

LIST OF TABLES

Table

2-1. PMM Motions in the Earth-fixed Coordinates.	17
2-2. PMM Motions in the Ship-fixed Coordinates.....	17
2-3. Mathematic Models in Harmonics Forms.	21
2-4. ‘ <i>Multiple-Run</i> ’ Method.....	27
2-5. ‘ <i>Single-Run</i> ’ Method.....	27
3-1. Full- and model-scale particulars.....	37
3-2. Mount Conditions.....	39
3-3. PMM Test conditions.....	42
4-1. Noise Test Conditions.....	76
4-2. Tests for Stationarity.....	76
4-3. Statistical Convergence of Data (Averages for 12 repeat tests).	76
4-4. Statistical convergence of Phase-averaged velocity and Reynolds stress.	91
5-1. Sensitivity coefficients of the bias limits for dynamic tests.	118
5-2. Sensitivity coefficients of the bias limits for static drift test.	119
5-3. Polynomial models for measured force/moment, $\tilde{F}$	119
5-4. Bias limits of global variables.	119
5-5. Bias limits of PMM motion parameters for dynamic tests ($Fr = 0.280$).	120
5-6. Bias limits of measured forces and moment (B_F).	121
5-7. Total bias limits of non-dimensional forces and moment (B_r).	122
5-8. Identifications of primary bias sources and propagations.	122
5-9. Summary of UA results.	123
5-10. Evaluation of asymmetry bias B_{asym}	124
5-11. Comparisons of UA between facilities.	125
5-12. Evaluation of asymmetry bias B_{asym} (FORCE and INSEAN data).	126

5-13. Evaluation of facility bias B_{FB}	127
5-14. Evaluation of facility bias B_{FB} (FORCE and INSEAN data).....	128
5-15. Open water tests conditions for Stereo PIV UA.....	151
5-16. Elemental systematic standard uncertainties of the SPIV measurements.....	151
5-17. Systematic uncertainties of SPIV uniform flow measurement [†]	151
5-18. Measurement data of U_C , Y_0 , and ψ_0 [†]	152
5-19. Measurement data of Y , ψ , and γ [†]	152
5-20. Summary of UA for open water pure yaw test ($M = 3$ repeat tests) [†]	152
5-21. Summary of UA for pure yaw test with model (Inner Region).....	153
5-22. Summary of UA for pure yaw test with model (Outer Region).....	153
6-1. Harmonics of Dynamic Tests Time-histories (% Amplitude, $Fr = 0.280$).....	162
6-2. Hydrodynamic Derivatives (Static Drift).....	174
6-3. Hydrodynamic Derivatives (MR _L Method).....	174
6-4. Hydrodynamic Derivatives (MR _H Method).....	174
6-5. Reconstruction Errors (Sway derivatives).....	175
6-6. Reconstruction Errors (Yaw derivatives).....	175
6-7. Reconstruction ¹⁾ Errors (Cross-coupled derivatives).....	175
6-8. Surge-derivatives ($Fr = 0.280$).....	175
6-9. Comparisons between Facilities: Static drift test ($\beta = 10^\circ$).....	186
6-10. Comparisons between Facilities: Dynamic tests ($Fr = 0.280$).....	186
6-11. Comparisons between Facilities (Sway derivatives).....	187
6-12. Comparisons between Facilities (Yaw derivatives).....	187
6-13. Comparisons between Facilities (Cross-coupled derivatives).....	188
6-14. Comparisons between Facilities (Surge derivatives).....	188
6-15. Polynomial Fit Coefficients for Static Drift Motions Data.....	197
6-16. Harmonic Amplitudes ¹⁾ of Motions for Dynamic Tests ($Fr = 0.280$).....	197
6-17. Comparisons between mount-conditions (Static drift).....	208

6-18. Comparisons between mount-conditions (Dynamic tests at $Fr = 0.280$).....	208
6-19. Comparisons between mount-conditions (Hydrodynamic derivatives).....	209