DAFTAR PUSTAKA

Ahmed S.R., G. Ramm and G. Faltin, SAE paper, Detroit, Michigan, USA, 840300-1, 1984

Anderson, 2001. *Fundamental of Aerodynamics. McGraw-Hill Series in Aeronautical and Aerospace Engineering.* University of Mayland. Third edition. ISBN 0-07237335-0.

Ariyanto. Tati Noviati. 2022 Karakteristik Aerodinamika Pada Analisa Ahmed Body Car Menggunakan Software Ansys Workbench 18. Jurnal Teknik Science Vol 1 No. 2 Juni 2022 | P-ISSN: 2828-7002

Bruneau C.H, 2010. Coupling Active and Passive Techniques to Control the Flow Past the Square Back Ahmed body. Computers & Fluids 39, pp. 1875-1892.

Brunn A, Wassen E, Sperber D, Nitsche W, Thiele F, 2007. Active *Drag* Control for a Generic Car Model. DOI: 10.1007/978-3-540-71439-2_15.

Budiarto, Arif Wahyu. , Suriansyah. Muhammad Agus Sahbana. 2013. Study Exsperimental Pengaruh Pemasangan Model *Side skirt* Terhadap Coefisient *Drag* Dan Gaya *Drag*. Jurnal PROTON, Vol 5,No.2/Hal. 26-30

Cooper, K.R., Leuschen, J., 2005. Model and full-scale wind tunnel tests of secondgeneration aerodynamic fuel saving devices for tractor-trailers. SAE Technical Paper, No. 2005-01-3512.

Cengel Y.A, Cimbala, 2006. Fluid Mechanics, Fundamentals and Applications. McGraw Hill. New York.

Conan B., Anthoine J., and Planquart P., Experimental aerodynamic study of a car-type bluff body, Experimental in fluids, 50, pp. 1273–1284, 2011

Harinaldi, Budiarso, Warjito, Kosasih, E. A., Tarakka, R., & Simanungkalit, S. P. (2012, June). *Active technique by suction to control the flow structure over a van model. In AIP Conference Proceedings* (Vol. 1440, No. 1, pp. 1333-1339). American Institute of Physics.

Hwang, Bae Geun, Sangseung Lee. Eui Jae Lee. 2016. *Reduction of drag in heavy vehicles with two different types of advanced Side skirts.* Journal of Wind Engineering and Industrial Aerodynamics 36-46

Krentel D., Muminovic R, Brunn A., Nitsche W., and King R., 2010, Application of active flow control on generic 3D car models, R. King (Ed.): Active flow control II, NNFM 108, pp. 223–239, 2010

Landman, D., Wood, R., Seay, W., Bledsoe, J., 2009. Understanding practical limits to heavy truck *drag* reduction. SAE Technical Paper, No. 2009-01-28900.

Munson B.R, Young D.F, Okiishi T.H, 2002. Fluid Mechanics. Four Edition

Nursantoso, Agus Priyo. 2016. *Pembuatan Desain Dan Analisis Aerodinamis Body Dfv 2.* Tugas Akhir Universitas Islam Indonesia

Prihadnyana Yudi, G. Widayana, K. Rihendra Dantes. 2017. *Analisis Aerodinamika Pada Permukaan Bodi Kendaraan Mobil Listrik Gaski (Ganesha Sakti) Dengan Perangkat Lunak Ansys 14.5.* Jurnal Jurusan Pendidikan Teknik Mesin Universitas Pendidiakan Ganesha Volume : 8 No : 2

Putra Yosafat N., Parlindungan M., Muhammad Iqbal, 2017. Analisa Pengaruh Variasi Penambahan *Fin* pada Centerbulb terhadap Hambatan Kapal Katamaran MV. Digambar menggunakan Metode Computational Fluid Dynamic (CFD). Jurnal Teknik Perkapalan: Vol. 5, No. 3, 2017

Rumapea Marsaut M., Deddy C., Parlindungan M., 2016. Pengaruh Penambahan *Fin* Pada Rudder Untuk Mengurangi Hambatan Kemudi Kapal Dengan Metode Cfd (Studi Kasus Kapal Kriso Container Ship). Jurnal Teknik Perkapalan : Vol. 4, No. 2, 2016

Stephen, Richard. 2021. *Research and Development of a Body Kit for Passenger Cars to Enhance Aerodynamic Efficiency.* Kaunas University of Technology

Susilo, J. 2014. *Simulasi Penggunaan Fins Undership Terhadap Tahanan Dan Gaya Dorong Kapal Dengan Metode Analisa CFD.* Doctoral dissertation, Institut Teknologi Sepuluh Nopember Surabaya

Willy, Wishnu. Agoes Santoso. Tony Bambang M. 2013. *Simulasi Penggunaan Fin Undership Terhadap Tahanan dan Gaya Dorong Kapal dengan Metode Analisa CFD*. Jurnal Teknik Pomits: Vol. 3, No. 2, 201

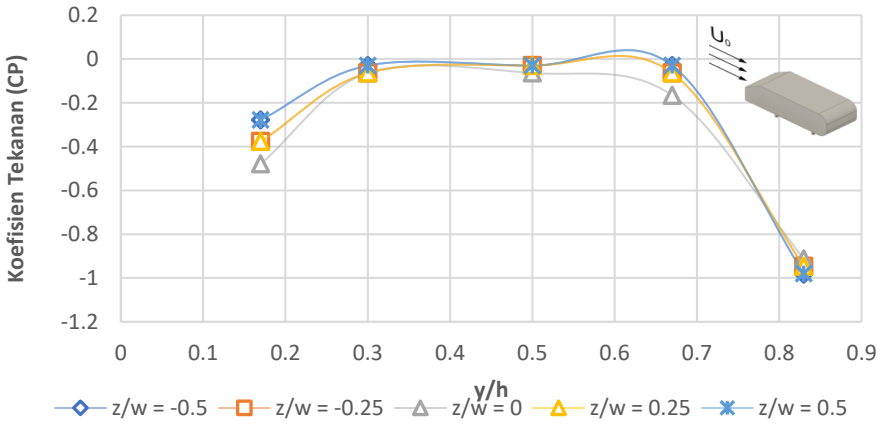
Yusuf, Ahmad. 2017. Analisa Aerodinamika Dan Optimasi Body Mobil Smart Ev Generasi Tiga Dengan Menggunakan Pemodelan CFD Tiga Dimensi. Jurnal Jurusan Pendidikan Teknik Mesin Universitas Sebelas Maret

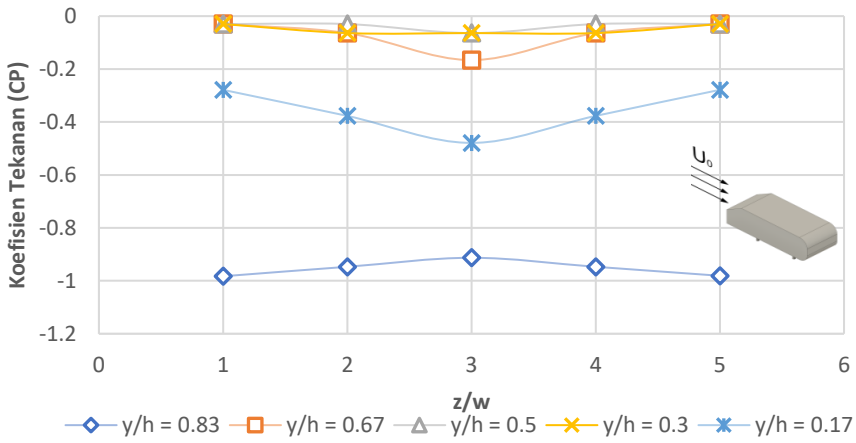
LAMPIRAN

Lampiran 1. Koefisien Tekanan (C_P) Tanpa Kontrol

- Nilai koefisien tekanan pada bagian belakang model uji tanpa kontrol pada kecepatan *Upstream* 11.1 m/s

Upstream		Koefisien Tekanan				
P0	Posisi	-0.5	-0.25	0	0.25	0.5
11.1	y/h = 0.83	-0.983	-0.947	-0.913	-0.947	-0.981
	y/h = 0.67	-0.030	-0.064	-0.166	-0.064	-0.030
	y/h = 0.5	-0.030	-0.030	-0.064	-0.030	-0.030
	y/h = 0.3	-0.030	-0.064	-0.064	-0.064	-0.030
	y/h = 0.17	-0.278	-0.376	-0.478	-0.376	-0.278

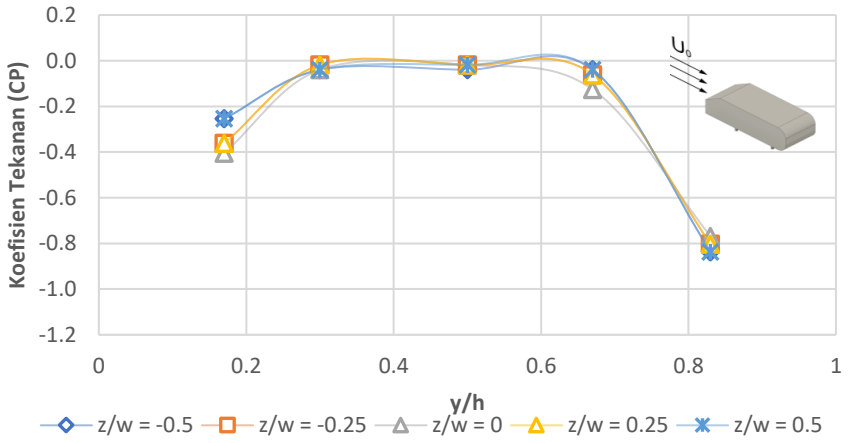


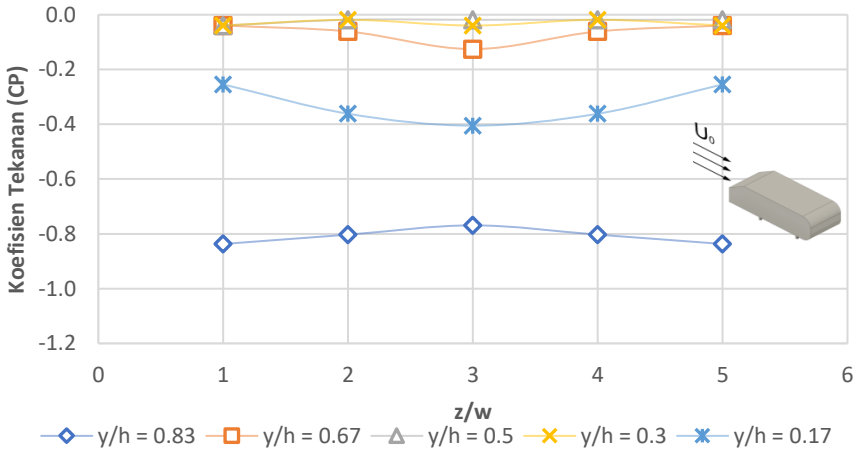


a. Kecepatan *Upstream* U_{01} = 11.1 m/s

- Nilai koefisien tekanan pada bagian belakang model uji tanpa kontrol pada kecepatan *Upstream* 13.9 m/s

Upstream		Koefisien Tekanan				
P0	Posisi	-0.5	-0.25	0	0.25	0.5
13.9	y/h = 0.83	-0.837	-0.803	-0.769	-0.803	-0.837
	y/h = 0.67	-0.040	-0.061	-0.126	-0.061	-0.040
	y/h = 0.5	-0.040	-0.018	-0.018	-0.018	-0.018
	y/h = 0.3	-0.040	-0.018	-0.040	-0.018	-0.040
	y/h = 0.17	-0.254	-0.362	-0.405	-0.362	-0.254

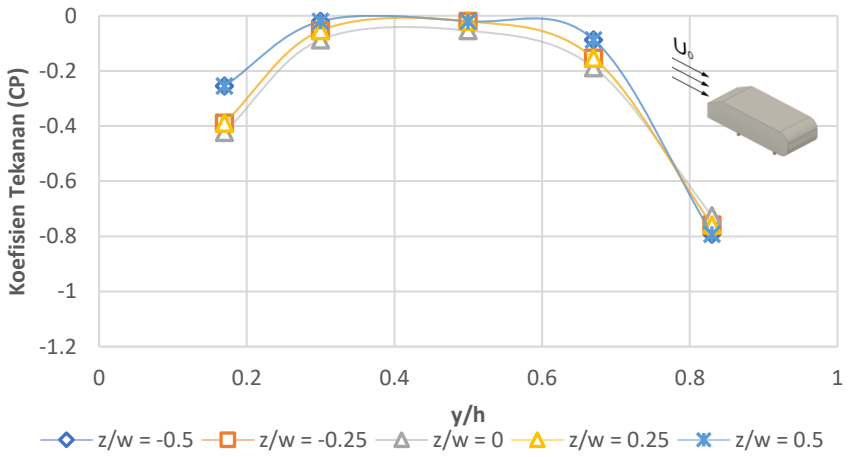


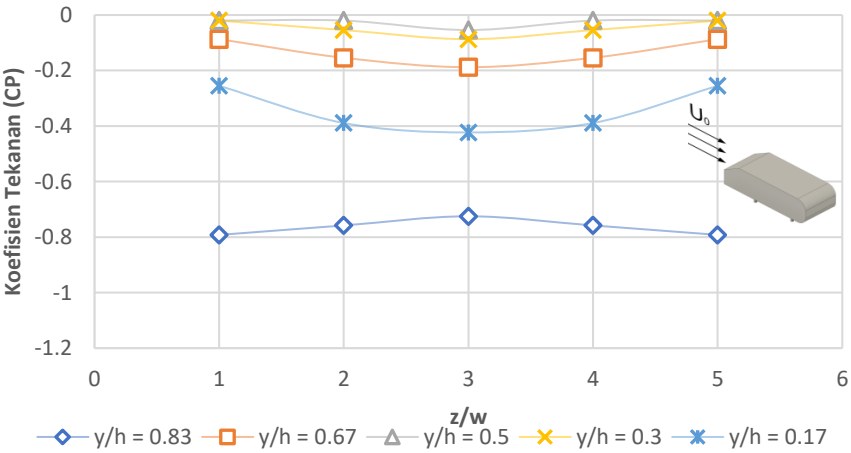


b. Kecepatan *Upstream* U_{02} = 13.9 m/s

- Nilai koefisien tekanan pada bagian belakang model uji tanpa kontrol pada kecepatan *Upstream* 16.7 m/s

Upstream		Koefisien Tekanan				
P0	Posisi	-0.5	-0.25	0	0.25	0.5
16.7	y/h = 0.83	-0.792	-0.758	-0.725	-0.758	-0.792
	y/h = 0.67	-0.087	-0.154	-0.188	-0.154	-0.087
	y/h = 0.5	-0.020	-0.020	-0.054	-0.020	-0.020
	y/h = 0.3	-0.020	-0.054	-0.087	-0.054	-0.020
	y/h = 0.17	-0.255	-0.389	-0.423	-0.389	-0.255

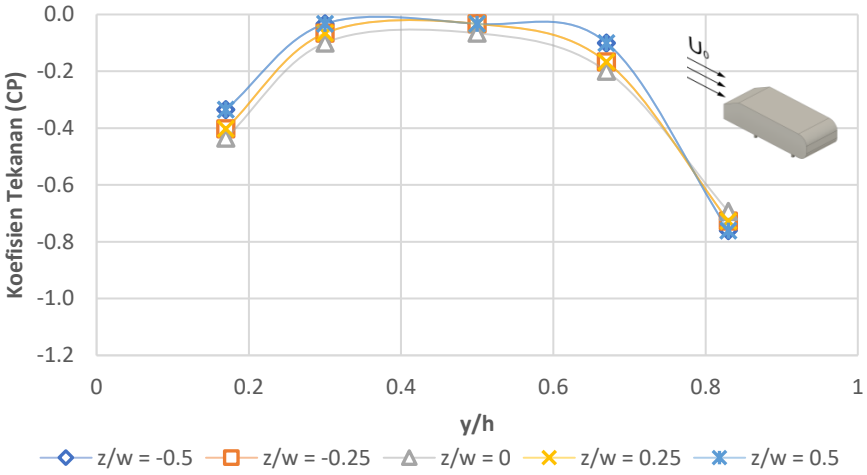


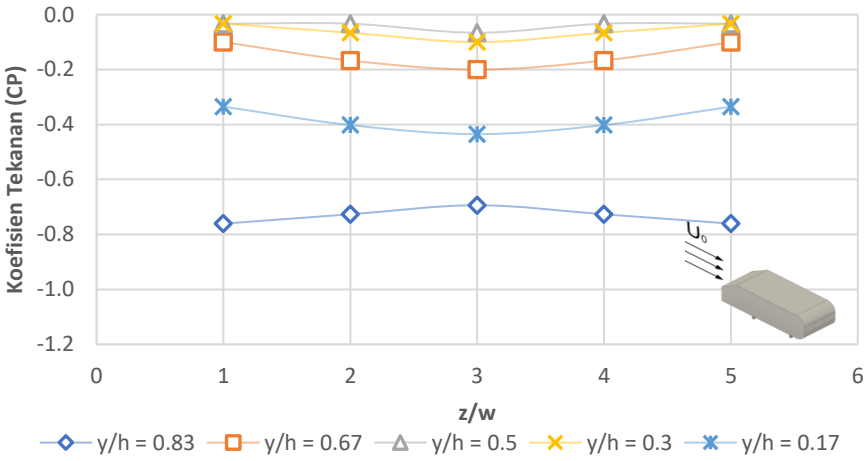


c. Kecepatan *Upstream* U_{03} = 16.7 m/s

- Nilai koefisien tekanan pada bagian belakang model uji tanpa kontrol pada kecepatan *Upstream* 19.4 m/s

Upstream		Koefisien Tekanan				
P0	Posisi	-0.5	-0.25	0	0.25	0.5
19.4	y/h = 0.83	-0.804	-0.770	-0.737	-0.770	-0.804
	y/h = 0.67	-0.100	-0.167	-0.200	-0.167	-0.100
	y/h = 0.5	-0.033	-0.033	-0.066	-0.033	-0.033
	y/h = 0.3	-0.033	-0.066	-0.100	-0.066	-0.033
	y/h = 0.17	-0.335	-0.402	-0.435	-0.402	-0.335

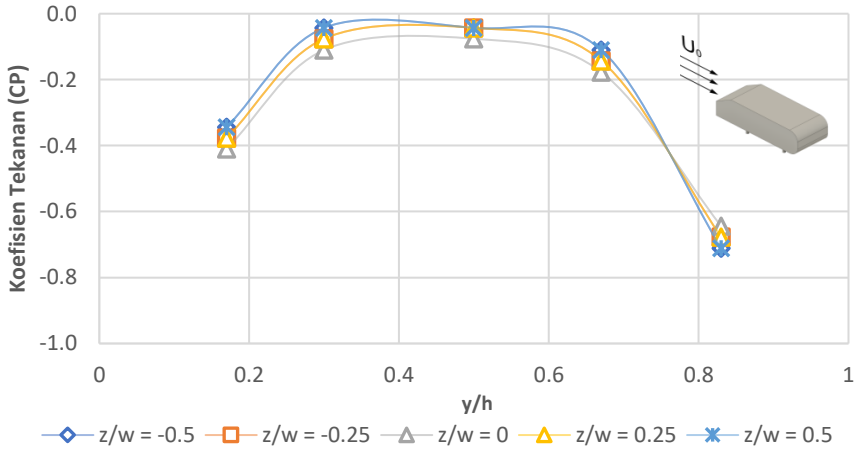


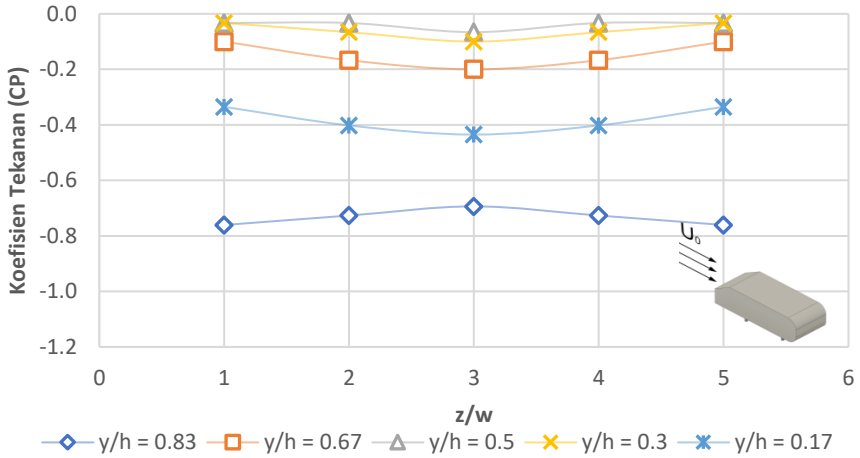


d. Kecepatan *Upstream* U_{04} = 19.4 m/s

- Nilai koefisien tekanan pada bagian belakang model uji tanpa kontrol pada kecepatan *Upstream* 22.2 m/s

Upstream		Koefisien Tekanan				
P0	Posisi	-0.5	-0.25	0	0.25	0.5
22.2	y/h = 0.83	-0.711	-0.677	-0.644	-0.677	-0.711
	y/h = 0.67	-0.110	-0.143	-0.177	-0.143	-0.110
	y/h = 0.5	-0.043	-0.043	-0.076	-0.043	-0.043
	y/h = 0.3	-0.043	-0.076	-0.110	-0.076	-0.043
	y/h = 0.17	-0.344	-0.377	-0.410	-0.377	-0.344

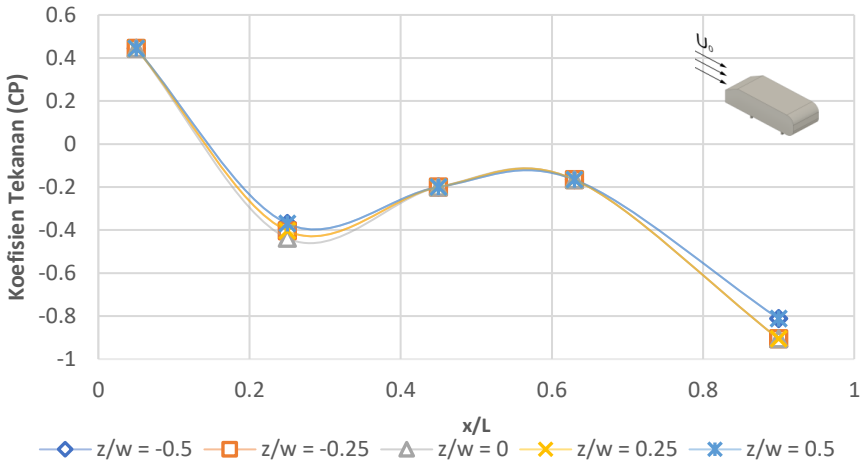


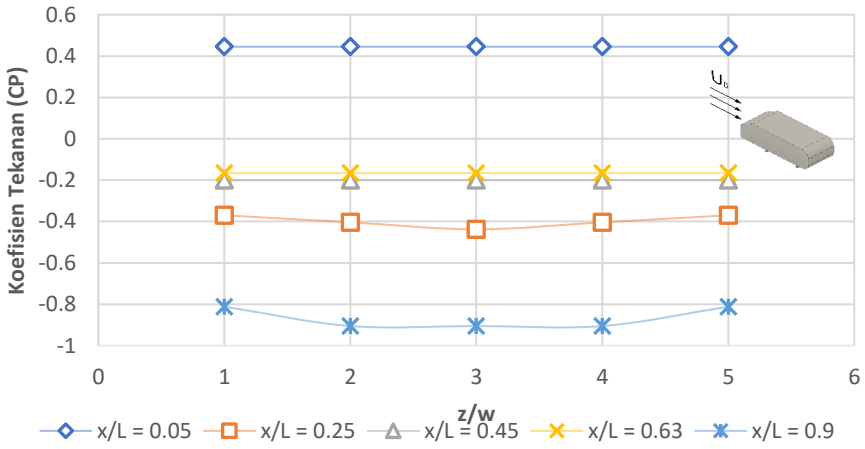


e. Kecepatan *Upstream* U_{05} = 22.2 m/s

- Nilai koefisien tekanan pada bagian atas model uji tanpa kontrol pada kecepatan *Upstream* 11.1 m/s

Upstream		Koefisien Tekanan				
P0	Posisi	-0.5	-0.25	0	0.25	0.5
11.1	x/l = 0.9	0.445	0.445	0.445	0.445	0.445
	x/l = 0.63	-0.370	-0.404	-0.438	-0.404	-0.370
	x/l = 0.45	-0.200	-0.200	-0.200	-0.200	-0.200
	x/l = 0.25	-0.166	-0.166	-0.166	-0.166	-0.166
	x/l = 0.05	-0.812	-0.879	-0.879	-0.879	-0.812

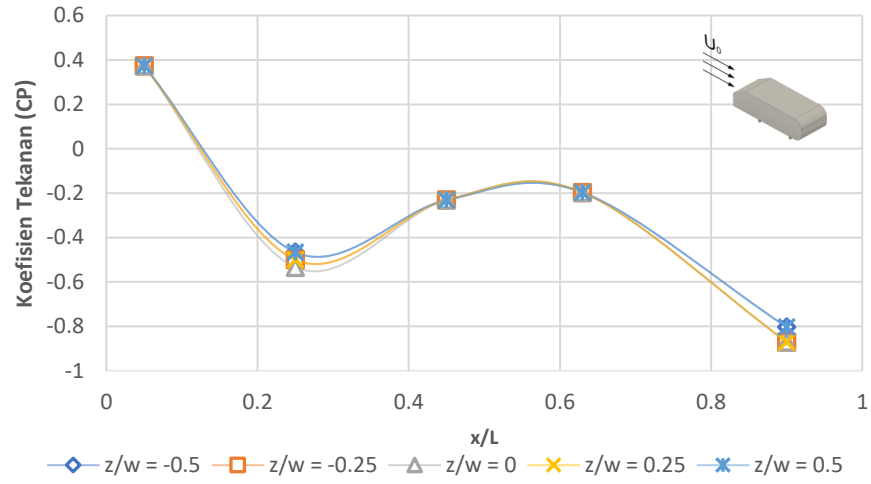


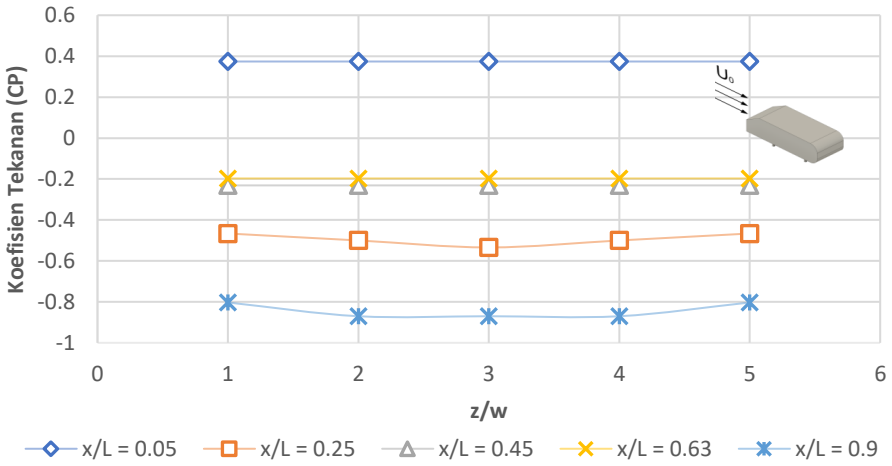


a. Kecepatan *Upstream* U_{01} = 11.1 m/s

- Nilai koefisien tekanan pada bagian atas model uji tanpa kontrol pada kecepatan *Upstream* 13.9 m/s

Upstream ———		Koefisien Tekanan				
P0	Posisi	-0.5	-0.25	0	0.25	0.5
13.9	x/l = 0.9	0.374	0.374	0.374	0.374	0.374
	x/l = 0.63	-0.466	-0.5	-0.534	-0.5	-0.466
	x/l = 0.45	-0.231	-0.231	-0.231	-0.231	-0.231
	x/l = 0.25	-0.197	-0.197	-0.197	-0.197	-0.197
	x/l = 0.05	-0.803	-0.87	-0.904	-0.87	-0.803

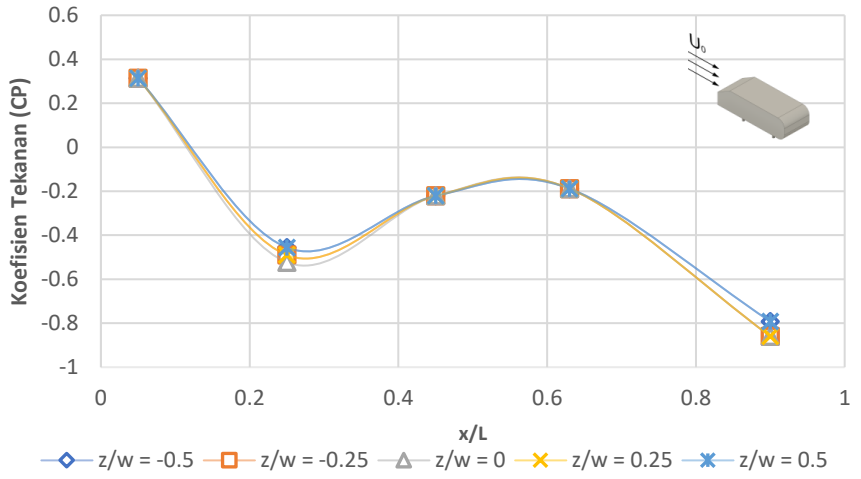


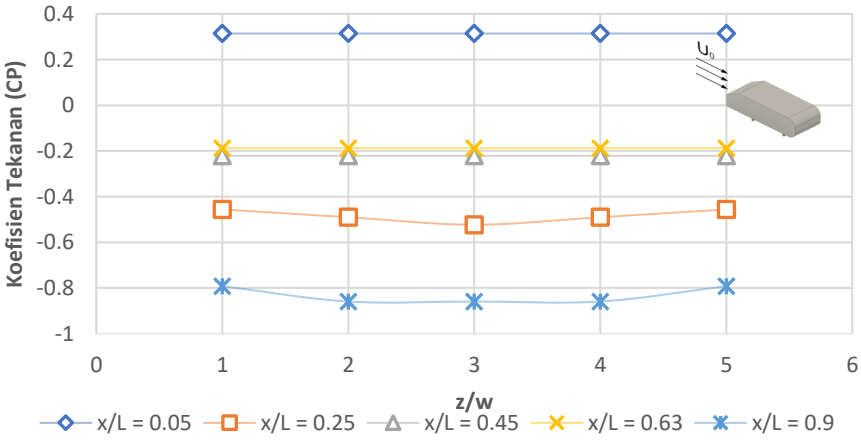


b. Kecepatan *Upstream* U_{02} = 13.9 m/s

- Nilai koefisien tekanan pada bagian atas model uji tanpa kontrol pada kecepatan *Upstream* 16.7 m/s

Upstream		Koefisien Tekanan				
P0	Posisi	-0.5	-0.25	0	0.25	0.5
16.7	x/l = 0.9	0.314	0.314	0.314	0.314	0.314
	x/l = 0.63	-0.456	-0.49	-0.523	-0.49	-0.456
	x/l = 0.45	-0.221	-0.221	-0.221	-0.221	-0.221
	x/l = 0.25	-0.188	-0.188	-0.188	-0.188	-0.188
	x/l = 0.05	-0.792	-0.859	-0.893	-0.859	-0.825

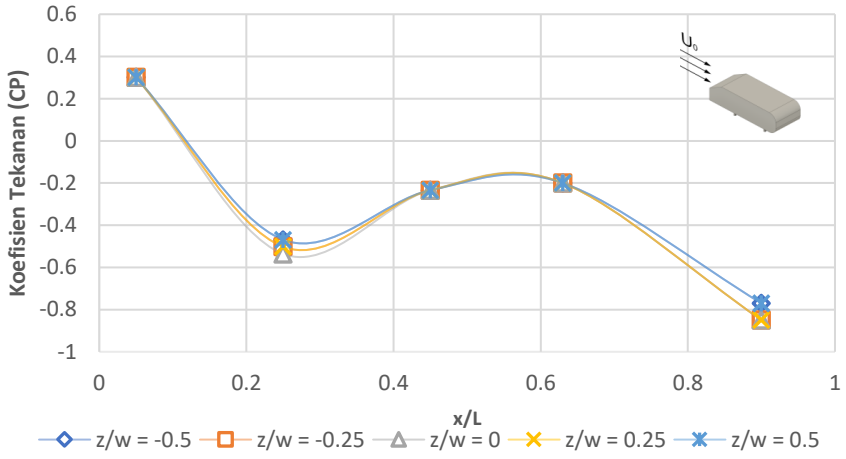


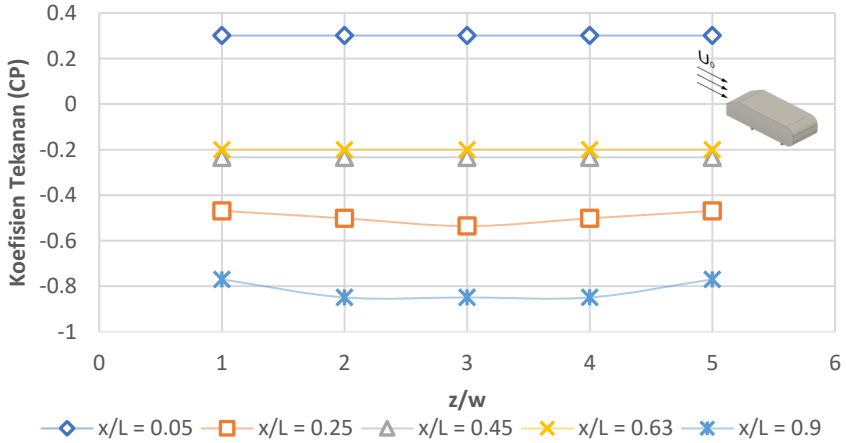


c. Kecepatan *Upstream* U_{03} = 16.7 m/s

- Nilai koefisien tekanan pada bagian atas model uji tanpa kontrol pada kecepatan *Upstream* 19.4 m/s

Upstream		Koefisien Tekanan				
P0	Posisi	-0.5	-0.25	0	0.25	0.5
19.4	x/l = 0.9	0.301	0.301	0.301	0.301	0.301
	x/l = 0.63	-0.469	-0.502	-0.536	-0.502	-0.469
	x/l = 0.45	-0.234	-0.234	-0.234	-0.234	-0.234
	x/l = 0.25	-0.200	-0.200	-0.200	-0.200	-0.200
	x/l = 0.05	-0.770	-0.871	-0.904	-0.871	-0.770

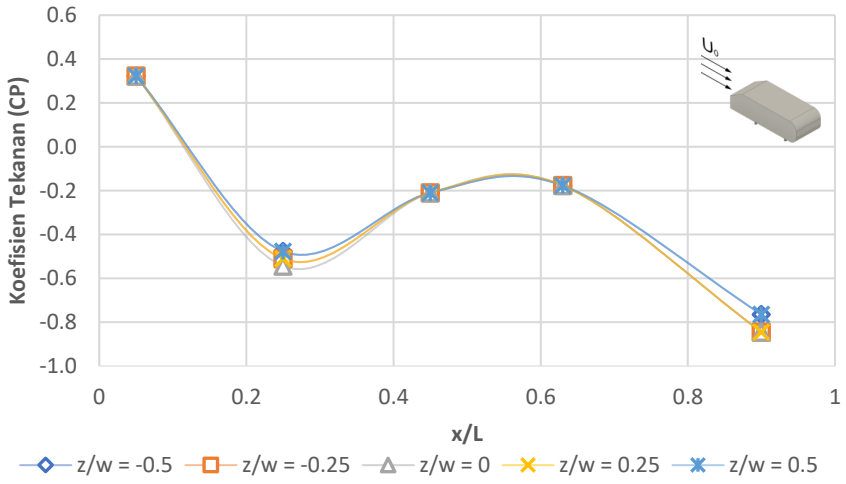


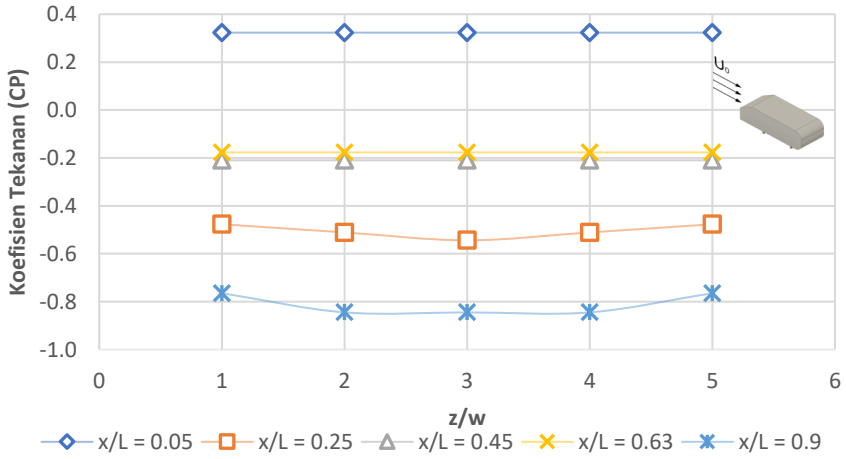


d. Kecepatan *Upstream* U_{04} = 19.4 m/s

- Nilai koefisien tekanan pada bagian atas model uji tanpa kontrol pada kecepatan *Upstream* 22.2 m/s

Upstream		Koefisien Tekanan				
P0	Posisi	-0.5	-0.25	0	0.25	0.5
22.2	x/l = 0.9	0.323	0.323	0.323	0.323	0.323
	x/l = 0.63	-0.477	-0.511	-0.544	-0.511	-0.477
	x/l = 0.45	-0.210	-0.210	-0.210	-0.210	-0.210
	x/l = 0.25	-0.177	-0.177	-0.177	-0.177	-0.177
	x/l = 0.05	-0.778	-0.845	-0.911	-0.845	-0.778



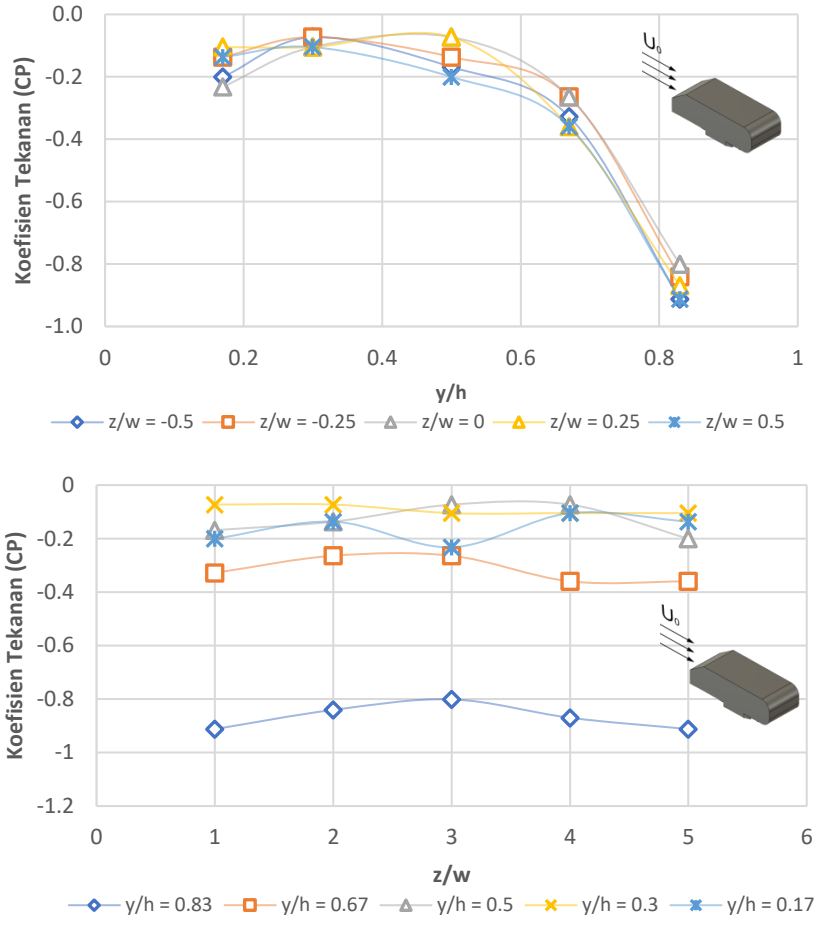


e. Kecepatan *Upstream* U_{05} = 22.2 m/s

Lampiran 2. Koefisien Tekanan (C_P) dengan *Side skirt*

- Nilai koefisien tekanan pada bagian belakang model uji dengan *Side skirt* pada kecepatan *Upstream* 11.1 m/s

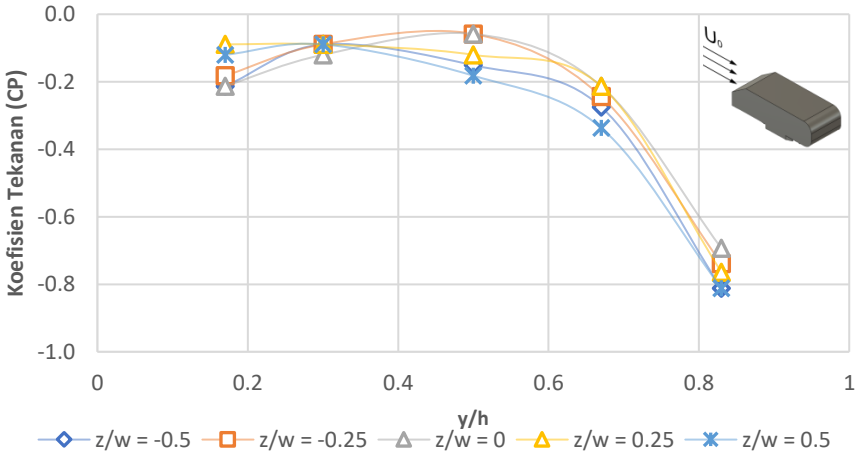
Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
11.1	y/h = 0.83	-0.806	-0.774	-0.934	-0.870	-0.774
	y/h = 0.67	-0.328	-0.264	-0.264	-0.360	-0.360
	y/h = 0.5	-0.169	-0.137	-0.073	-0.073	-0.200
	y/h = 0.3	-0.073	-0.073	-0.105	-0.105	-0.105
	y/h = 0.17	-0.200	-0.137	-0.232	-0.105	-0.137

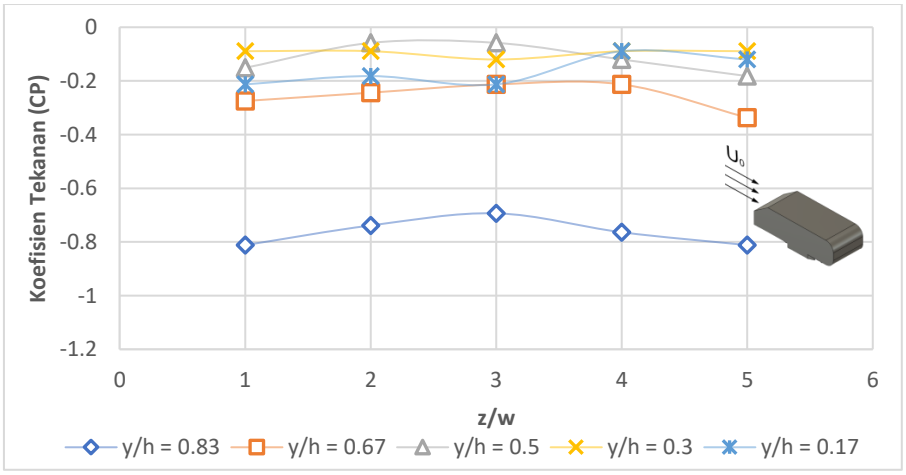


a. Kecepatan *Upstream* U_{01} = 11.1 m/s

- Nilai koefisien tekanan pada bagian belakang model uji dengan *Side skirt* pada kecepatan *Upstream* 13.9 m/s

Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
13.9	y/h = 0.83	-0.770	-0.739	-0.862	-0.831	-0.739
	y/h = 0.67	-0.275	-0.244	-0.213	-0.213	-0.337
	y/h = 0.5	-0.151	-0.058	-0.058	-0.120	-0.182
	y/h = 0.3	-0.089	-0.089	-0.120	-0.089	-0.089
	y/h = 0.17	-0.213	-0.182	-0.213	-0.089	-0.120

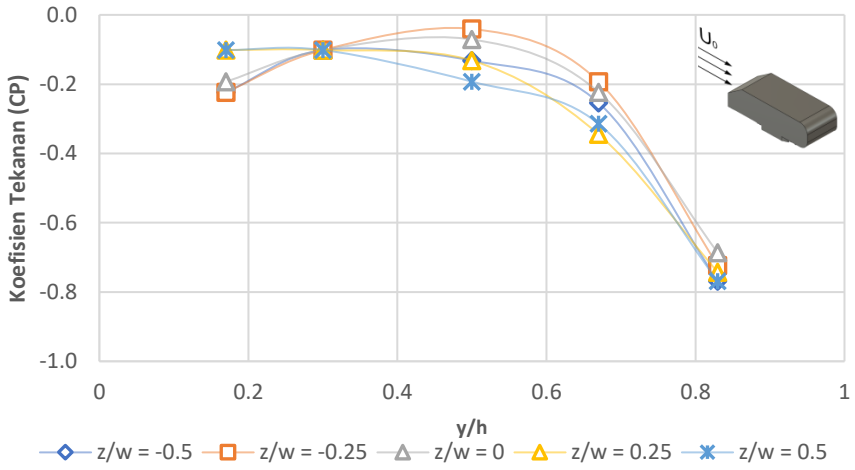


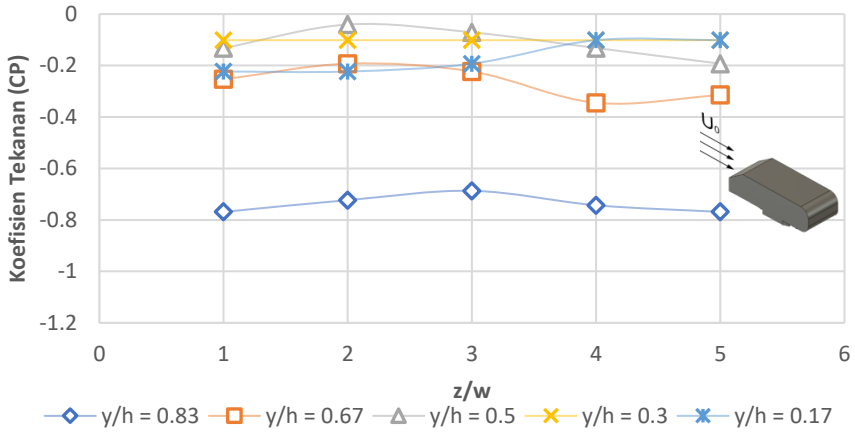


b. Kecepatan *Upstream* U_{02} = 13.9 m/s

- Nilai koefisien tekanan pada bagian belakang model uji dengan *Side skirt* pada kecepatan *Upstream* 16.7 m/s

Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
16.7	y/h = 0.83	-0.710	-0.741	-0.862	-0.802	-0.710
	y/h = 0.67	-0.254	-0.193	-0.223	-0.345	-0.315
	y/h = 0.5	-0.132	-0.041	-0.071	-0.132	-0.193
	y/h = 0.3	-0.101	-0.101	-0.101	-0.101	-0.101
	y/h = 0.17	-0.223	-0.223	-0.193	-0.101	-0.101

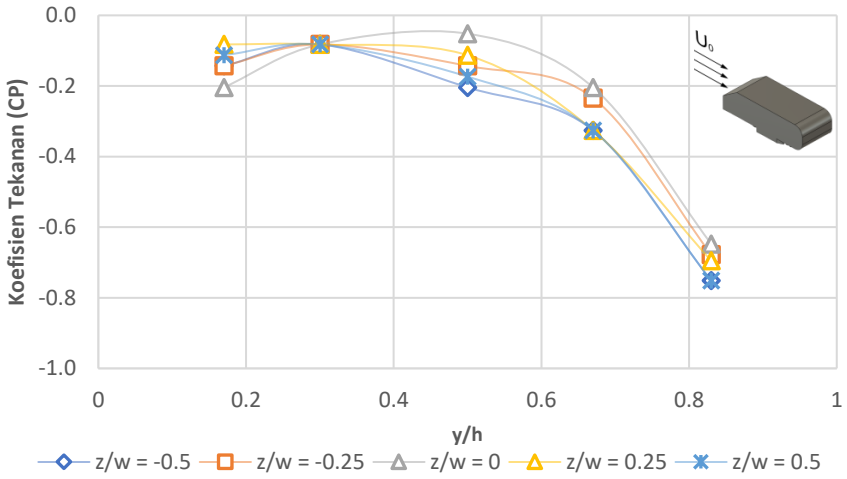


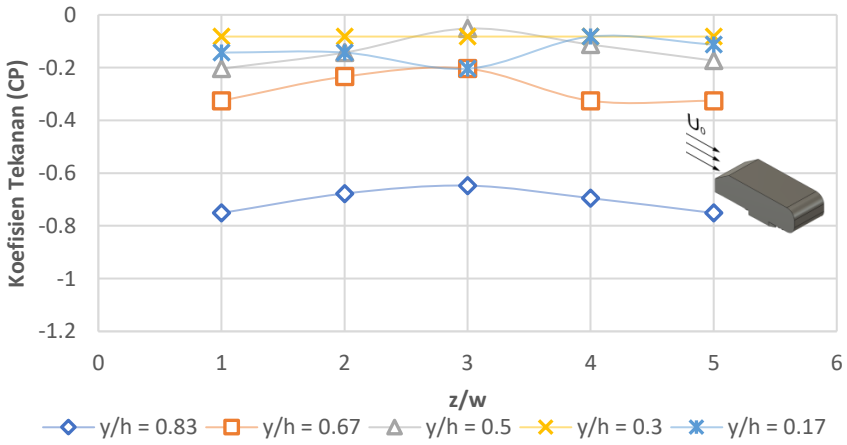


c. Kecepatan *Upstream* U_{03} = 16.7 m/s

- Nilai koefisien tekanan pada bagian belakang model uji dengan *Side skirt* pada kecepatan *Upstream* 19.4 m/s

Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
19.4	y/h = 0.83	-0.708	-0.678	-0.756	-0.738	-0.647
	y/h = 0.67	-0.326	-0.234	-0.204	-0.326	-0.326
	y/h = 0.5	-0.204	-0.143	-0.052	-0.113	-0.174
	y/h = 0.3	-0.082	-0.082	-0.082	-0.082	-0.082
	y/h = 0.17	-0.143	-0.143	-0.204	-0.082	-0.113

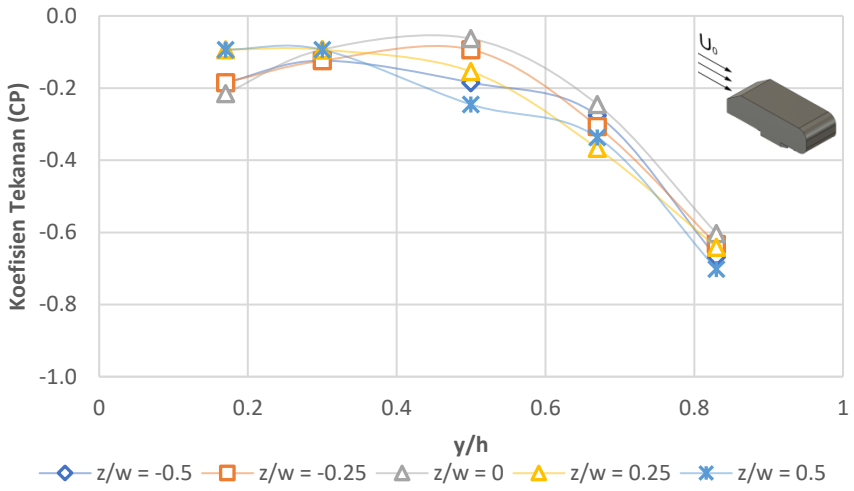


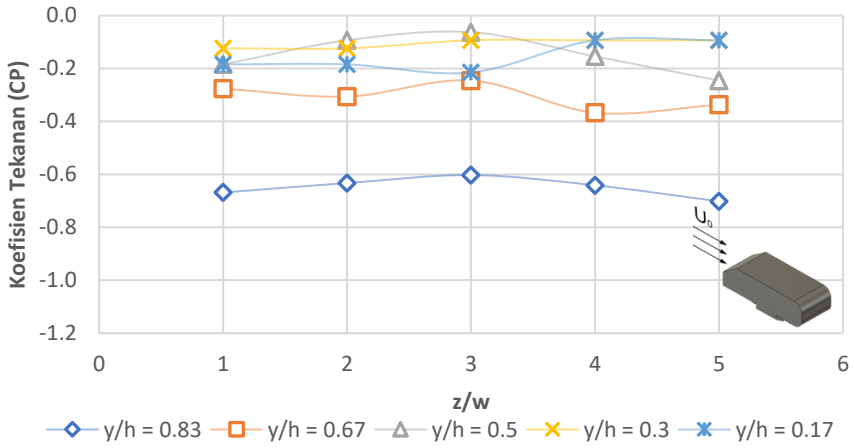


d. Kecepatan *Upstream* U_{04} = 19.4 m/s

- Nilai koefisien tekanan pada bagian belakang model uji dengan *Side skirt* pada kecepatan *Upstream* 22.2 m/s

Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
22.2	y/h = 0.83	-0.602	-0.633	-0.752	-0.724	-0.602
	y/h = 0.67	-0.276	-0.306	-0.246	-0.367	-0.337
	y/h = 0.5	-0.185	-0.093	-0.063	-0.154	-0.246
	y/h = 0.3	-0.124	-0.124	-0.093	-0.093	-0.093
	y/h = 0.17	-0.185	-0.185	-0.215	-0.093	-0.093

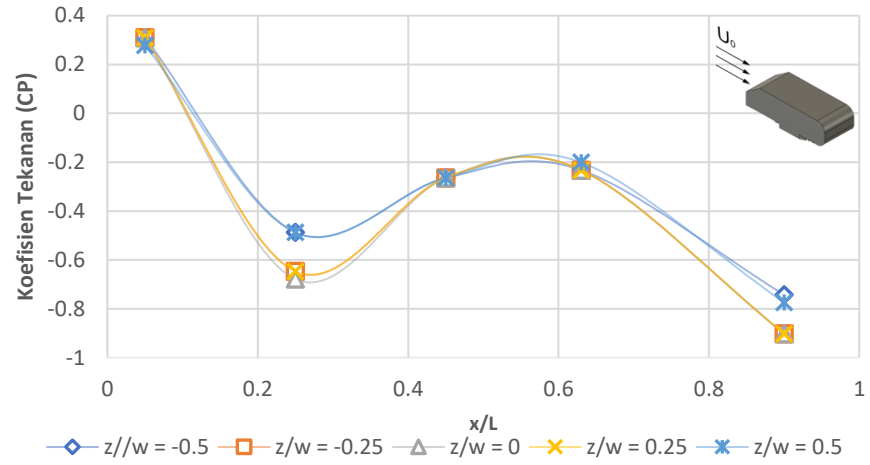


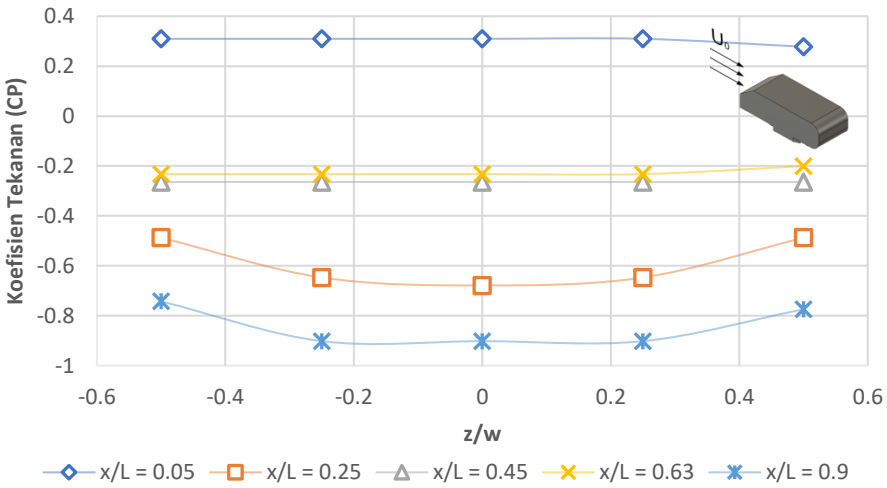


e. Kecepatan *Upstream* U_{05} = 22.2 m/s

- Nilai koefisien tekanan pada bagian atas model uji dengan *Side skirt* pada kecepatan *Upstream* 11.1 m/s

Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
11.1	x/L = 0.05	0.310	0.310	0.310	0.310	0.278
	x/L = 0.25	-0.487	-0.647	-0.679	-0.647	-0.487
	x/L = 0.45	-0.264	-0.264	-0.264	-0.264	-0.264
	x/L = 0.63	-0.232	-0.232	-0.232	-0.232	-0.200
	x/L = 0.9	-0.742	-0.902	-0.902	-0.902	-0.774

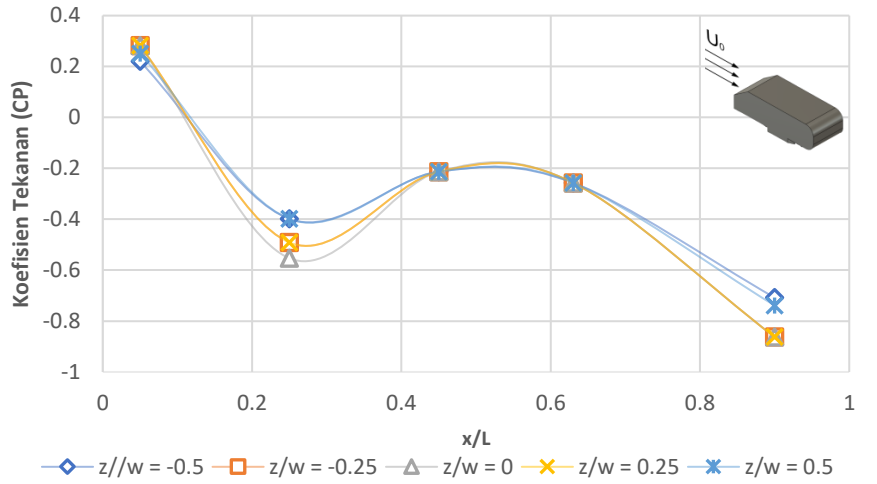


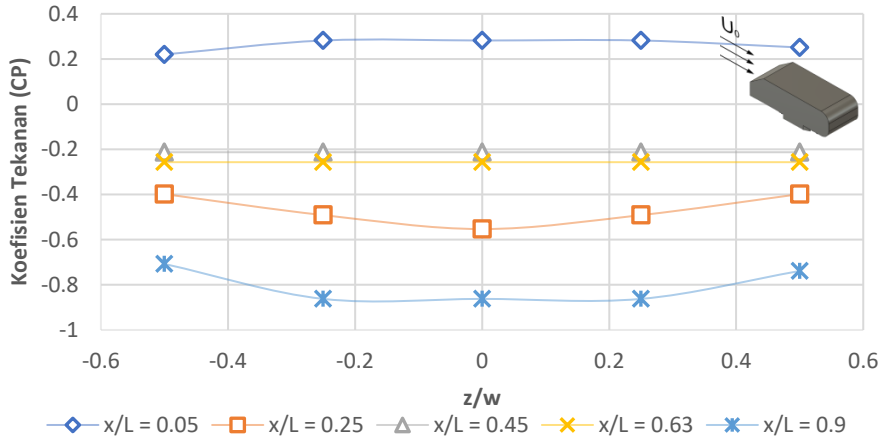


a. Kecepatan *Upstream* U_{01} = 11.1 m/s

- Nilai koefisien tekanan pada bagian atas model uji dengan *Side skirt* pada kecepatan *Upstream* 13.9 m/s

Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
13.9	x/L = 0.05	0.220	0.282	0.282	0.282	0.251
	x/L = 0.25	-0.399	-0.491	-0.553	-0.491	-0.399
	x/L = 0.45	-0.213	-0.213	-0.213	-0.213	-0.213
	x/L = 0.63	-0.257	-0.257	-0.257	-0.257	-0.257
	x/L = 0.9	-0.708	-0.862	-0.862	-0.862	-0.739

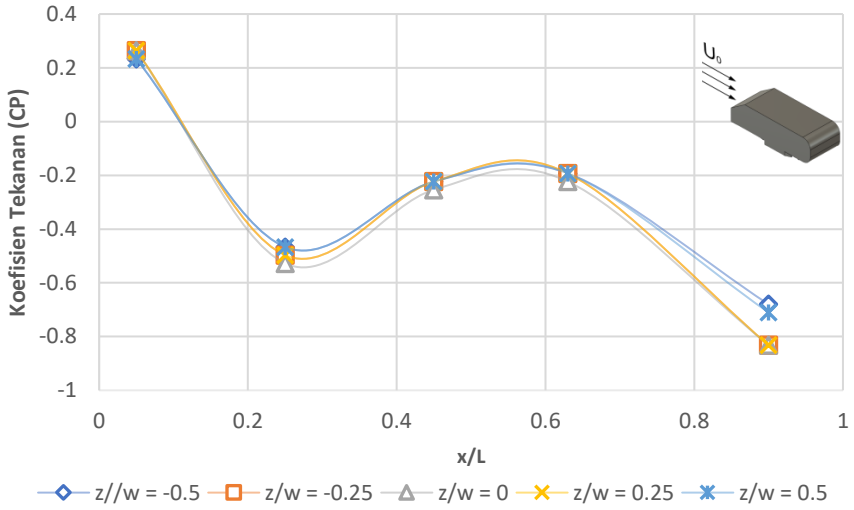


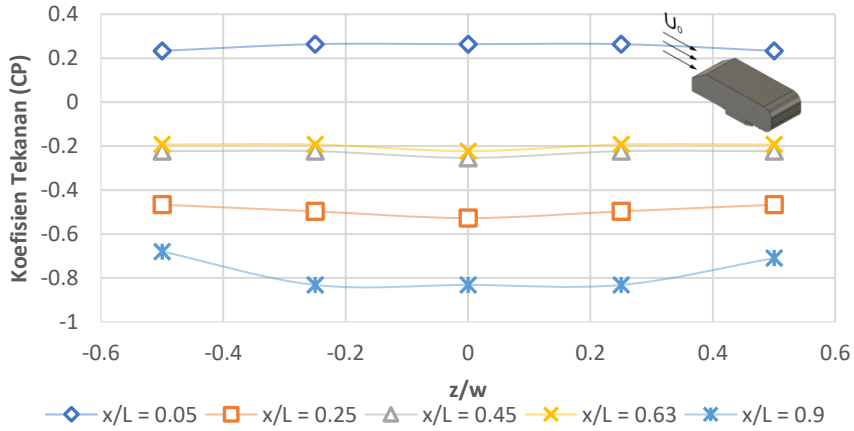


b. Kecepatan *Upstream* U_{02} = 13.9 m/s

- Nilai koefisien tekanan pada bagian atas model uji dengan *Side skirt* pada kecepatan *Upstream* 16.7 m/s

Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
16.7	x/L = 0.05	0.233	0.264	0.264	0.264	0.233
	x/L = 0.25	-0.467	-0.497	-0.528	-0.497	-0.467
	x/L = 0.45	-0.223	-0.223	-0.254	-0.223	-0.223
	x/L = 0.63	-0.193	-0.193	-0.223	-0.193	-0.193
	x/L = 0.9	-0.680	-0.832	-0.862	-0.832	-0.710

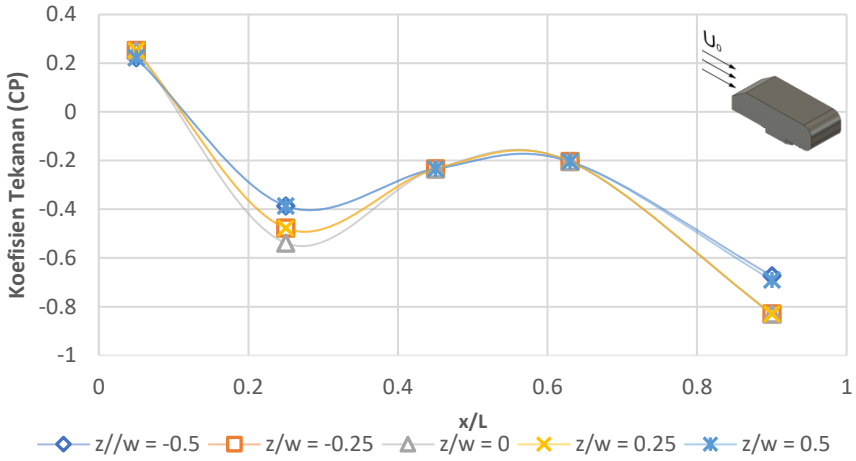


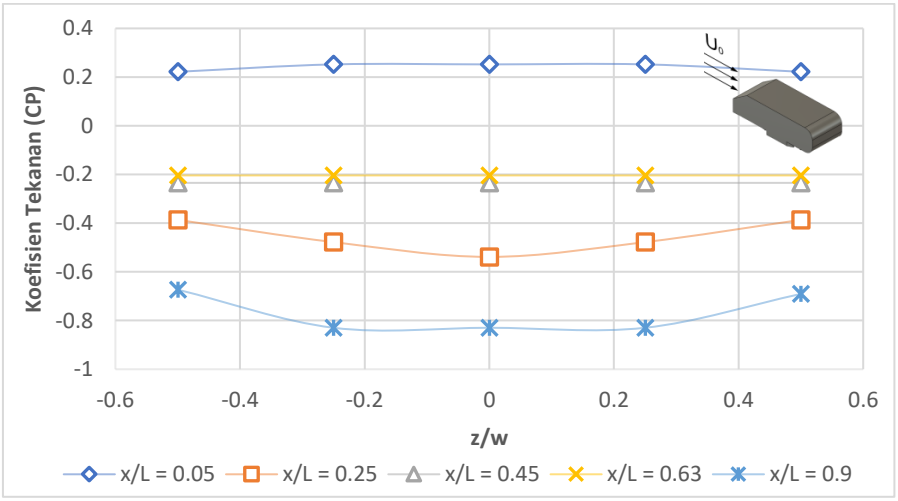


c. Kecepatan *Upstream* U_{03} = 16.7 m/s

- Nilai koefisien tekanan pada bagian atas model uji dengan *Side skirt* pada kecepatan *Upstream* 19.4 m/s

Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
19.4	x/L = 0.05	0.222	0.252	0.252	0.252	0.222
	x/L = 0.25	-0.386	-0.478	-0.538	-0.478	-0.386
	x/L = 0.45	-0.234	-0.234	-0.234	-0.234	-0.234
	x/L = 0.63	-0.204	-0.204	-0.204	-0.204	-0.204
	x/L = 0.9	-0.630	-0.830	-0.873	-0.830	-0.721

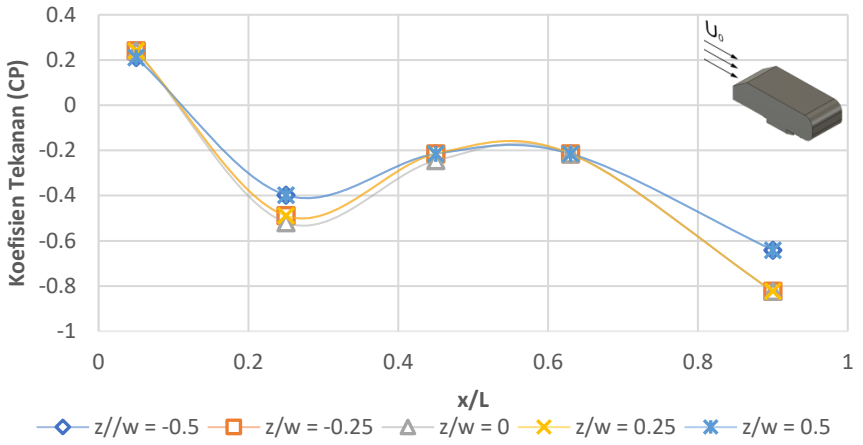


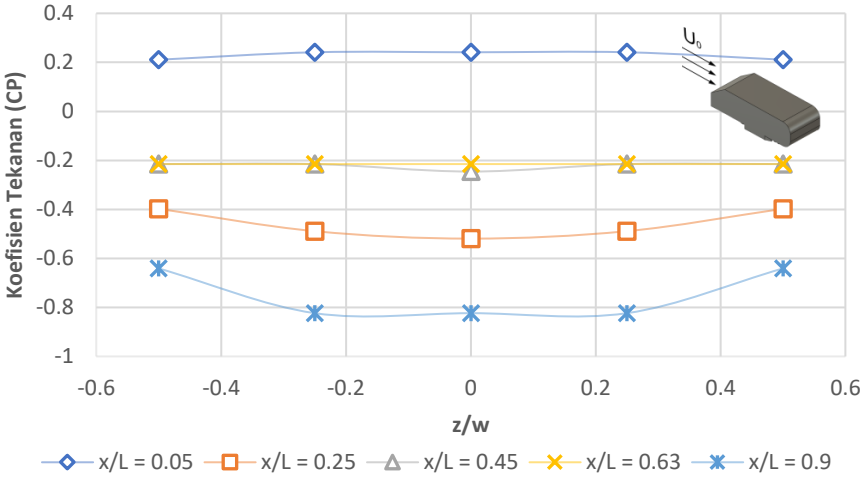


d. Kecepatan *Upstream* U_{04} = 19.4 m/s

- Nilai koefisien tekanan pada bagian atas model uji dengan *Side skirt* pada kecepatan *Upstream* 22.2 m/s

Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
22.2	x/L = 0.05	0.211	0.241	0.241	0.241	0.211
	x/L = 0.25	-0.398	-0.489	-0.519	-0.489	-0.398
	x/L = 0.45	-0.215	-0.215	-0.246	-0.215	-0.215
	x/L = 0.63	-0.215	-0.215	-0.215	-0.215	-0.215
	x/L = 0.9	-0.641	-0.824	-0.884	-0.854	-0.641



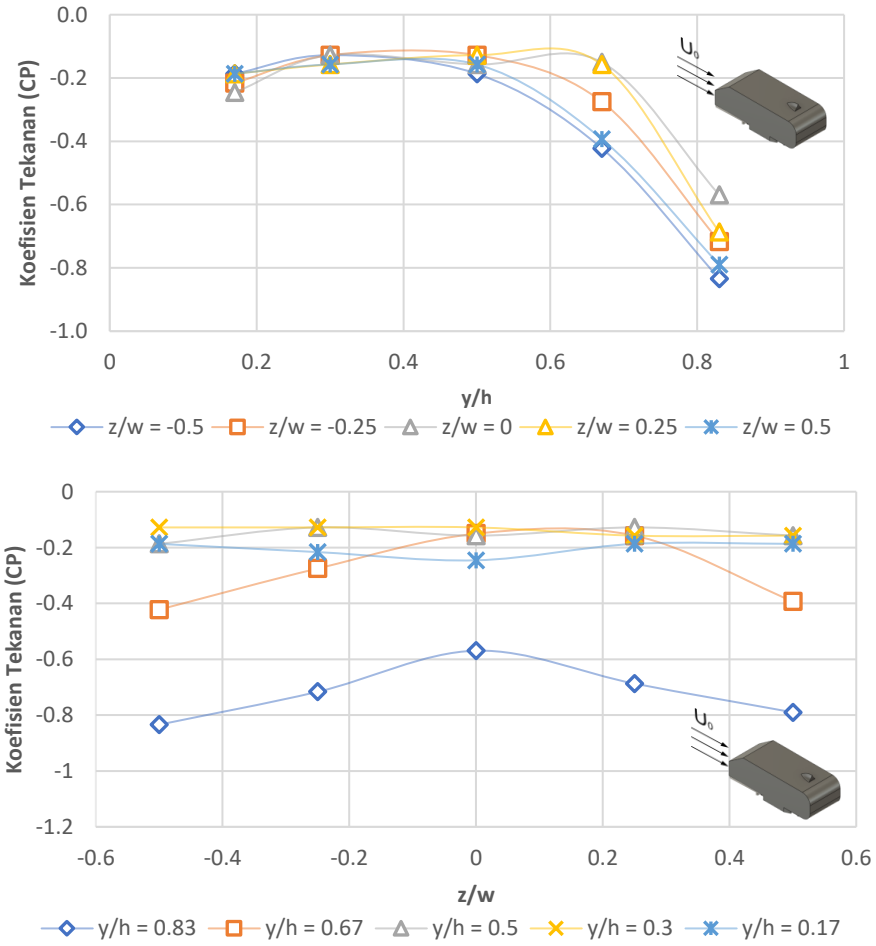


e. Kecepatan *Upstream* U_{05} = 22.2 m/s

Lampiran 3. Koefisien Tekanan (C_P) dengan *Fin* 1 dan *Side skirt*

- Nilai koefisien tekanan pada bagian belakang model uji dengan *Fin* 1 dan *Side skirt* pada kecepatan *Upstream* 11.1 m/s

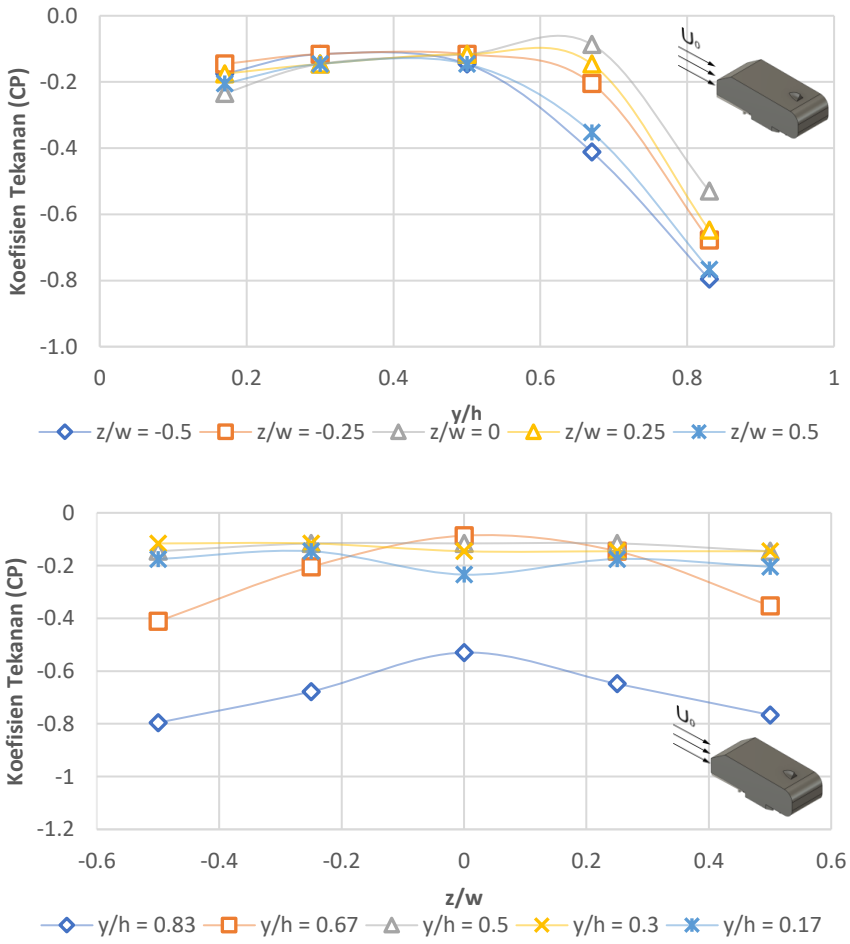
Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
11.1	y/h = 0.83	-0.834	-0.716	-0.569	-0.687	-0.922
	y/h = 0.67	-0.422	-0.275	-0.150	-0.157	-0.393
	y/h = 0.5	-0.187	-0.128	-0.157	-0.128	-0.157
	y/h = 0.3	-0.128	-0.128	-0.128	-0.157	-0.157
	y/h = 0.17	-0.187	-0.216	-0.246	-0.187	-0.187



a. Kecepatan *Upstream* U_{01} = 11.1 m/s

- Nilai koefisien tekanan pada bagian belakang model uji dengan *Fin* 1 dan *Side skirt* pada kecepatan *Upstream* 13.9 m/s

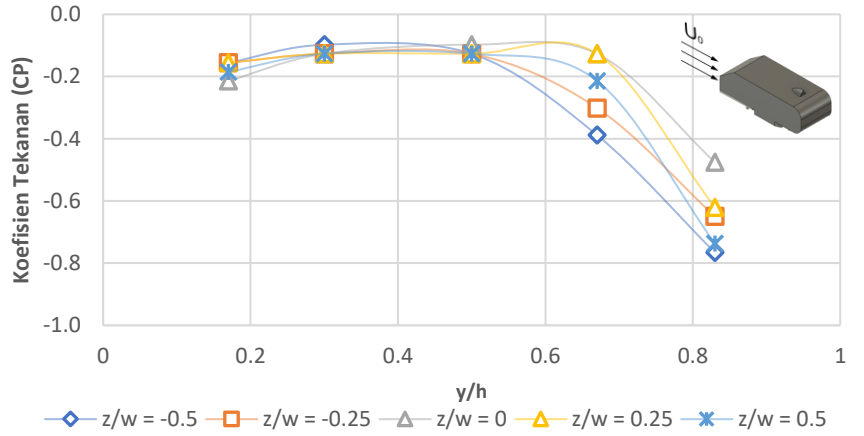
Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
13.9	y/h = 0.83	-0.796	-0.678	-0.530	-0.648	-0.766
	y/h = 0.67	-0.412	-0.205	-0.087	-0.146	-0.352
	y/h = 0.5	-0.146	-0.116	-0.116	-0.116	-0.146
	y/h = 0.3	-0.116	-0.116	-0.146	-0.146	-0.146
	y/h = 0.17	-0.175	-0.146	-0.234	-0.175	-0.205

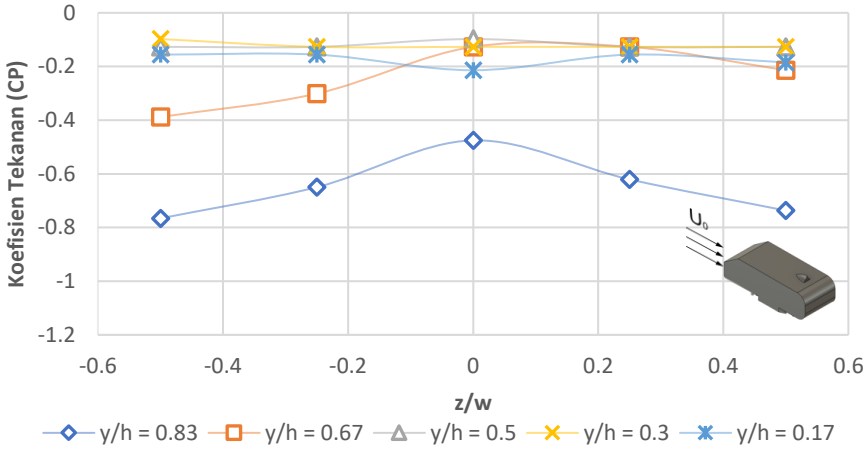


b. Kecepatan *Upstream* U_{02} = 13.9 m/s

- Nilai koefisien tekanan pada bagian belakang model uji dengan *Fin* 1 dan *Side skirt* pada kecepatan *Upstream* 16.7 m/s

Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
16.7	y/h = 0.83	-0.766	-0.650	-0.475	-0.621	-0.737
	y/h = 0.67	-0.388	-0.301	-0.127	-0.127	-0.214
	y/h = 0.5	-0.127	-0.127	-0.098	-0.127	-0.127
	y/h = 0.3	-0.098	-0.127	-0.127	-0.127	-0.127
	y/h = 0.17	-0.156	-0.156	-0.214	-0.156	-0.185

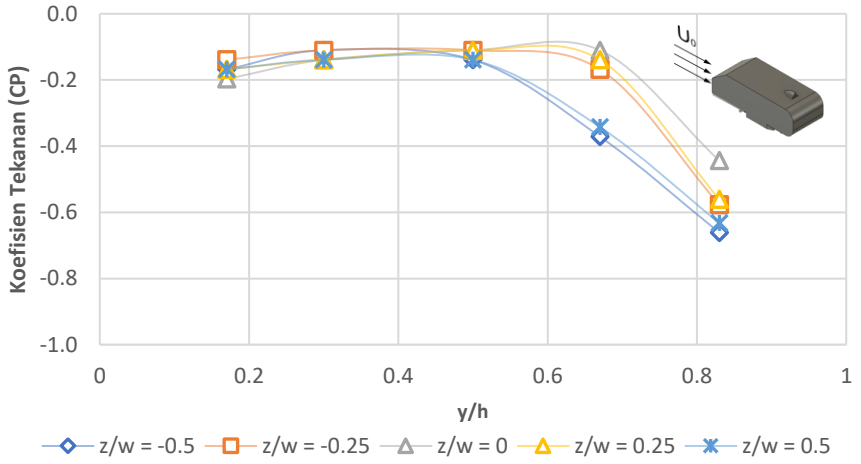


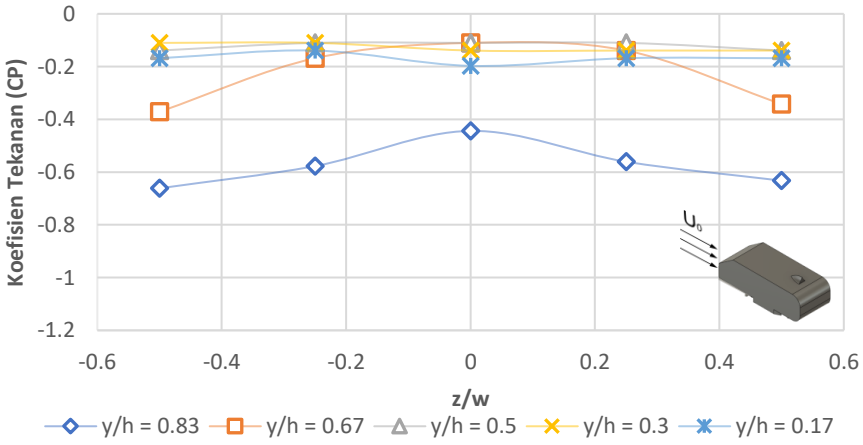


c. Kecepatan *Upstream* U_{03} = 16.7 m/s

- Nilai koefisien tekanan pada bagian belakang model uji dengan *Fin* 1 dan *Side skirt* pada kecepatan *Upstream* 19.4 m/s

Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
19.4	y/h = 0.83	-0.661	-0.577	-0.444	-0.561	-0.632
	y/h = 0.67	-0.371	-0.168	-0.110	-0.139	-0.342
	y/h = 0.5	-0.139	-0.110	-0.110	-0.110	-0.139
	y/h = 0.3	-0.110	-0.110	-0.139	-0.139	-0.139
	y/h = 0.17	-0.168	-0.139	-0.197	-0.168	-0.168

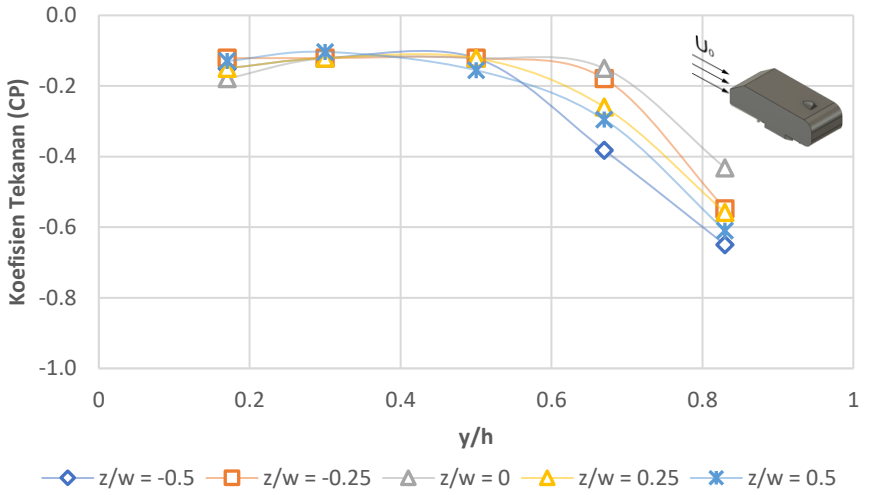


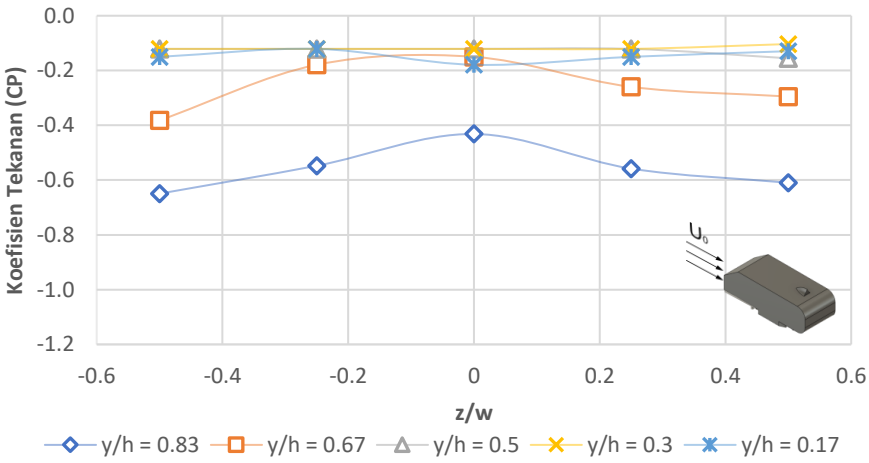


d. Kecepatan *Upstream* U_{04} = 19.4 m/s

- Nilai koefisien tekanan pada bagian belakang model uji dengan *Fin* 1 dan *Side skirt* pada kecepatan *Upstream* 22.2 m/s

Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
22.2	y/h = 0.83	-0.650	-0.548	-0.432	-0.558	-0.610
	y/h = 0.67	-0.382	-0.179	-0.150	-0.260	-0.295
	y/h = 0.5	-0.121	-0.121	-0.121	-0.121	-0.155
	y/h = 0.3	-0.121	-0.121	-0.121	-0.121	-0.103
	y/h = 0.17	-0.150	-0.121	-0.179	-0.150	-0.129

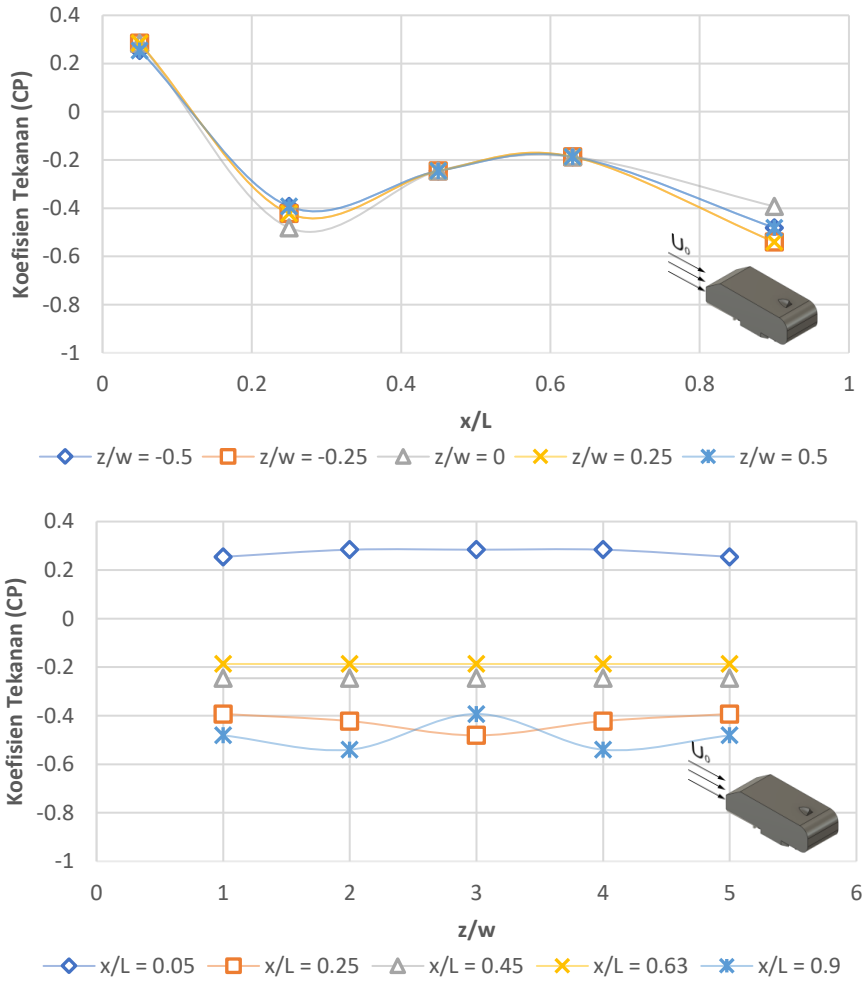




e. Kecepatan *Upstream* U_{05} = 22.2 m/s

- Nilai koefisien tekanan pada bagian atas model uji dengan *Fin* 1 dan *Side skirt* pada kecepatan *Upstream* 11.1 m/s

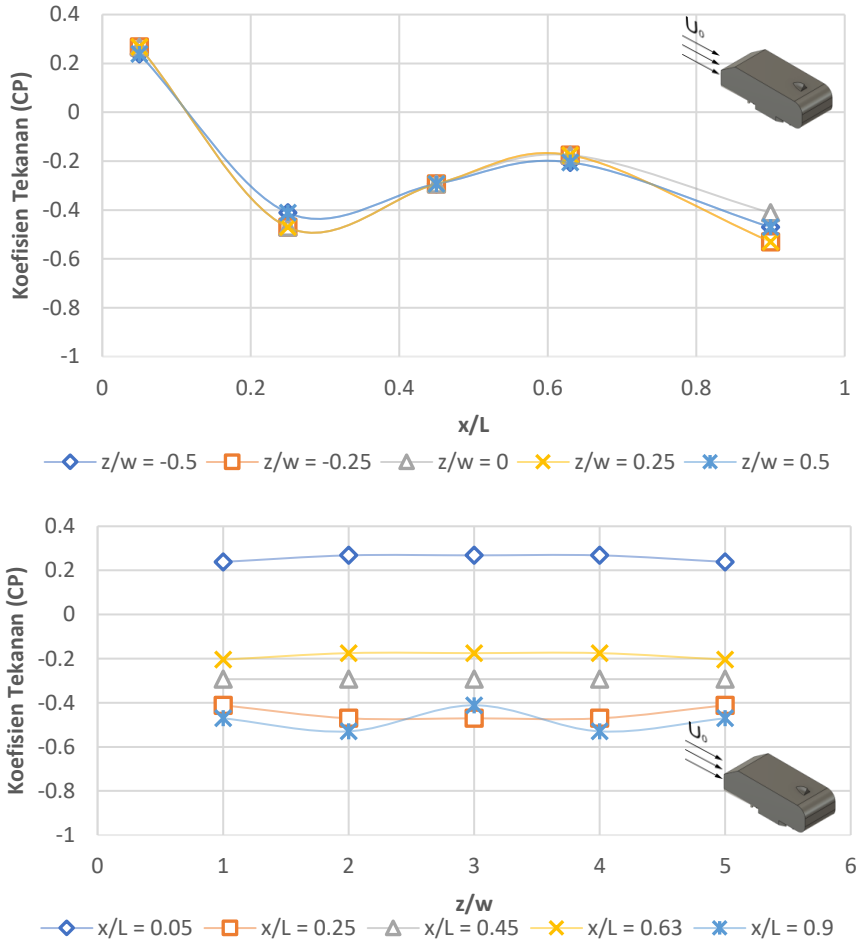
Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
11.1	x/L = 0.05	0.255	0.284	0.284	0.284	0.255
	x/L = 0.25	-0.393	-0.422	-0.481	-0.422	-0.393
	x/L = 0.45	-0.246	-0.246	-0.246	-0.246	-0.246
	x/L = 0.63	-0.187	-0.187	-0.187	-0.187	-0.187
	x/L = 0.9	-0.481	-0.540	-0.452	-0.540	-0.481



a. Kecepatan *Upstream* U_{01} = 11.1 m/s

- Nilai koefisien tekanan pada bagian atas model uji dengan *Fin* 1 dan *Side skirt* pada kecepatan *Upstream* 13.9 m/s

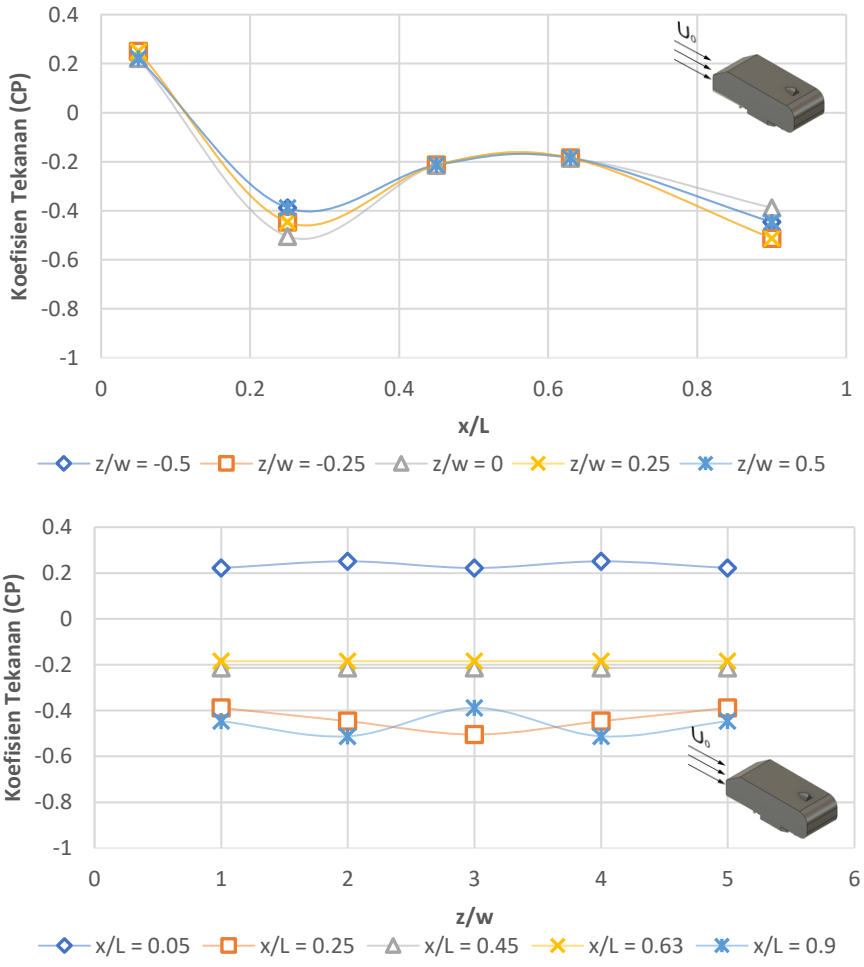
Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
13.9	x/L = 0.05	0.239	0.268	0.268	0.268	0.239
	x/L = 0.25	-0.412	-0.471	-0.471	-0.471	-0.412
	x/L = 0.45	-0.293	-0.293	-0.293	-0.293	-0.293
	x/L = 0.63	-0.205	-0.175	-0.175	-0.175	-0.205
	x/L = 0.9	-0.471	-0.530	-0.412	-0.530	-0.471



b. Kecepatan *Upstream* U_{02} = 13.9 m/s

- Nilai koefisien tekanan pada bagian atas model uji dengan *Fin* 1 dan *Side skirt* pada kecepatan *Upstream* 16.7 m/s

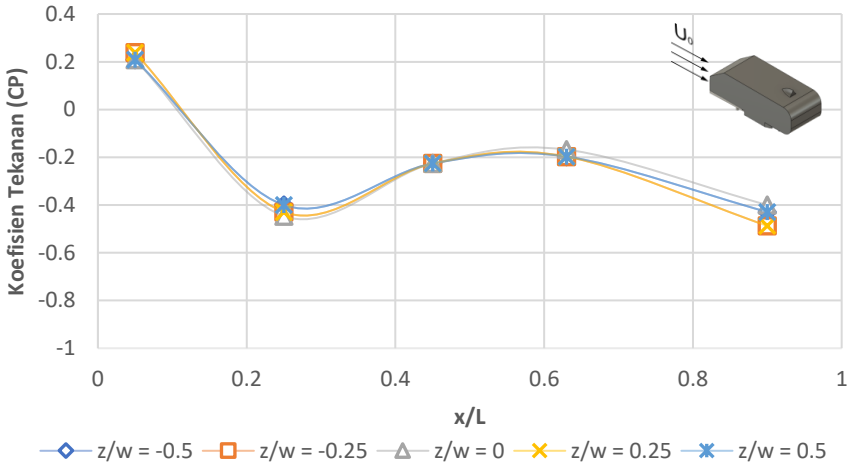
Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
16.7	x/L = 0.05	0.222	0.251	0.222	0.251	0.222
	x/L = 0.25	-0.388	-0.504	-0.504	-0.504	-0.388
	x/L = 0.45	-0.214	-0.214	-0.214	-0.214	-0.214
	x/L = 0.63	-0.185	-0.185	-0.185	-0.185	-0.185
	x/L = 0.9	-0.446	-0.512	-0.388	-0.512	-0.446

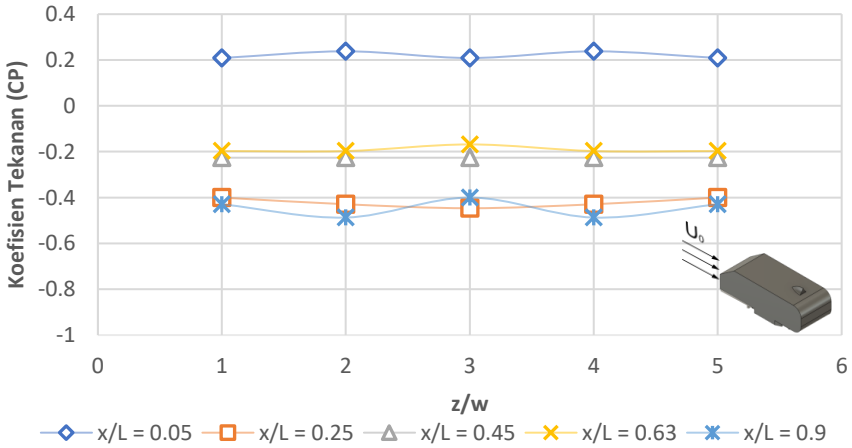


c. Kecepatan *Upstream* U_{03} = 16.7 m/s

- Nilai koefisien tekanan pada bagian atas model uji dengan *Fin* 1 dan *Side skirt* pada kecepatan *Upstream* 19.4 m/s

Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
19.4	x/L = 0.05	0.209	0.238	0.209	0.238	0.209
	x/L = 0.25	-0.400	-0.429	-0.458	-0.429	-0.400
	x/L = 0.45	-0.226	-0.226	-0.226	-0.226	-0.226
	x/L = 0.63	-0.197	-0.197	-0.168	-0.197	-0.197
	x/L = 0.9	-0.429	-0.487	-0.400	-0.487	-0.429

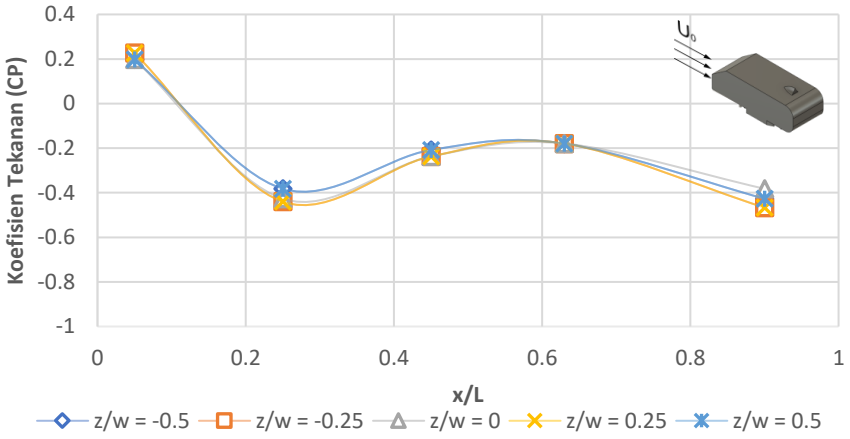


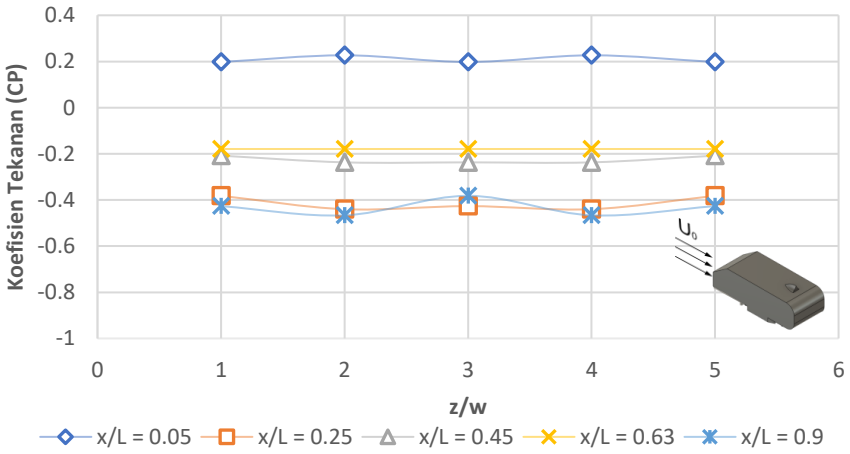


d. Kecepatan *Upstream* U_{04} = 19.4 m/s

- Nilai koefisien tekanan pada bagian atas model uji dengan *Fin* 1 dan *Side skirt* pada kecepatan *Upstream* 22.2 m/s

Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
22.2	x/L = 0.05	0.198	0.227	0.198	0.227	0.198
	x/L = 0.25	-0.382	-0.467	-0.440	-0.467	-0.382
	x/L = 0.45	-0.208	-0.237	-0.237	-0.237	-0.208
	x/L = 0.63	-0.179	-0.179	-0.179	-0.179	-0.179
	x/L = 0.9	-0.427	-0.440	-0.411	-0.440	-0.427



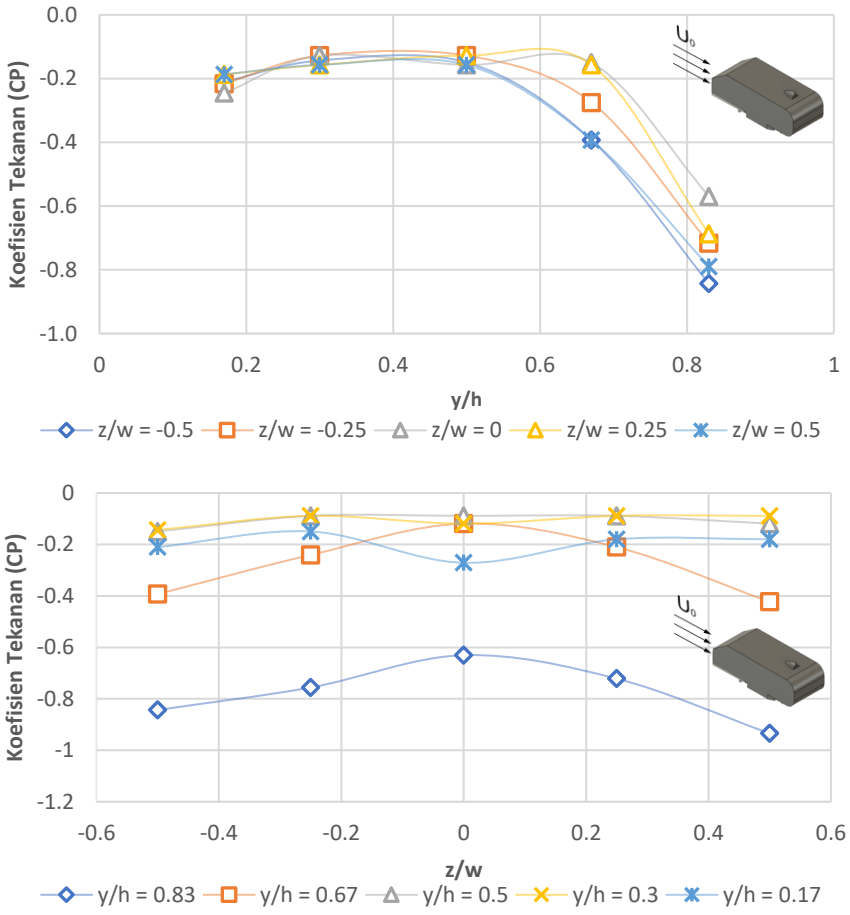


e. Kecepatan *Upstream* U_{05} = 22.2 m/s

Lampiran 4. Koefisien Tekanan (C_P) dengan *Fin* 2 dan *Side skirt*

- Nilai koefisien tekanan pada bagian belakang model uji dengan *Fin* 2 dan *Side skirt* pada kecepatan *Upstream* 11.1 m/s

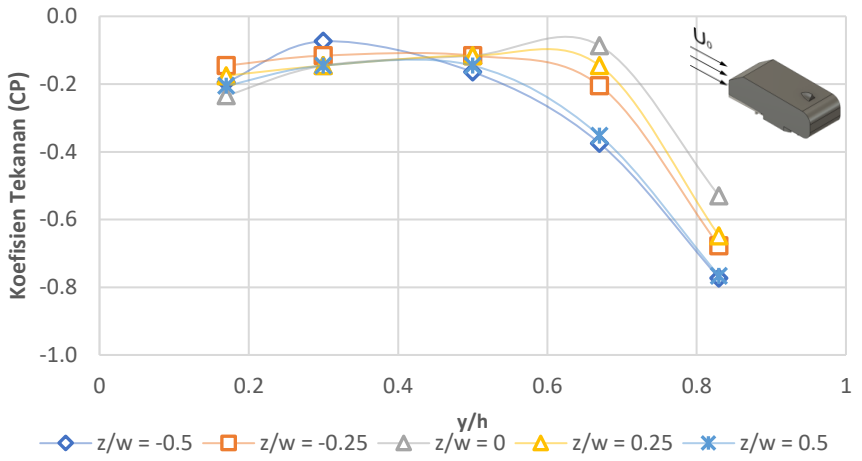
Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
11.1	y/h = 0.83	-0.843	-0.756	-0.630	-0.722	-0.934
	y/h = 0.67	-0.393	-0.241	-0.119	-0.210	-0.423
	y/h = 0.5	-0.150	-0.089	-0.089	-0.089	-0.119
	y/h = 0.3	-0.143	-0.089	-0.119	-0.089	-0.089
	y/h = 0.17	-0.210	-0.150	-0.271	-0.180	-0.180

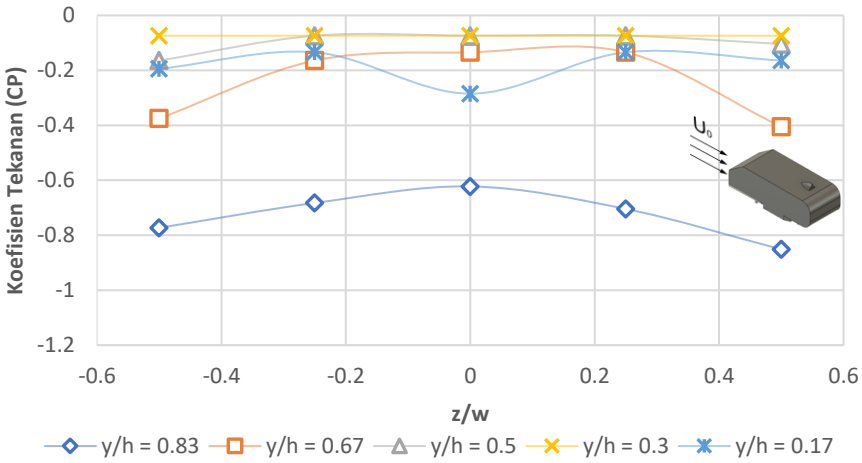


a. Kecepatan *Upstream* U_{01} = 11.1 m/s

- Nilai koefisien tekanan pada bagian belakang model uji dengan *Fin* 2 dan *Side skirt* pada kecepatan *Upstream* 13.9 m/s

Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
13.9	y/h = 0.83	-0.773	-0.683	-0.622	-0.704	-0.851
	y/h = 0.67	-0.375	-0.164	-0.134	-0.134	-0.405
	y/h = 0.5	-0.164	-0.074	-0.074	-0.074	-0.104
	y/h = 0.3	-0.074	-0.074	-0.074	-0.074	-0.074
	y/h = 0.17	-0.194	-0.134	-0.285	-0.134	-0.164

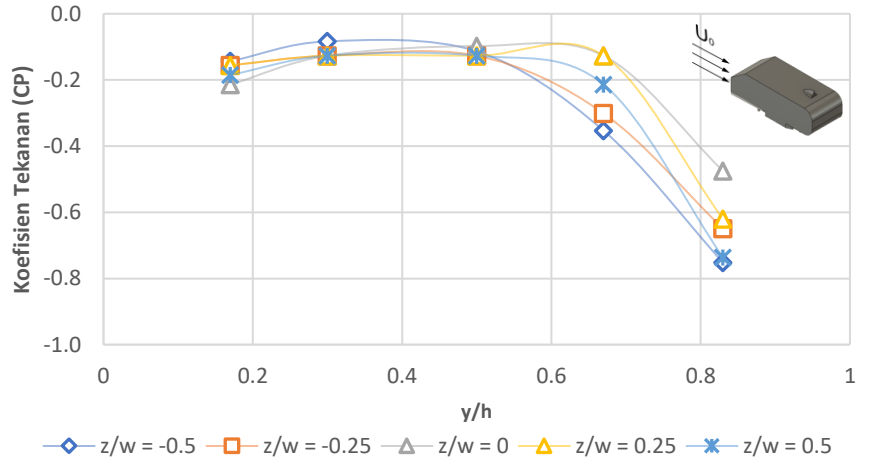


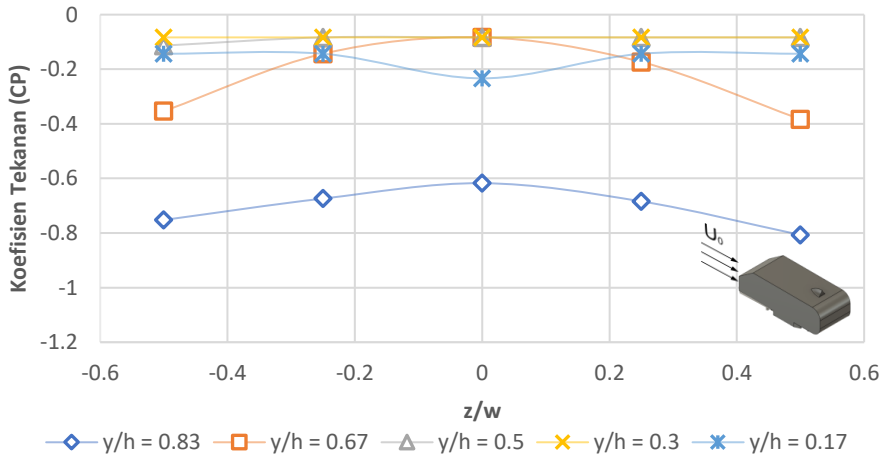


b. Kecepatan *Upstream* U_{02} = 13.9 m/s

- Nilai koefisien tekanan pada bagian belakang model uji dengan *Fin* 2 dan *Side skirt* pada kecepatan *Upstream* 16.7 m/s

Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
16.7	y/h = 0.83	-0.752	-0.674	-0.617	-0.684	-0.807
	y/h = 0.67	-0.353	-0.143	-0.083	-0.173	-0.383
	y/h = 0.5	-0.113	-0.083	-0.083	-0.083	-0.083
	y/h = 0.3	-0.083	-0.083	-0.083	-0.083	-0.083
	y/h = 0.17	-0.143	-0.143	-0.233	-0.143	-0.143

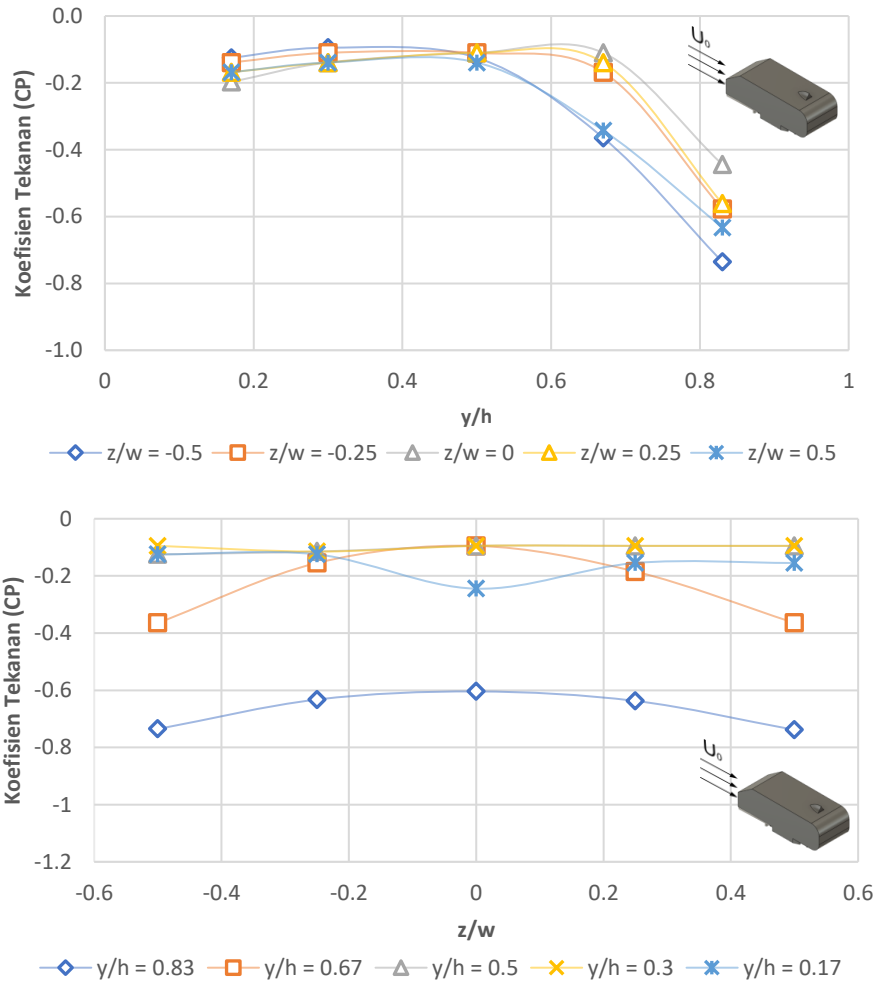




c. Kecepatan *Upstream* U_{03} = 16.7 m/s

- Nilai koefisien tekanan pada bagian belakang model uji dengan *Fin* 2 dan *Side skirt* pada kecepatan *Upstream* 19.4 m/s

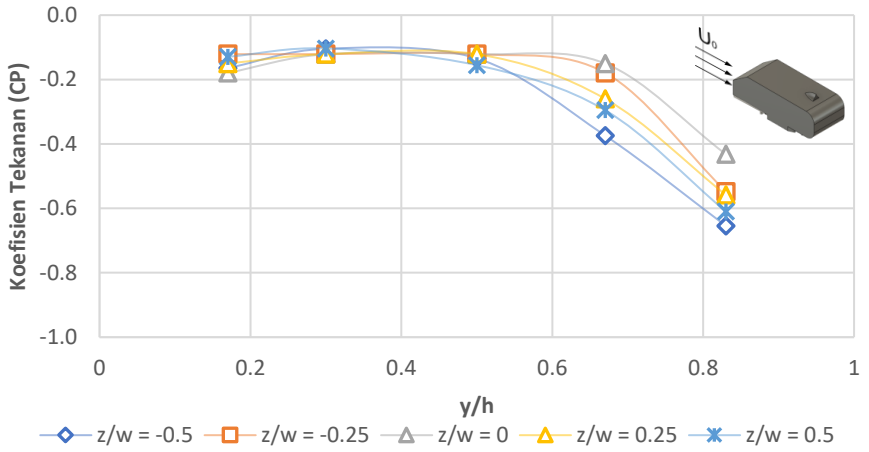
Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
19.4	y/h = 0.83	-0.735	-0.632	-0.604	-0.637	-0.738
	y/h = 0.67	-0.364	-0.155	-0.095	-0.185	-0.364
	y/h = 0.5	-0.125	-0.115	-0.095	-0.095	-0.095
	y/h = 0.3	-0.095	-0.115	-0.095	-0.095	-0.095
	y/h = 0.17	-0.125	-0.125	-0.245	-0.155	-0.155

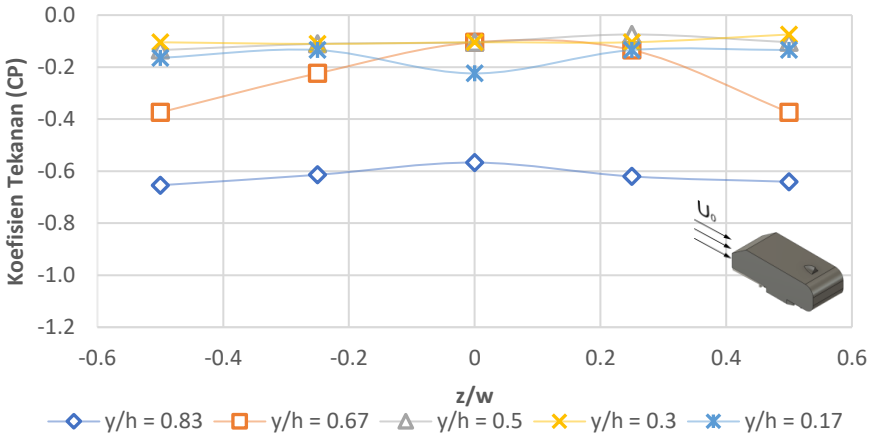


d. Kecepatan *Upstream* U_{04} = 19.4 m/s

- Nilai koefisien tekanan pada bagian belakang model uji dengan *Fin* 2 dan *Side skirt* pada kecepatan *Upstream* 22.2 m/s

Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
22.2	y/h = 0.83	-0.654	-0.614	-0.567	-0.620	-0.641
	y/h = 0.67	-0.374	-0.224	-0.104	-0.134	-0.374
	y/h = 0.5	-0.134	-0.111	-0.104	-0.074	-0.104
	y/h = 0.3	-0.104	-0.111	-0.104	-0.104	-0.074
	y/h = 0.17	-0.164	-0.134	-0.224	-0.134	-0.134

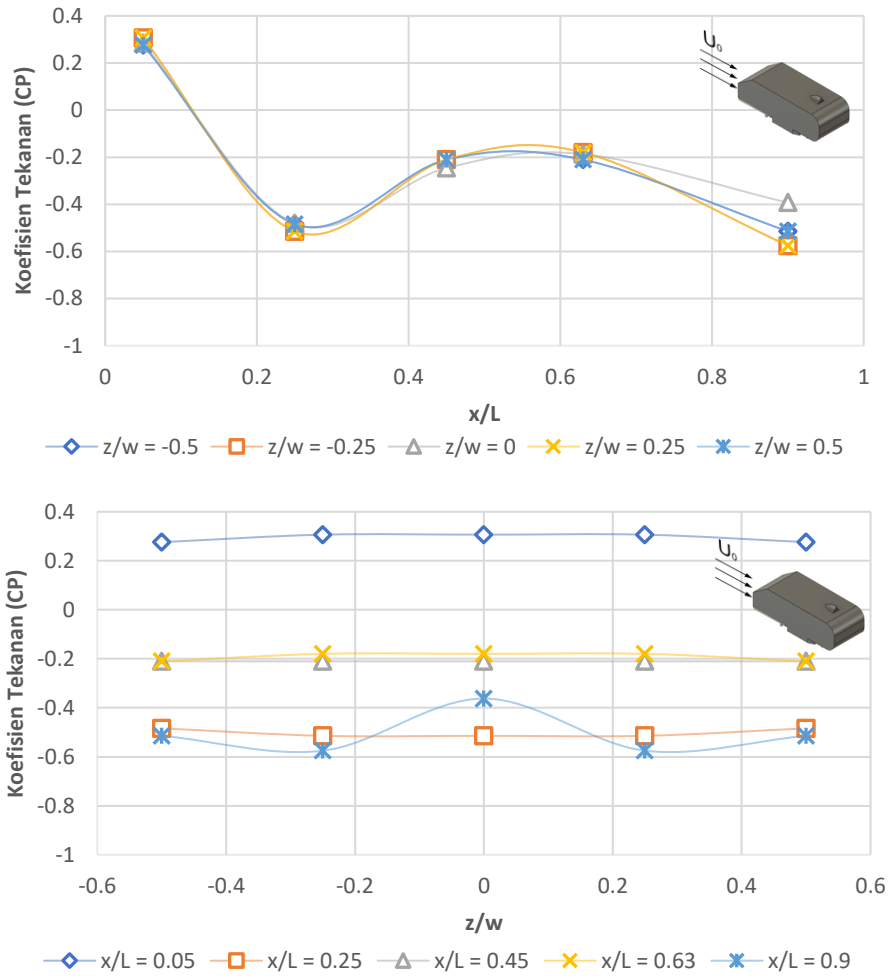




e. Kecepatan *Upstream* U_{05} = 22.2 m/s

- Nilai koefisien tekanan pada bagian atas model uji dengan *Fin* 2 dan *Side skirt* pada kecepatan *Upstream* 11.1 m/s

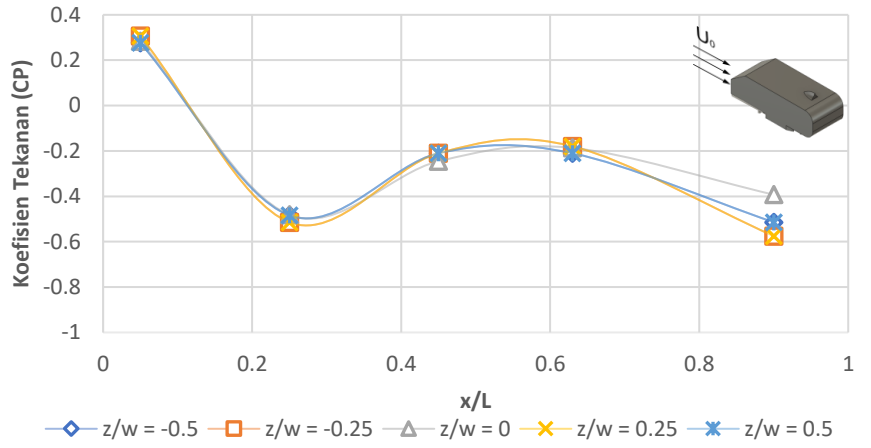
Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
11.1	x/L = 0.05	0.276	0.306	0.306	0.306	0.276
	x/L = 0.25	-0.484	-0.514	-0.514	-0.514	-0.484
	x/L = 0.45	-0.210	-0.210	-0.210	-0.210	-0.210
	x/L = 0.63	-0.210	-0.180	-0.180	-0.180	-0.210
	x/L = 0.9	-0.514	-0.575	-0.362	-0.575	-0.514

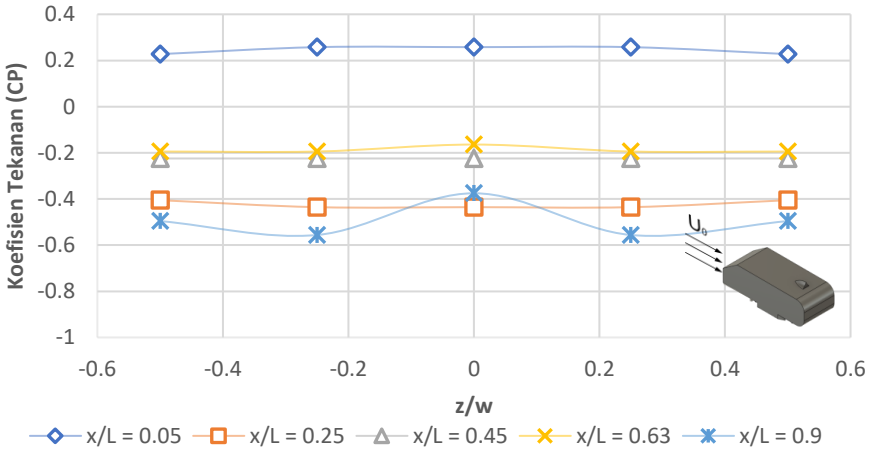


a. Kecepatan *Upstream* U_{01} = 11.1 m/s

- Nilai koefisien tekanan pada bagian atas model uji dengan *Fin* 2 dan *Side skirt* pada kecepatan *Upstream* 13.9 m/s

Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
13.9	x/L = 0.05	0.228	0.258	0.258	0.258	0.228
	x/L = 0.25	-0.405	-0.436	-0.436	-0.436	-0.405
	x/L = 0.45	-0.225	-0.225	-0.225	-0.225	-0.225
	x/L = 0.63	-0.194	-0.194	-0.164	-0.194	-0.194
	x/L = 0.9	-0.496	-0.556	-0.375	-0.556	-0.496

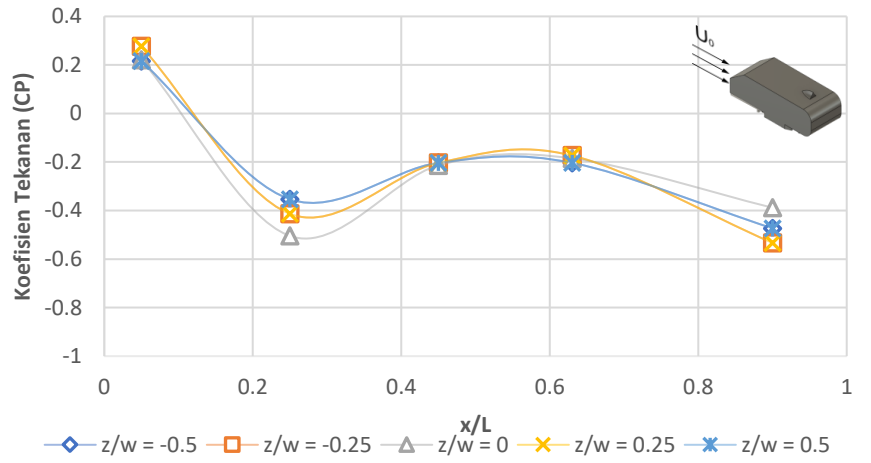


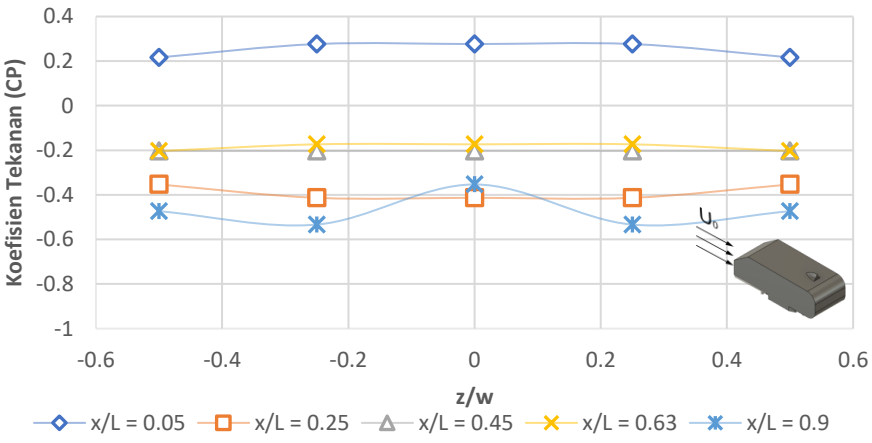


b. Kecepatan *Upstream* U_{02} = 13.9 m/s

- Nilai koefisien tekanan pada bagian atas model uji dengan *Fin* 2 dan *Side skirt* pada kecepatan *Upstream* 16.7 m/s

Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
16.7	x/L = 0.05	0.217	0.277	0.277	0.277	0.217
	x/L = 0.25	-0.353	-0.413	-0.413	-0.413	-0.353
	x/L = 0.45	-0.203	-0.203	-0.203	-0.203	-0.203
	x/L = 0.63	-0.203	-0.173	-0.173	-0.173	-0.203
	x/L = 0.9	-0.473	-0.533	-0.353	-0.533	-0.473

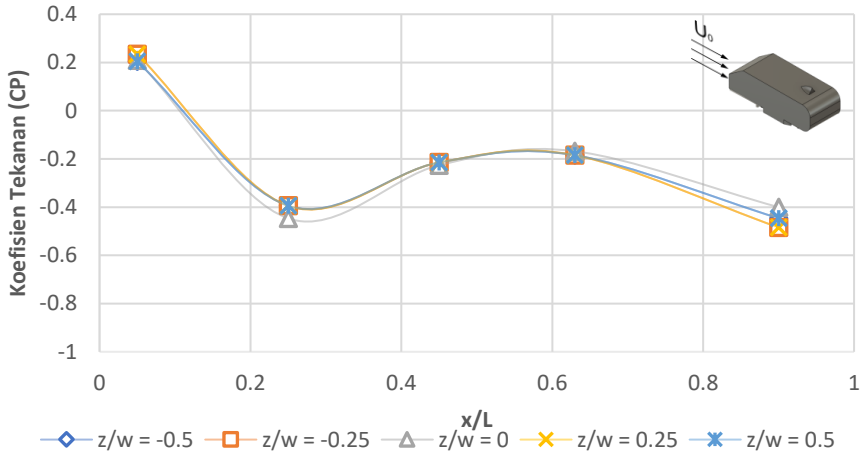


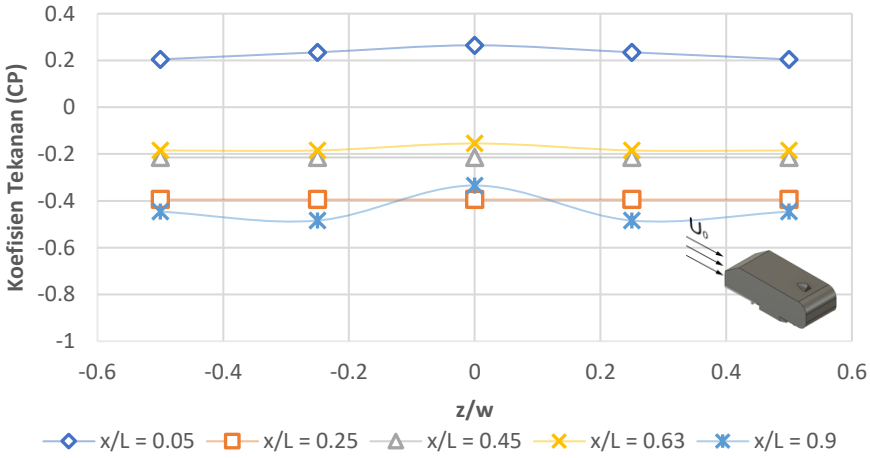


c. Kecepatan *Upstream* U_{03} = 16.7 m/s

- Nilai koefisien tekanan pada bagian atas model uji dengan *Fin* 2 dan *Side skirt* pada kecepatan *Upstream* 19.4 m/s

Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
19.4	x/L = 0.05	0.205	0.235	0.265	0.235	0.205
	x/L = 0.25	-0.394	-0.394	-0.394	-0.394	-0.394
	x/L = 0.45	-0.215	-0.215	-0.215	-0.215	-0.215
	x/L = 0.63	-0.185	-0.185	-0.155	-0.185	-0.185
	x/L = 0.9	-0.424	-0.484	-0.334	-0.484	-0.424

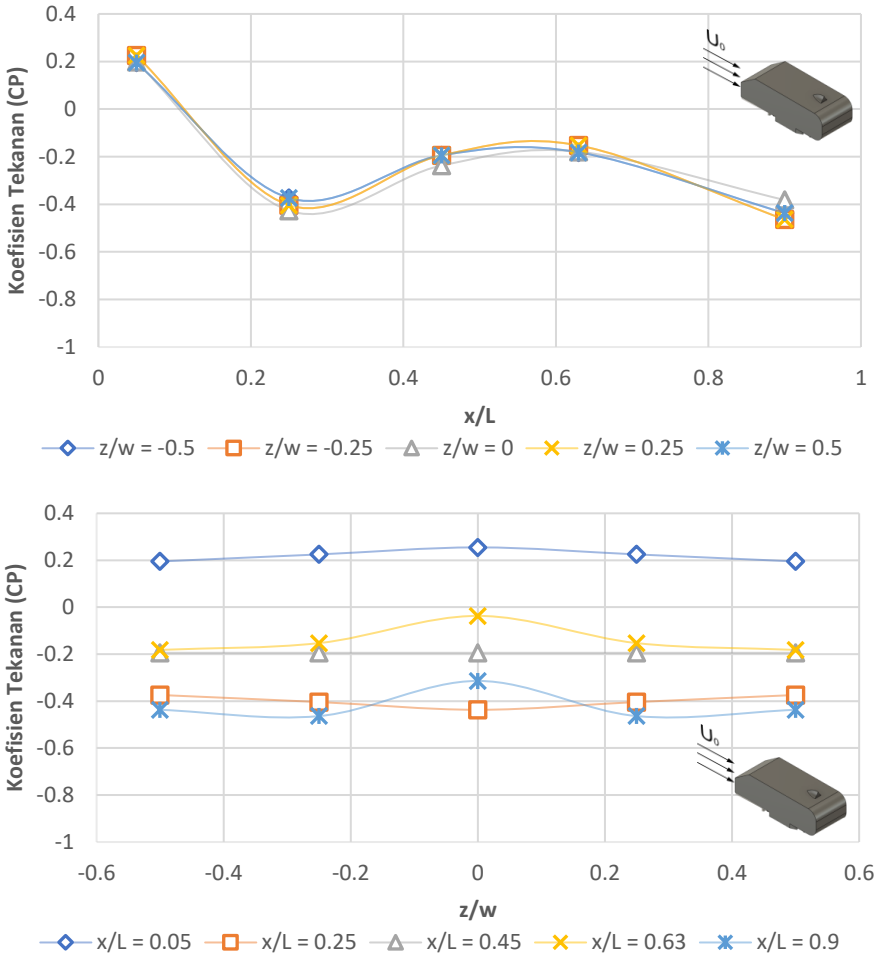




d. Kecepatan *Upstream* U_{04} = 19.4 m/s

- Nilai koefisien tekanan pada bagian atas model uji dengan *Fin* 2 dan *Side skirt* pada kecepatan *Upstream* 22.2 m/s

Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
22.2	x/L = 0.05	0.195	0.225	0.255	0.225	0.195
	x/L = 0.25	-0.374	-0.404	-0.404	-0.404	-0.374
	x/L = 0.45	-0.194	-0.194	-0.194	-0.194	-0.194
	x/L = 0.63	-0.182	-0.153	-0.037	-0.153	-0.182
	x/L = 0.9	-0.404	-0.464	-0.314	-0.464	-0.404

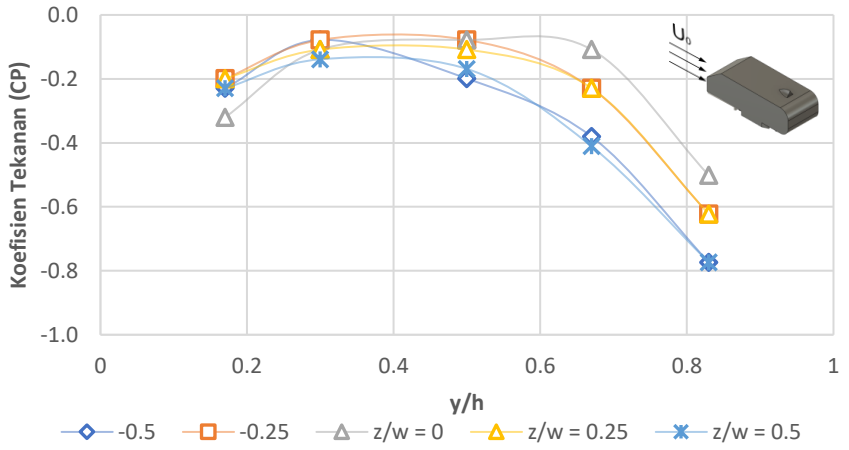


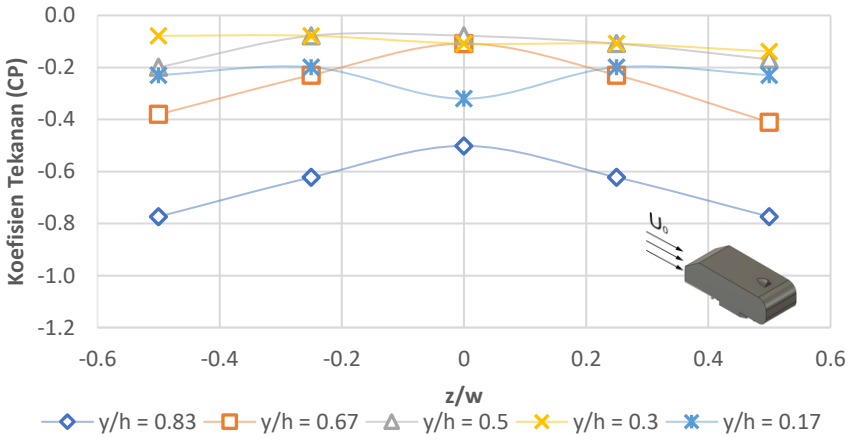
e. Kecepatan *Upstream* U_{05} = 22.2 m/s

Lampiran 5. Koefisien Tekanan (C_P) dengan *Fin* 3 dan *Side skirt*

- Nilai koefisien tekanan pada bagian belakang model uji dengan *Fin* 3 dan *Side skirt* pada kecepatan *Upstream* 11.1 m/s

Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
11.1	y/h = 0.83	-0.774	-0.623	-0.502	-0.623	-0.774
	y/h = 0.67	-0.381	-0.229	-0.108	-0.229	-0.411
	y/h = 0.5	-0.199	-0.078	-0.078	-0.108	-0.169
	y/h = 0.3	-0.078	-0.078	-0.108	-0.108	-0.139
	y/h = 0.17	-0.229	-0.199	-0.320	-0.199	-0.229

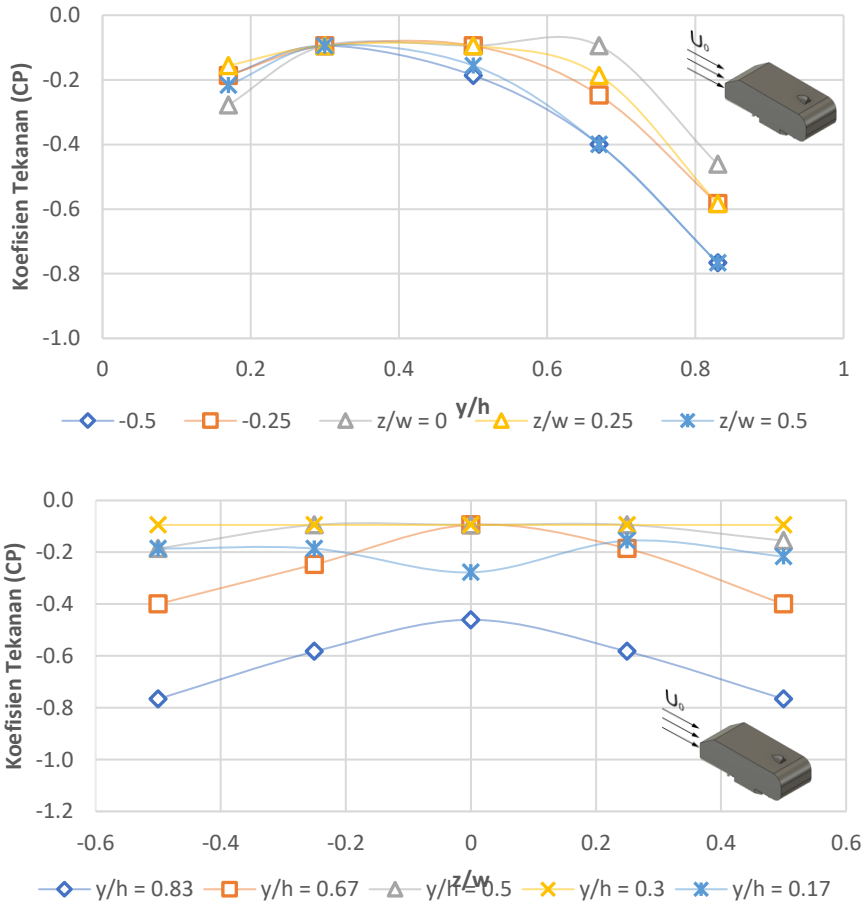




a. Kecepatan *Upstream* U_{01} = 11.1 m/s

- Nilai koefisien tekanan pada bagian belakang model uji dengan *Fin* 3 dan *Side skirt* pada kecepatan *Upstream* 13.9 m/s

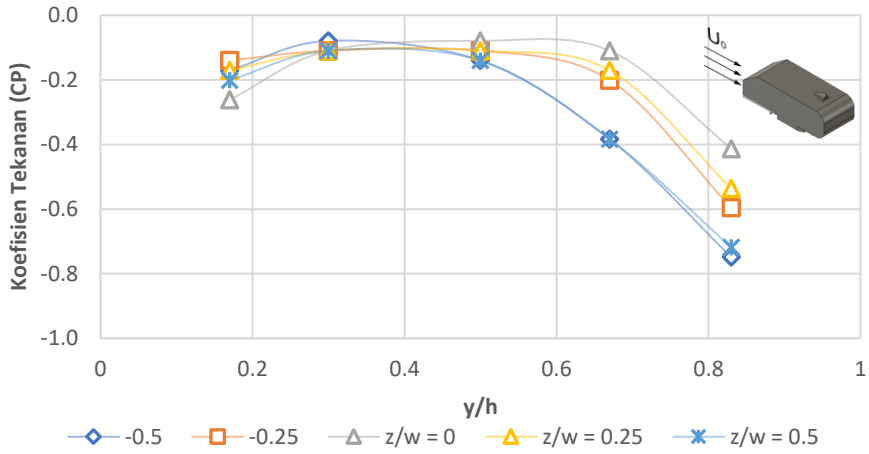
Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
13.9	y/h = 0.83	-0.766	-0.583	-0.461	-0.583	-0.766
	y/h = 0.67	-0.400	-0.247	-0.094	-0.186	-0.400
	y/h = 0.5	-0.186	-0.094	-0.094	-0.094	-0.155
	y/h = 0.3	-0.094	-0.094	-0.094	-0.094	-0.094
	y/h = 0.17	-0.186	-0.186	-0.278	-0.155	-0.217

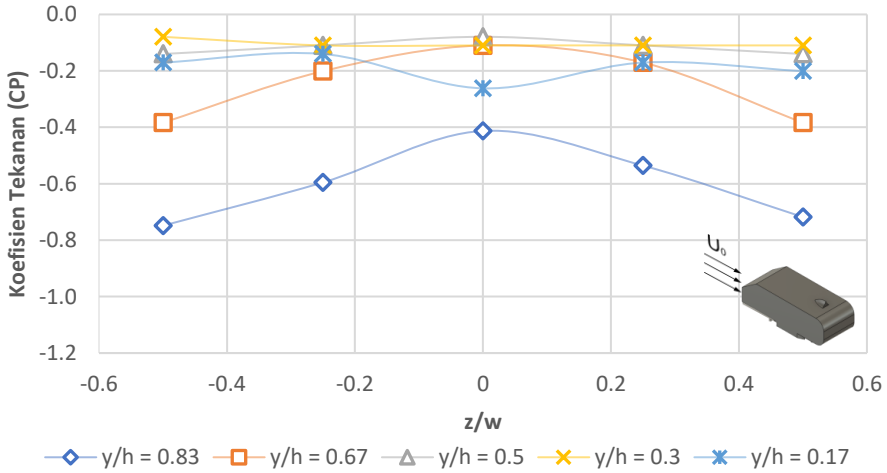


b. Kecepatan *Upstream* U_{02} = 13.9 m/s

- Nilai koefisien tekanan pada bagian belakang model uji dengan *Fin* 3 dan *Side skirt* pada kecepatan *Upstream* 16.7 m/s

Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
16.7	y/h = 0.83	-0.749	-0.566	-0.384	-0.536	-0.718
	y/h = 0.67	-0.384	-0.201	-0.110	-0.171	-0.384
	y/h = 0.5	-0.140	-0.110	-0.079	-0.110	-0.140
	y/h = 0.3	-0.079	-0.110	-0.110	-0.110	-0.110
	y/h = 0.17	-0.171	-0.140	-0.262	-0.171	-0.201

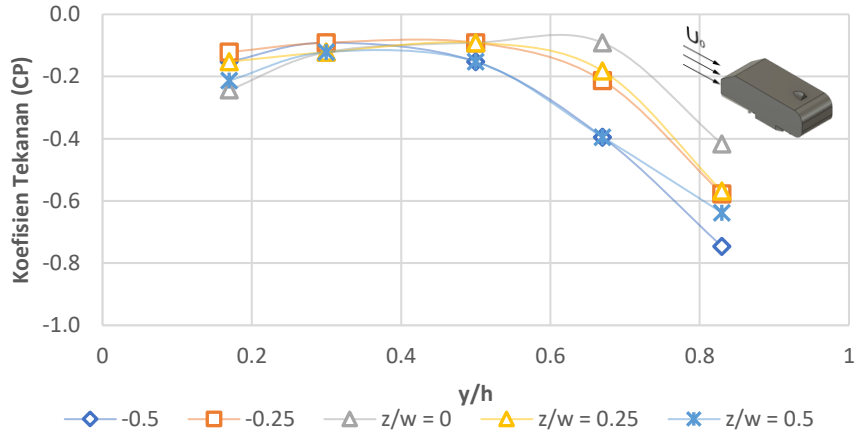


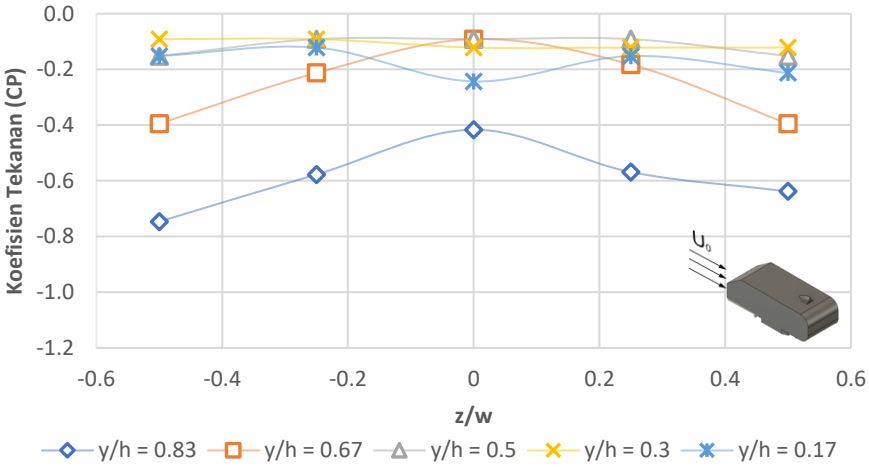


c. Kecepatan *Upstream* U_{03} = 16.7 m/s

- Nilai koefisien tekanan pada bagian belakang model uji dengan *Fin* 3 dan *Side skirt* pada kecepatan *Upstream* 19.4 m/s

Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
19.4	y/h = 0.83	-0.729	-0.577	-0.395	-0.547	-0.638
	y/h = 0.67	-0.395	-0.213	-0.091	-0.182	-0.395
	y/h = 0.5	-0.152	-0.091	-0.091	-0.091	-0.152
	y/h = 0.3	-0.091	-0.091	-0.122	-0.122	-0.122
	y/h = 0.17	-0.152	-0.122	-0.243	-0.152	-0.213

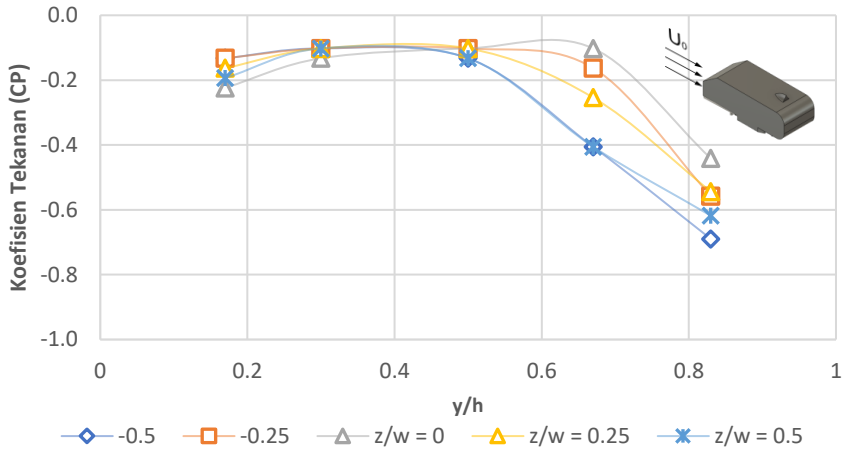


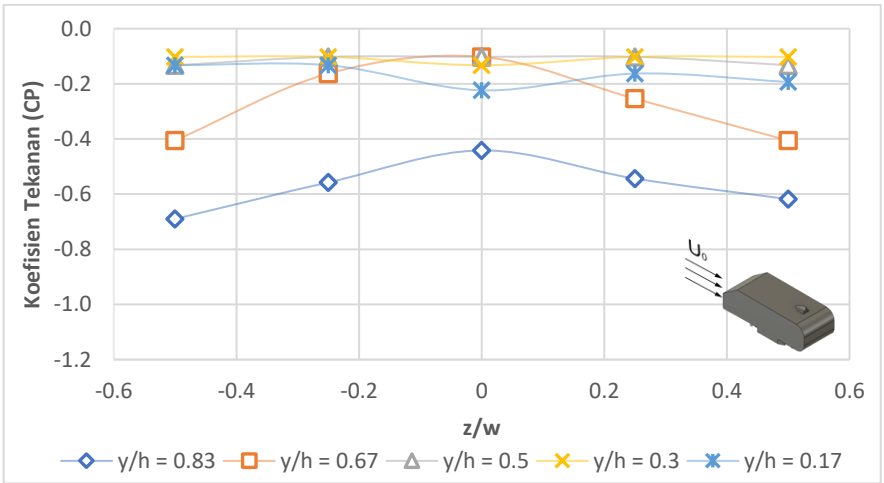


d. Kecepatan *Upstream* U_{04} = 19.4 m/s

- Nilai koefisien tekanan pada bagian belakang model uji dengan *Fin* 3 dan *Side skirt* pada kecepatan *Upstream* 22.2 m/s

Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
22.2	y/h = 0.83	-0.740	-0.557	-0.375	-0.527	-0.618
	y/h = 0.67	-0.406	-0.163	-0.102	-0.254	-0.406
	y/h = 0.5	-0.133	-0.102	-0.102	-0.102	-0.133
	y/h = 0.3	-0.102	-0.102	-0.133	-0.102	-0.102
	y/h = 0.17	-0.133	-0.133	-0.224	-0.163	-0.193

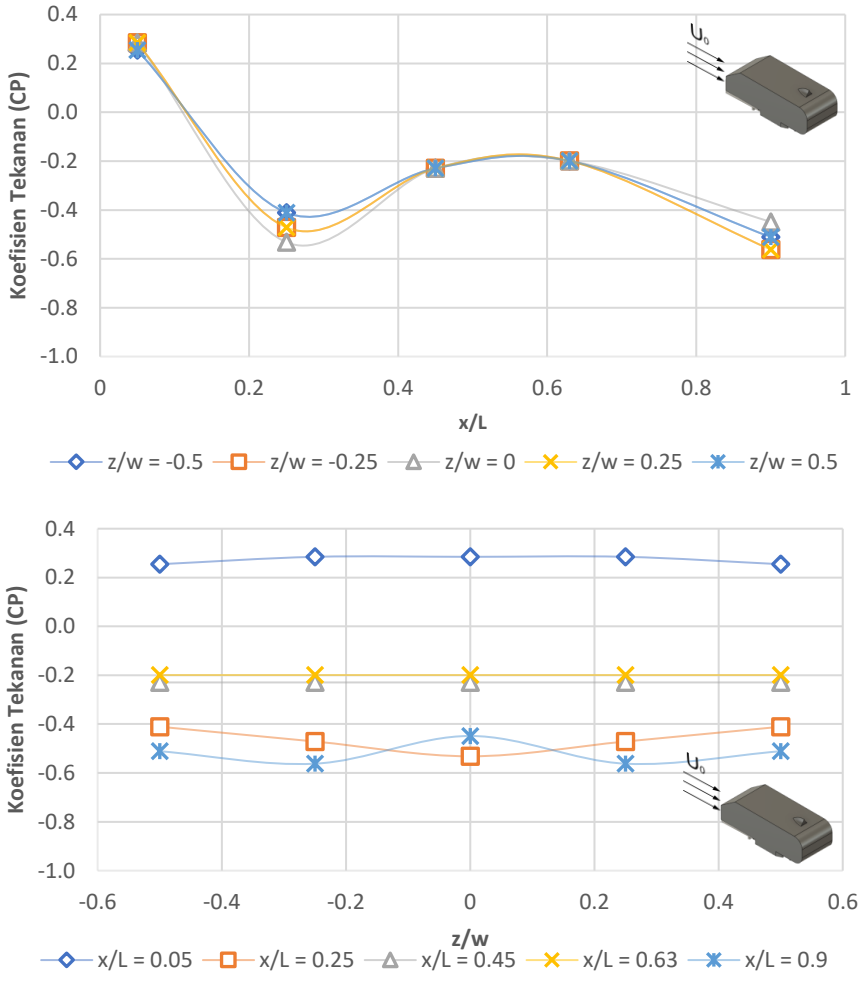




e. Kecepatan *Upstream* U_{05} = 22.2 m/s

- Nilai koefisien tekanan pada bagian atas model uji dengan *Fin* 3 dan *Side skirt* pada kecepatan *Upstream* 11.1 m/s

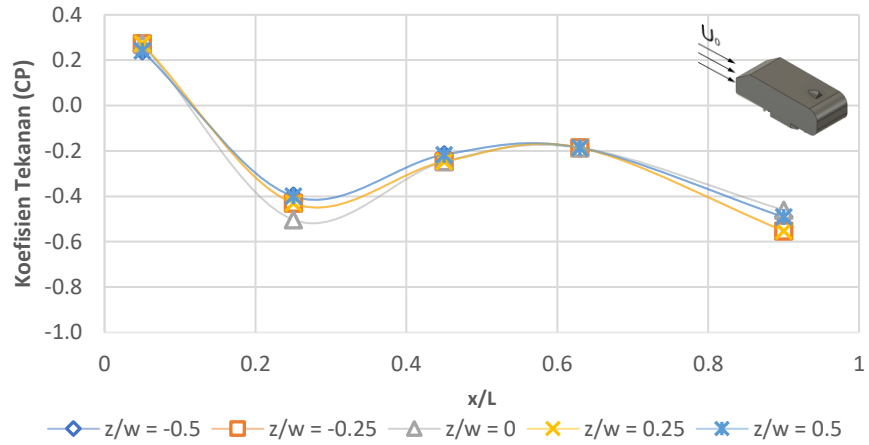
Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
11.1	x/L = 0.05	0.255	0.285	0.285	0.285	0.255
	x/L = 0.25	-0.411	-0.471	-0.532	-0.471	-0.411
	x/L = 0.45	-0.229	-0.229	-0.229	-0.229	-0.229
	x/L = 0.63	-0.199	-0.199	-0.199	-0.199	-0.199
	x/L = 0.9	-0.471	-0.562	-0.449	-0.562	-0.471

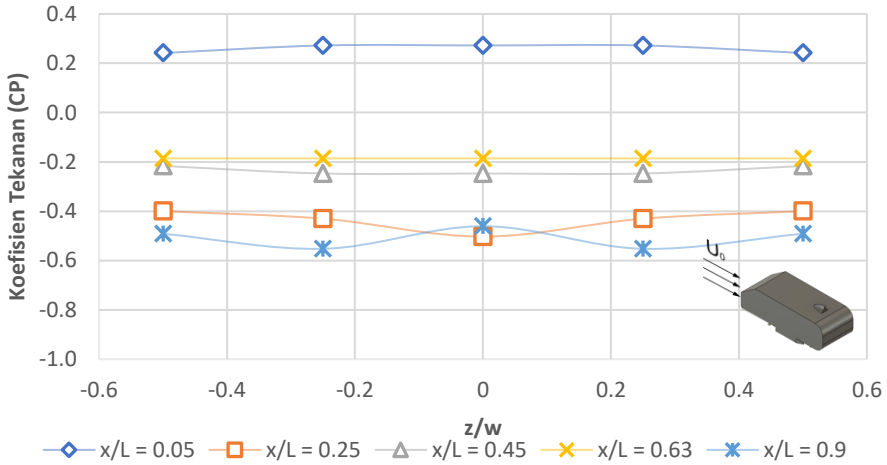


a. Kecepatan *Upstream* U_{01} = 11.1 m/s

- Nilai koefisien tekanan pada bagian atas model uji dengan *Fin* 3 dan *Side skirt* pada kecepatan *Upstream* 13.9 m/s

Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
13.9	x/L = 0.05	0.241	0.272	0.272	0.272	0.241
	x/L = 0.25	-0.400	-0.430	-0.461	-0.430	-0.400
	x/L = 0.45	-0.217	-0.247	-0.247	-0.247	-0.217
	x/L = 0.63	-0.186	-0.186	-0.186	-0.186	-0.186
	x/L = 0.9	-0.491	-0.552	-0.461	-0.552	-0.491

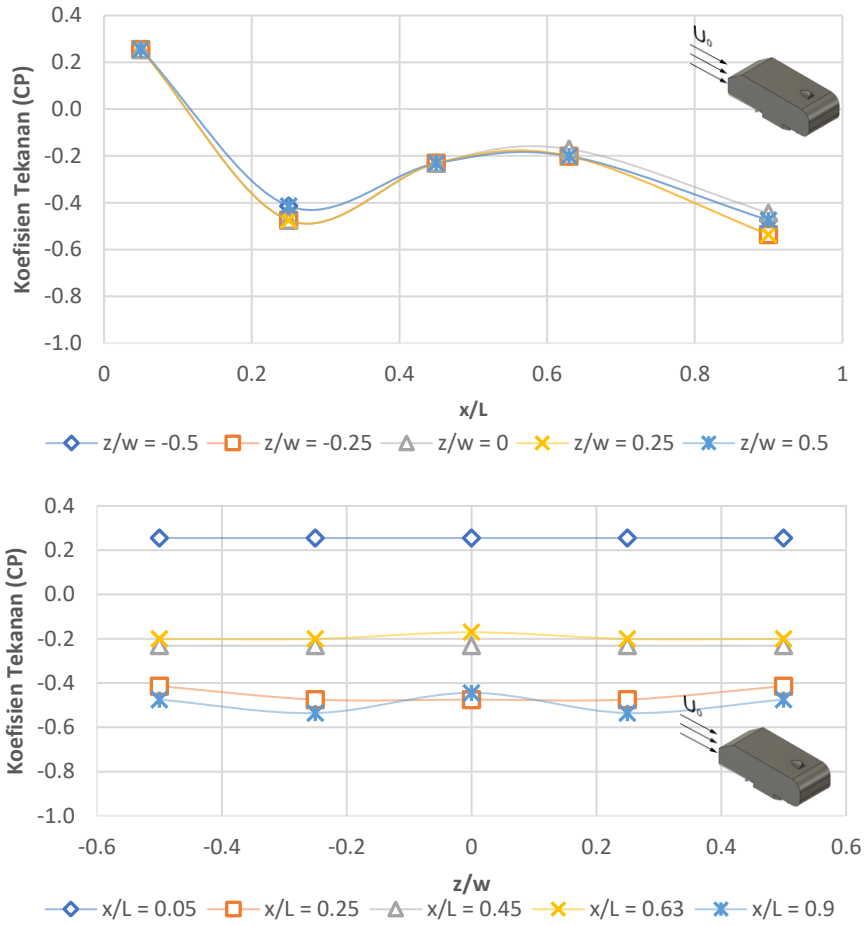




b. Kecepatan *Upstream* U_{02} = 13.9 m/s

- Nilai koefisien tekanan pada bagian atas model uji dengan *Fin* 3 dan *Side skirt* pada kecepatan *Upstream* 16.7 m/s

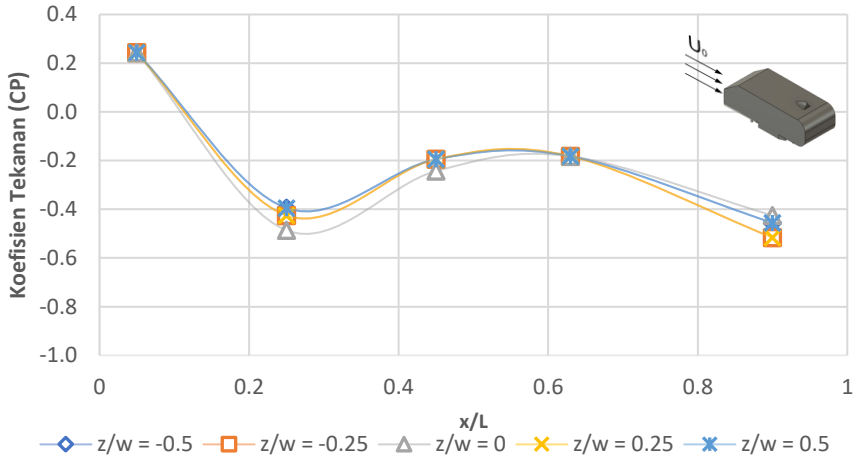
Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
16.7	x/L = 0.05	0.255	0.255	0.255	0.255	0.255
	x/L = 0.25	-0.414	-0.475	-0.475	-0.475	-0.414
	x/L = 0.45	-0.231	-0.231	-0.231	-0.231	-0.231
	x/L = 0.63	-0.201	-0.201	-0.171	-0.201	-0.201
	x/L = 0.9	-0.475	-0.536	-0.444	-0.536	-0.475

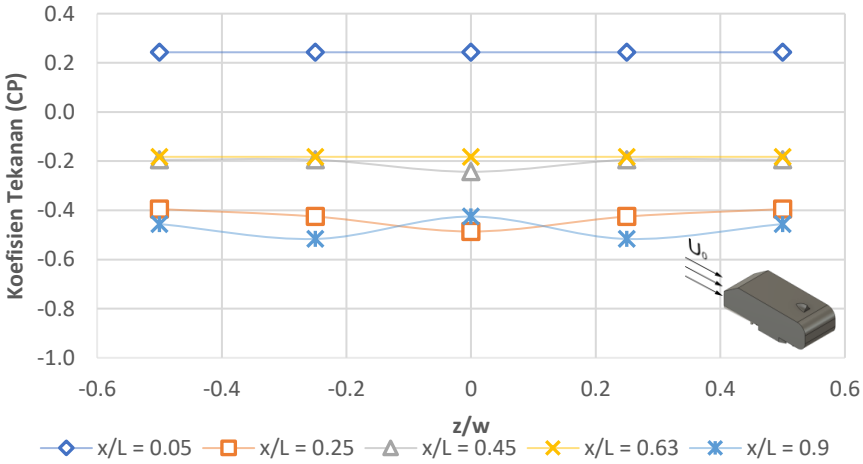


c. Kecepatan *Upstream* U_{03} = 16.7 m/s

- Nilai koefisien tekanan pada bagian atas model uji dengan *Fin* 3 dan *Side skirt* pada kecepatan *Upstream* 19.4 m/s

Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
19.4	x/L = 0.05	0.243	0.243	0.243	0.243	0.243
	x/L = 0.25	-0.395	-0.425	-0.486	-0.425	-0.395
	x/L = 0.45	-0.195	-0.195	-0.243	-0.195	-0.195
	x/L = 0.63	-0.182	-0.182	-0.182	-0.182	-0.182
	x/L = 0.9	-0.456	-0.516	-0.425	-0.516	-0.456

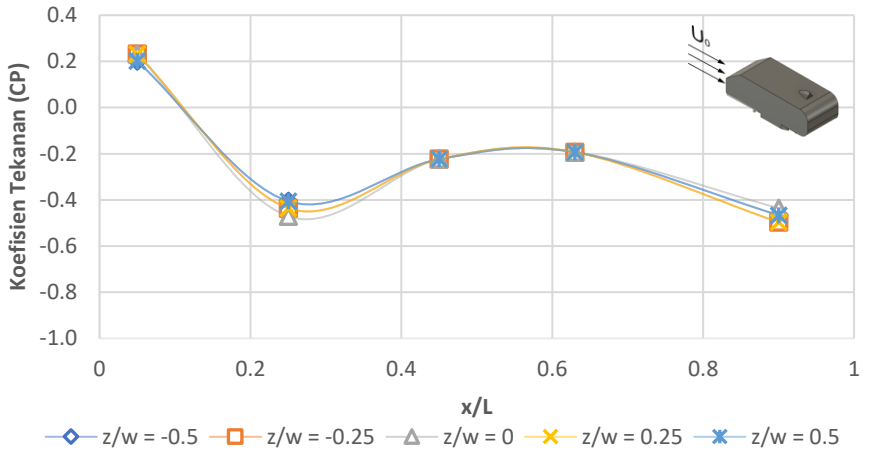


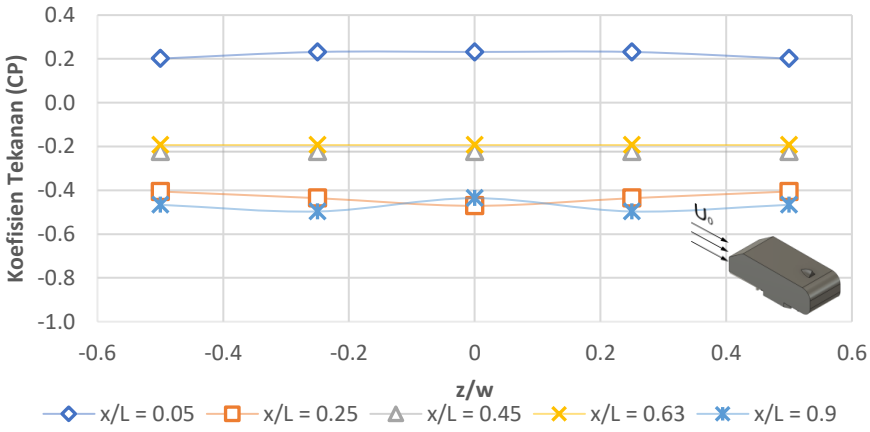


d. Kecepatan *Upstream* U_{04} = 19.4 m/s

- Nilai koefisien tekanan pada bagian atas model uji dengan *Fin* 3 dan *Side skirt* pada kecepatan *Upstream* 22.2 m/s

Upstream		Koefisien Tekanan				
P0		-0.5	-0.25	0	0.25	0.5
22.2	x/L = 0.05	0.201	0.232	0.232	0.232	0.201
	x/L = 0.25	-0.406	-0.436	-0.471	-0.436	-0.406
	x/L = 0.45	-0.224	-0.224	-0.224	-0.224	-0.224
	x/L = 0.63	-0.193	-0.193	-0.193	-0.193	-0.193
	x/L = 0.9	-0.466	-0.497	-0.436	-0.497	-0.466



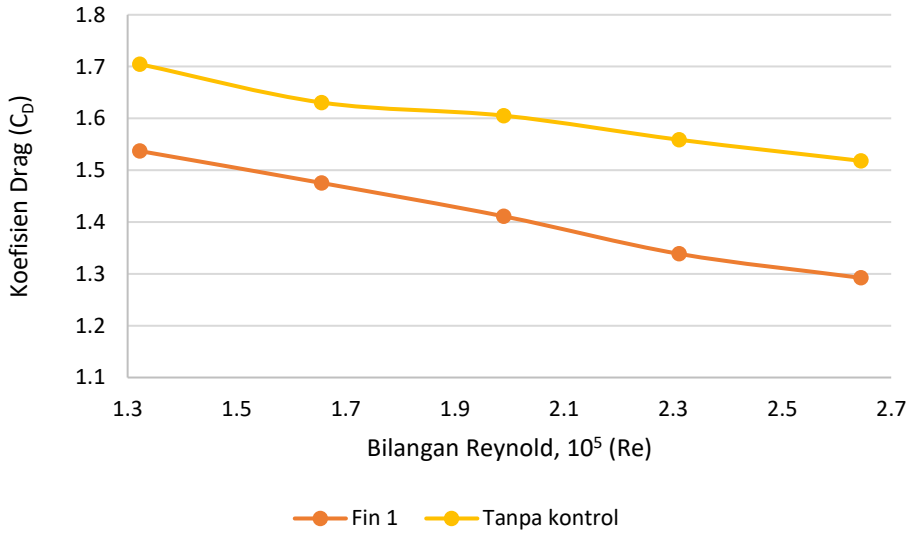


e. Kecepatan *Upstream* U_{05} = 22.2 m/s

LAMPIRAN 6 Nilai koefisien *drag* (CD) pada model uji dengan 3 jenis *Fin* dan *side skirt* dengan pendekatan komputasi

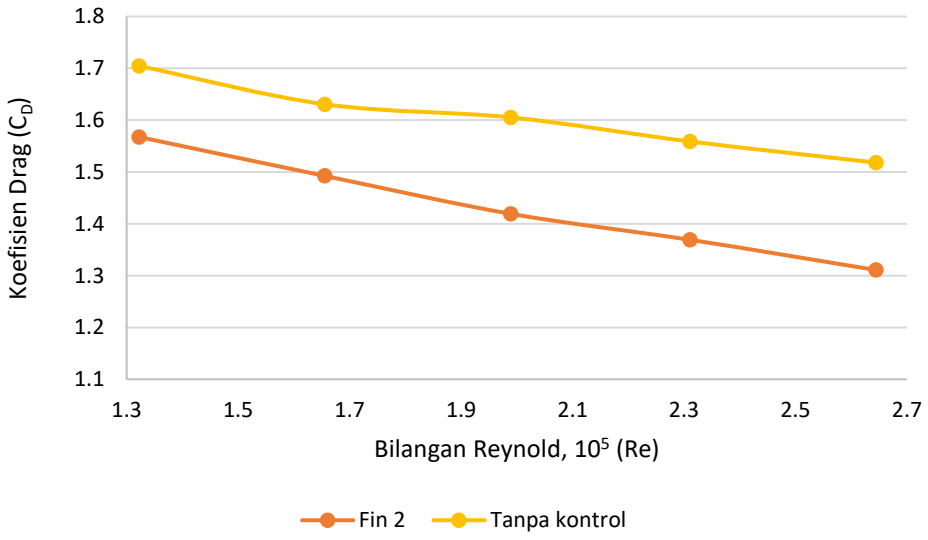
- Nilai koefisien *drag* dengan *Fin* 1 dan *Side skirt*

Kecepatan *Upstream*, U0 (m/s)	Bilangan Reynold	Nilai Koefisien *Drag* (Cd)		
		Tanpa Kontrol	*Fin* 1	Reduksi (%)
11.1	132221	1.745	1.577	9.604
13.9	165574	1.671	1.515	9.294
16.7	198927	1.645	1.451	11.807
19.4	231089	1.599	1.370	14.340
22.2	264442	1.558	1.332	14.491



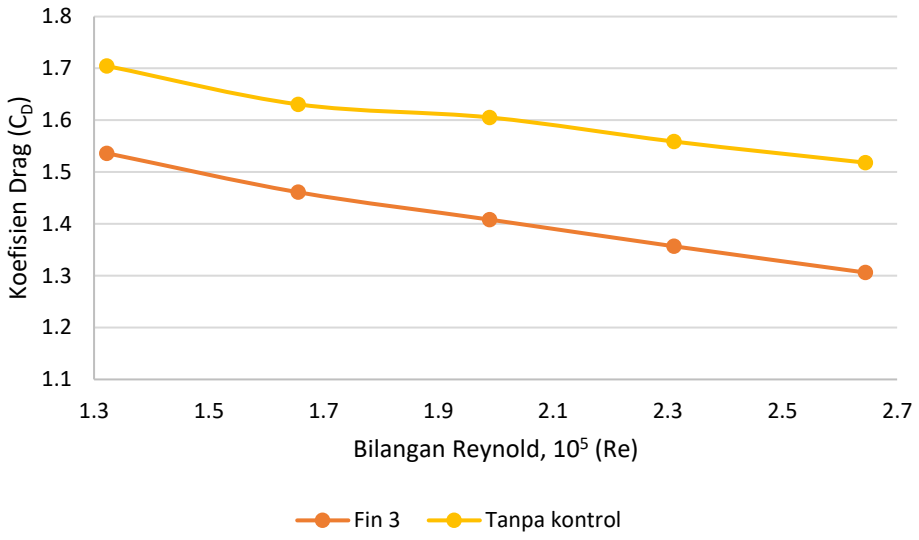
- Nilai koefisien *drag* dengan *Fin* 2 dan *Side skirt*

Kecepatan *Upstream*, U0 (m/s)	Bilangan Reynold	Nilai Koefisien *Drag* (Cd)		
		Tanpa Kontrol	*Fin* 2	Reduksi (%)
11.1	132221	1.745	1.608	7.854
13.9	165574	1.671	1.532	8.276
16.7	198927	1.645	1.459	11.311
19.4	231089	1.599	1.409	11.865
22.2	264442	1.558	1.351	13.304



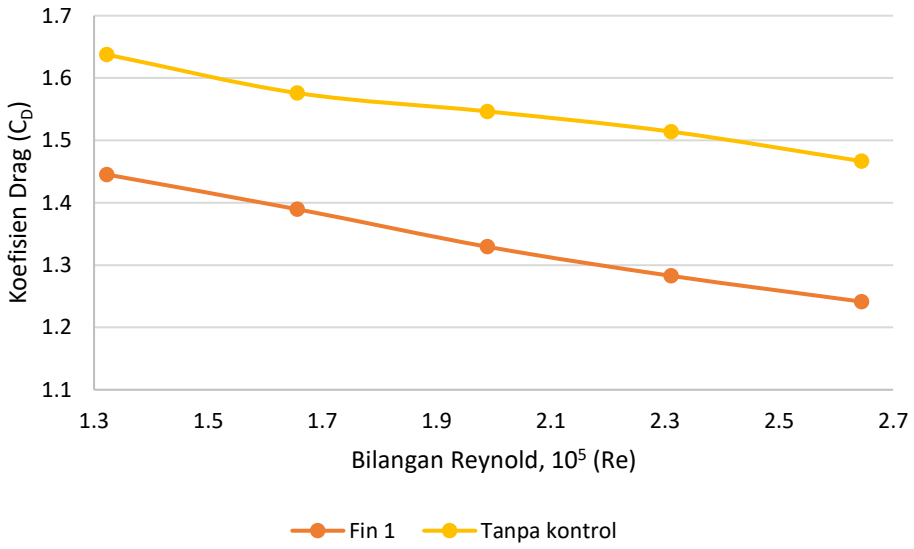
- Nilai koefisien *drag* dengan *Fin* 3 dan *Side skirt*

Kecepatan *Upstream*, U0 (m/s)	Bilangan Reynold	Nilai Koefisien *Drag* (Cd)		
		Tanpa Kontrol	*Fin* 3	Reduksi (%)
11.1	132221	1.745	1.576	9.647
13.9	165574	1.671	1.501	10.151
16.7	198927	1.645	1.448	11.976
19.4	231089	1.599	1.397	12.636
22.2	264442	1.558	1.346	13.603



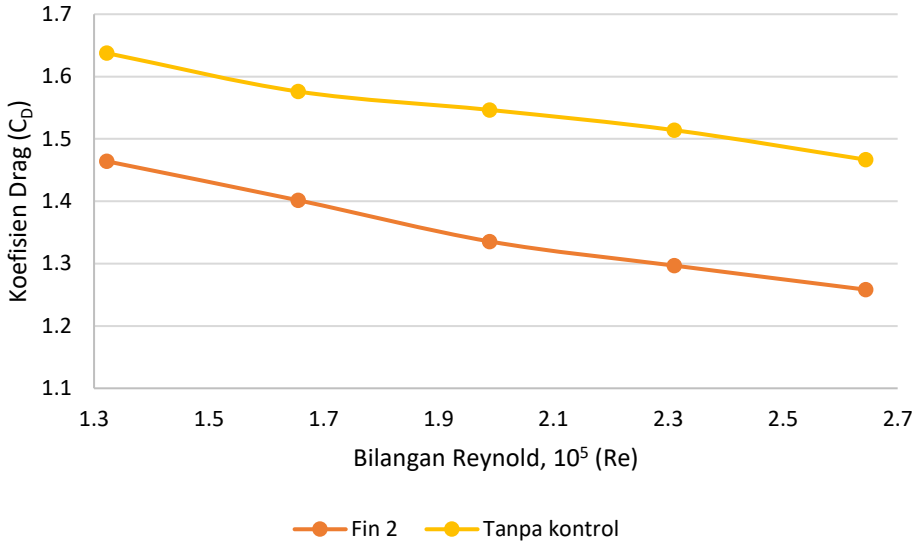
LAMPIRAN 7 Nilai koefisien *drag* (C_D) pada model uji dengan 3 jenis *Fin* dan *side skirt* dengan pendekatan eksperimental

Kecepatan *Upstream*, U0 (m/s)	Bilangan Reynold	Nilai Koefisien *Drag* (Cd)		
		Tanpa Kontrol	*Fin* 1	Reduksi (%)
11.1	132221	1.678	1.485	10.344
13.9	165574	1.616	1.430	10.795
16.7	198927	1.586	1.369	13.295
19.4	231089	1.554	1.323	12.864
22.2	264442	1.507	1.281	13.838



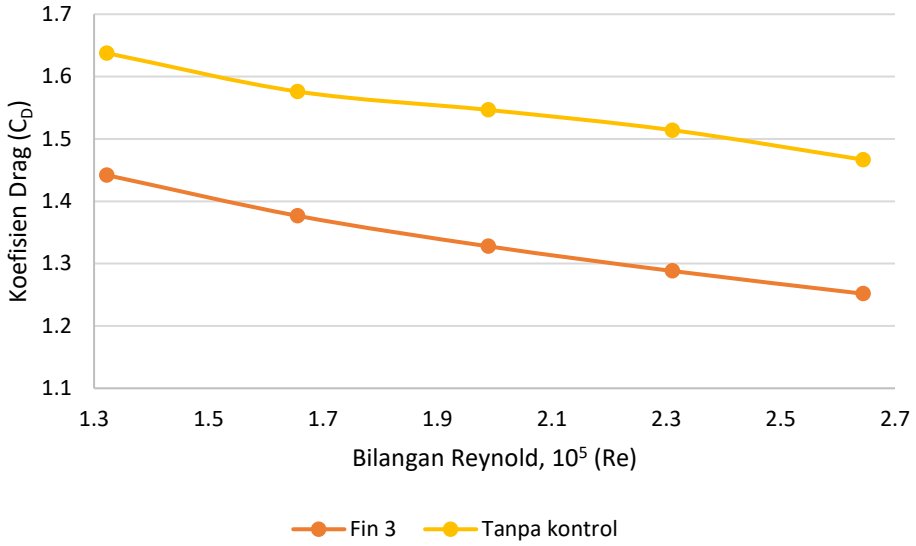
- Nilai koefisien *drag* dengan *Fin* 2 dan *Side skirt*

Kecepatan *Upstream*, U0 (m/s)	Bilangan Reynold	Nilai Koefisien *Drag* (Cd)		
		Tanpa Kontrol	*Fin* 2	Reduksi (%)
11.1	132221	1.678	1.504	10.344
13.9	165574	1.616	1.442	10.795
16.7	198927	1.586	1.376	13.295
19.4	231089	1.554	1.337	12.864
22.2	264442	1.507	1.298	13.838



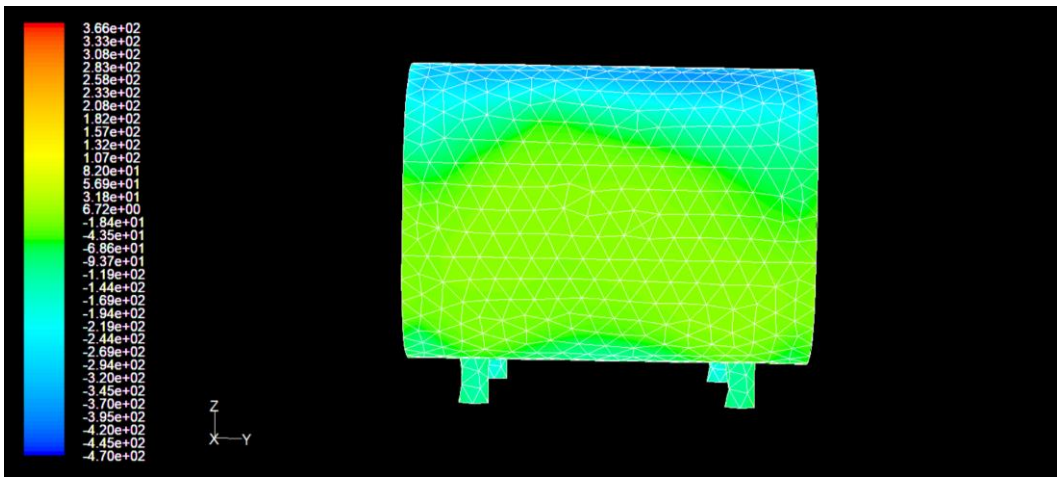
- Nilai koefisien *drag* dengan *Fin* 3 dan *Side skirt*

Kecepatan *Upstream*, U0 (m/s)	Bilangan Reynold	Nilai Koefisien *Drag* (Cd)		
		Tanpa Kontrol	*Fin* 3	Reduksi (%)
11.1	132221	1.678	1.482	11.665
13.9	165574	1.616	1.417	12.336
16.7	198927	1.586	1.368	13.788
19.4	231089	1.554	1.328	13.427
22.2	264442	1.507	1.292	14.269

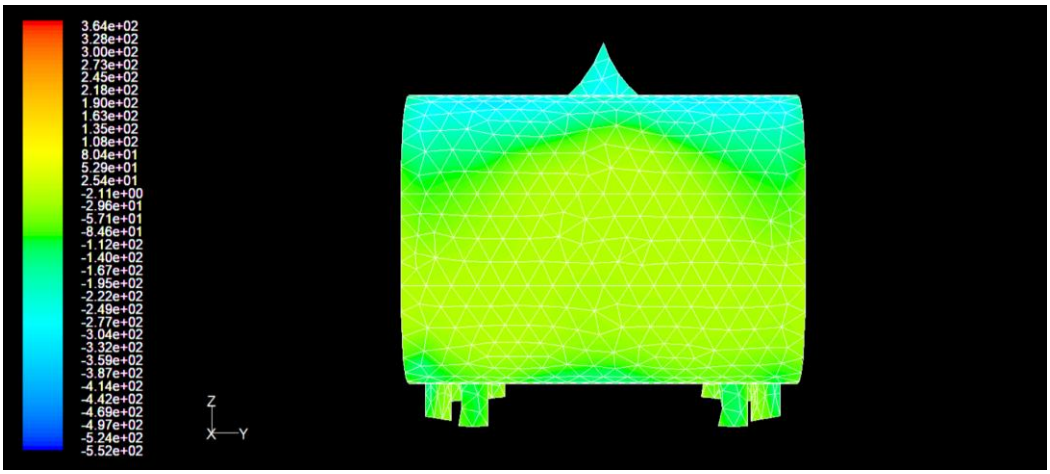


LAMPIRAN 8 Mesh benda uji

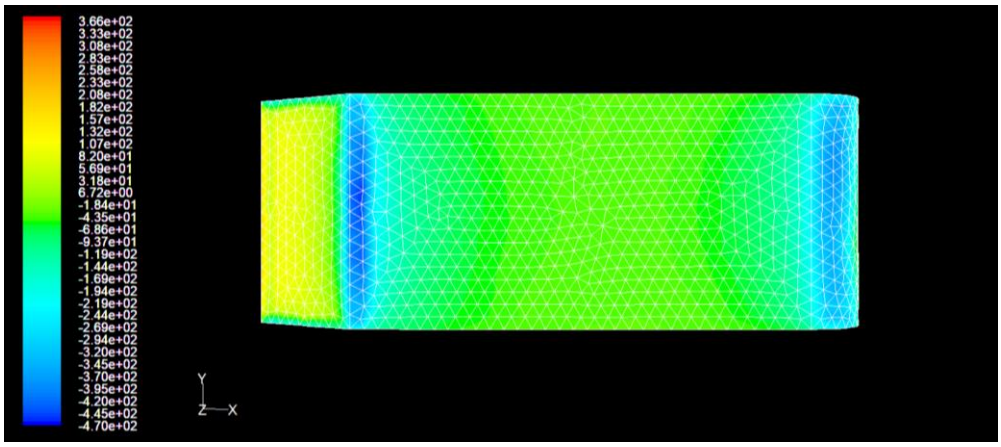
- Mesh bagian belakang tanpa kontrol aliran



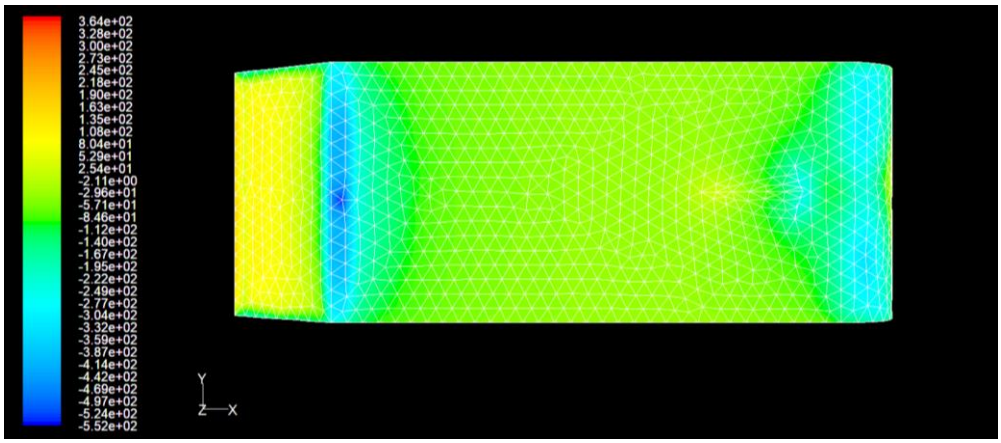
- Mesh bagian belakang model uji dengan *side skirt* dan kombinasi *Fin*



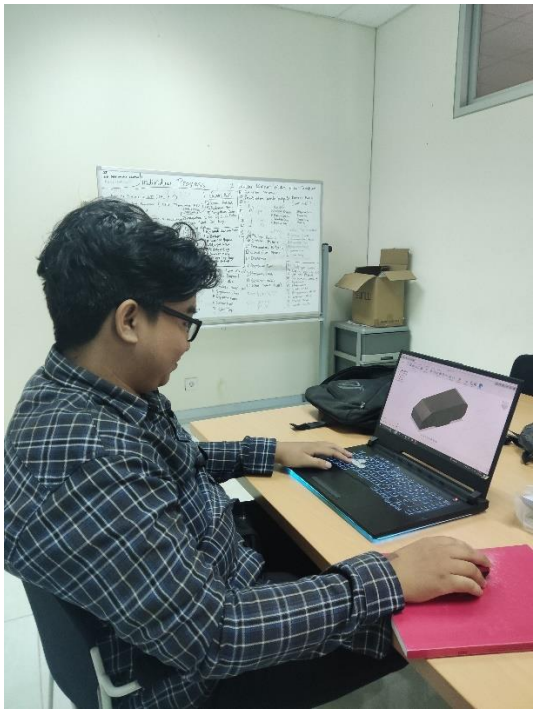
- Mesh bagian atas tanpa kontrol aliran



- Mesh bagian atas model uji dengan penambahan *side skirt* dan kombinasi *Fin*



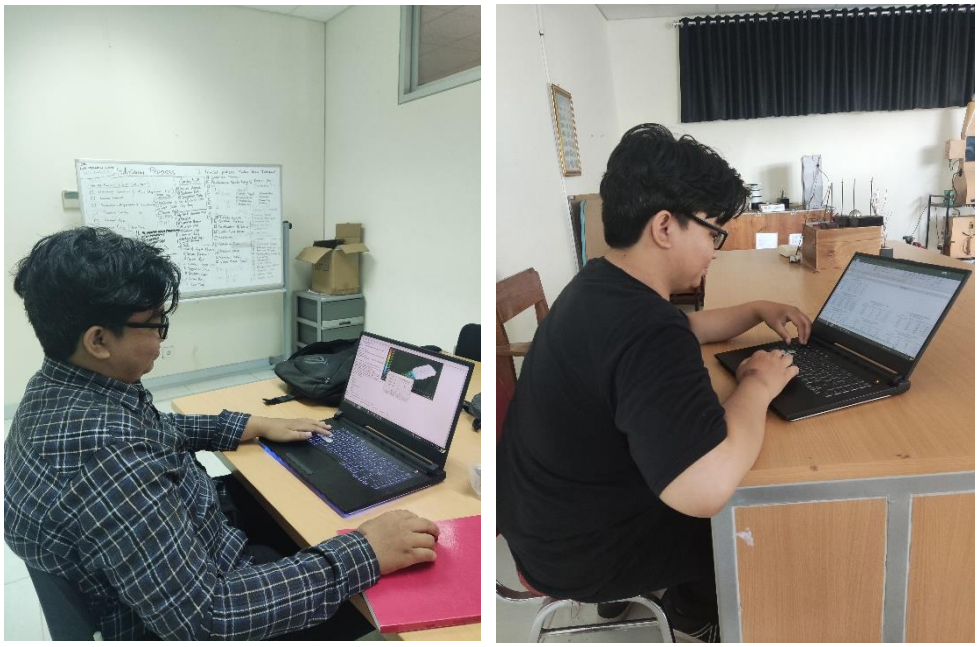
LAMPIRAN 9 Dokumentasi



Proses Pendesainan Benda Uji dan Pengambilan Data Komputasi

Benda Uji Untuk Percobaan Eksperimental

Proses Pengambilan Data Eksperimental



Proses Pengolahan Data Komputasi dan Eksperimental