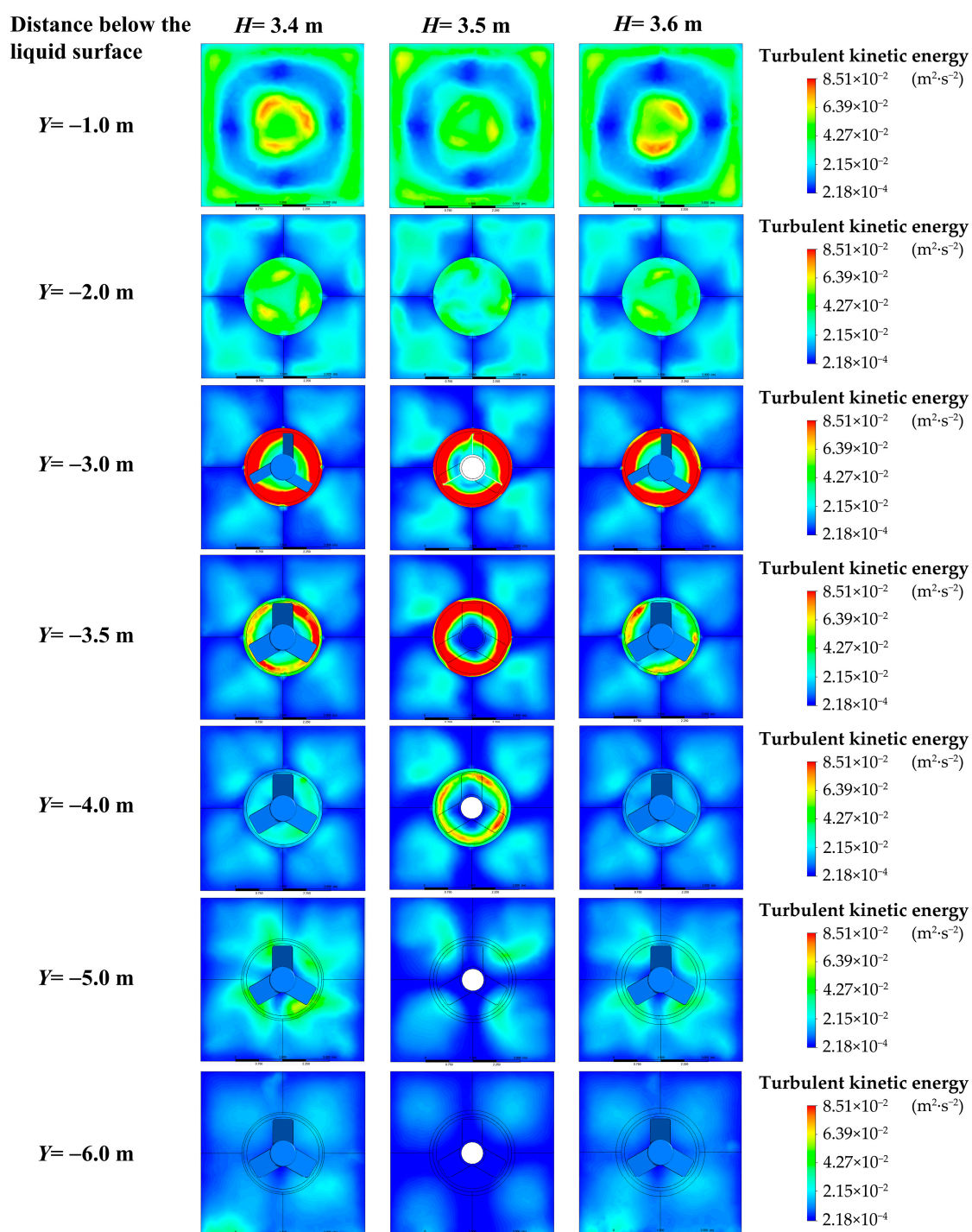


Figure S3. Distributions of turbulent kinetic energy in different cross-sections for various draft tube heights H .

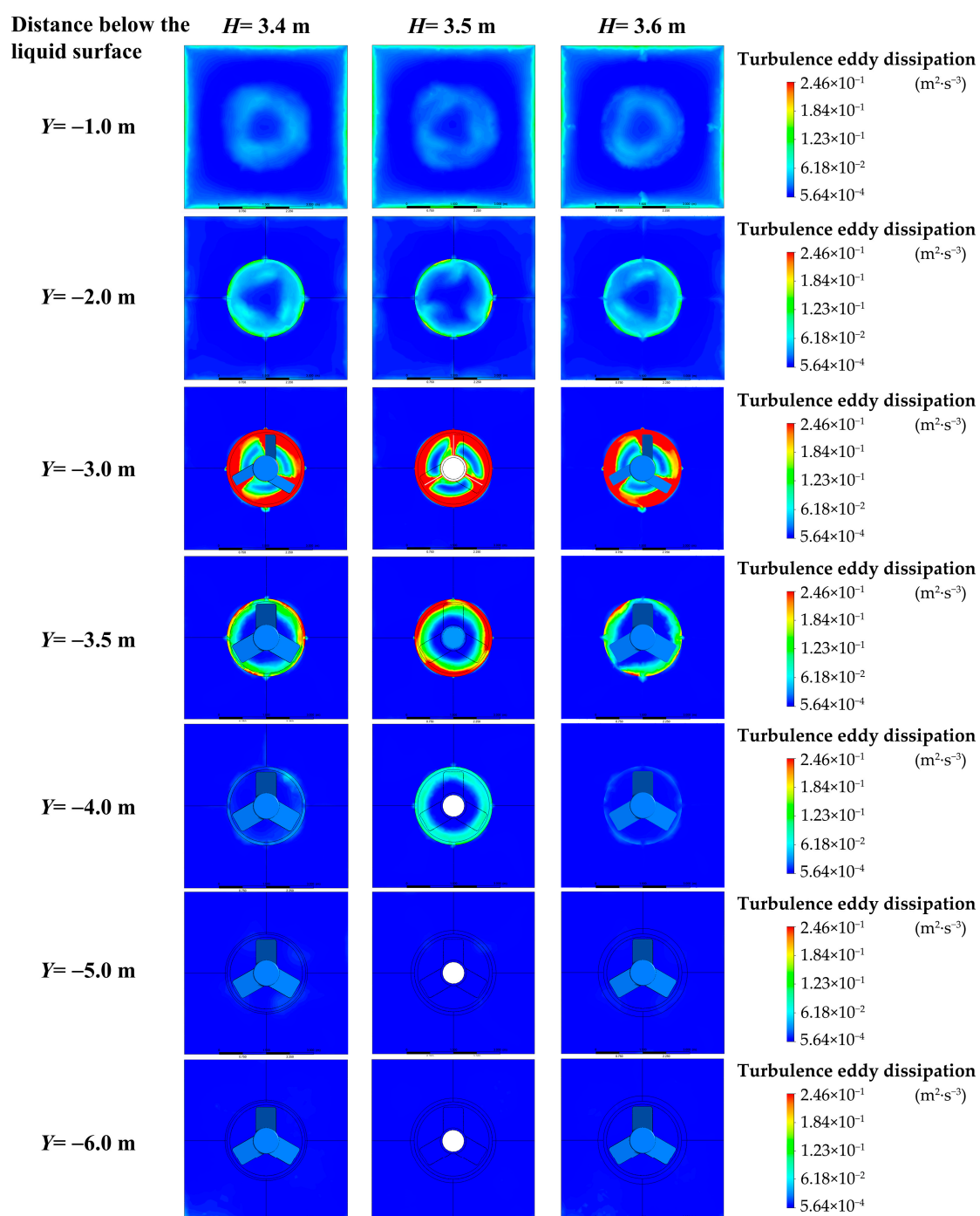


Figure S4. Distributions of turbulent kinetic energy dissipation rate in different cross-sections for various draft tube heights H

Table S1. Effect of water-retaining weir height l on average turbulent kinetic energy k and average turbulent kinetic energy dissipation rate ε in plug-flow/clarification zone.

| Height of water-retaining weir (m) | Turbulent kinetic energy k ($10^{-4} \text{ m}^2 \cdot \text{s}^{-2}$) | Dissipation rate ε ($10^{-4} \text{ m}^2 \cdot \text{s}^{-3}$) |
|------------------------------------|---|---|
| 1.5 | 0.7618 | 0.1246 |
| 1.6 | 0.7533 | 0.1205 |
| 1.7 | 0.7515 | 0.1221 |