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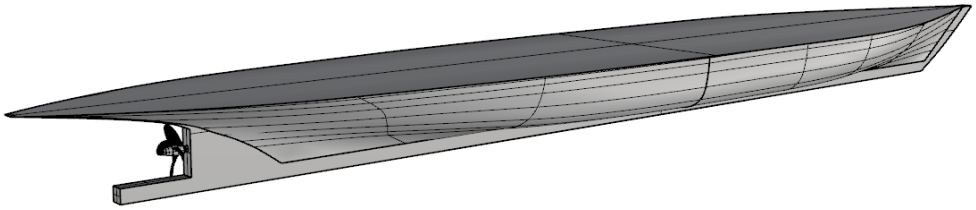
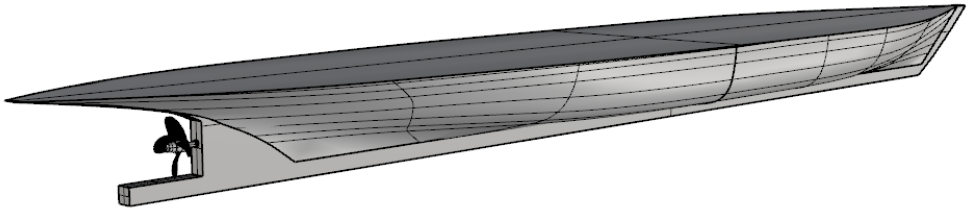
LAMPIRAN

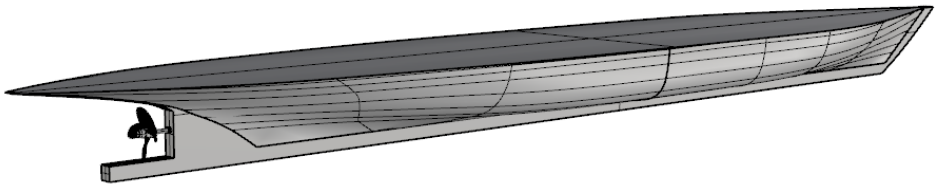
Lampiran 1 Gambar Konfigurasi Peletakan *Propeller*



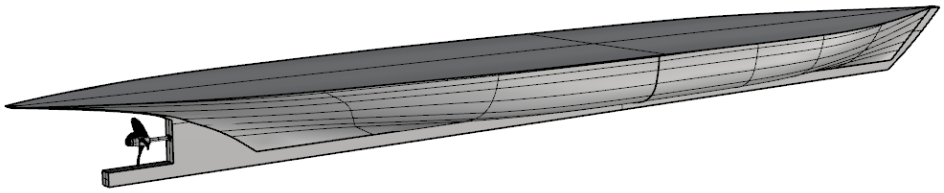
Gambar 1 Konfigurasi 1



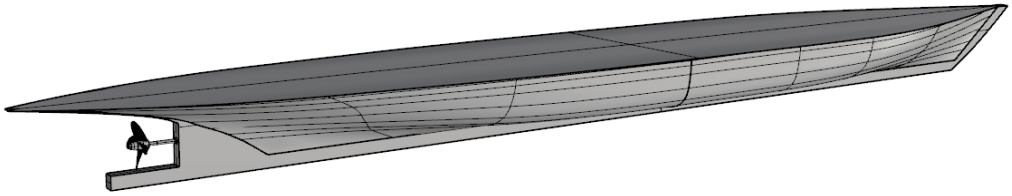
Gambar 2 Konfigurasi 2



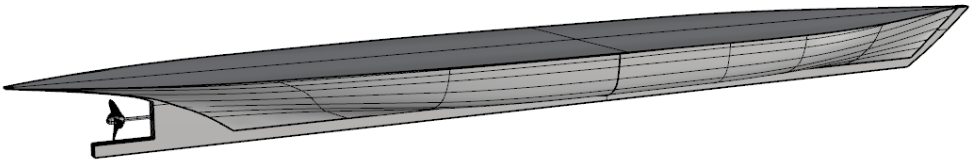
Gambar 4.5 Konfigurasi 3



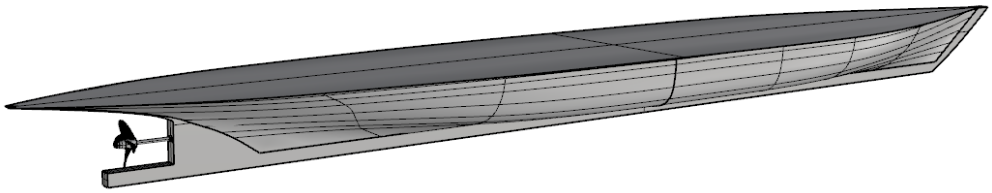
Gambar 4.6 Konfigurasi 4



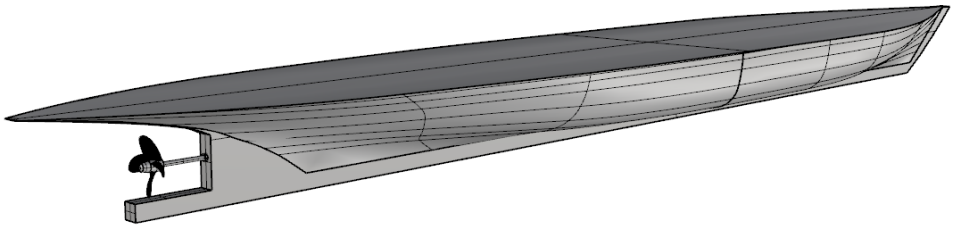
Gambar 4.7 Konfigurasi 5



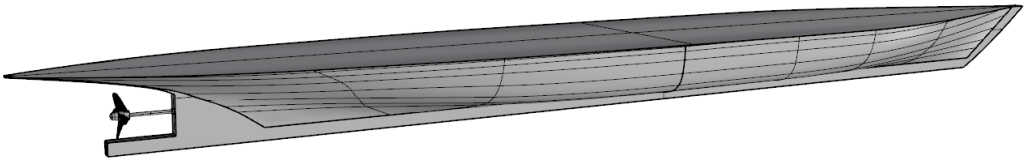
Gambar 4.8 Konfigurasi 6



Gambar 4.9 Konfigurasi 7



Gambar 4.10 Konfigurasi 8



Gambar 4.11 Konfigurasi 9

Lampiran 2 Perhitungan Tahanan Kapal dengan Maxsurft

	Speed (m/s)	Froude No. LWL	Froude No. Vol.	Holtrop Resist. (kN)	Holtrop Power (kW)	Fung Resist. (kN)	Fung Power (kW)
1	4.4700	0.291	0.714	5.6	25.058	5.5	24.3
2	4.5215	0.295	0.722	5.8	26.197	5.6	25.4
3	4.5730	0.298	0.730	6.0	27.343	5.8	26.6
4	4.6245	0.301	0.739	6.2	28.495	6.0	27.8
5	4.6760	0.305	0.747	6.3	29.655	6.2	28.9
6	4.7275	0.308	0.755	6.5	30.826	6.4	30.2
7	4.7790	0.312	0.763	6.7	32.015	6.6	31.4
8	4.8305	0.315	0.772	6.9	33.227	6.8	32.7
9	4.8820	0.318	0.780	7.1	34.470	7.0	34.0
10	4.9335	0.322	0.788	7.2	35.754	7.2	35.3
11	4.9850	0.325	0.796	7.4	37.087	7.4	36.7
12	5.0365	0.328	0.804	7.6	38.480	7.6	38.2
13	5.0880	0.332	0.813	7.9	39.942	7.8	39.7
14	5.1395	0.335	0.821	8.1	41.483	8.0	41.3
15	5.1910	0.338	0.829	8.3	43.115	8.3	42.9
16	5.2425	0.342	0.837	8.6	44.848	8.5	44.7
17	5.2940	0.345	0.846	8.8	46.694	8.8	46.6
18	5.3455	0.348	0.854	9.1	48.663	9.1	48.6
19	5.3970	0.352	0.862	9.4	50.768	9.4	50.7
20	5.4485	0.355	0.870	9.7	53.020	9.7	52.9
21	5.5000	0.359	0.878	10.1	55.432	10.1	55.4
22	5.5515	0.362	0.887	10.5	58.014	10.5	58.0
23	5.6030	0.365	0.895	10.8	60.781	10.9	60.8
24	5.6545	0.369	0.903	11.3	63.743	11.3	63.8
25	5.7060	0.372	0.911	11.7	66.913	11.8	67.0
26	5.7575	0.375	0.920	12.2	70.303	12.2	70.5
27	5.8090	0.379	0.928	12.7	73.925	12.8	74.2
28	5.8605	0.382	0.936	13.3	77.789	13.3	78.2
29	5.9120	0.385	0.944	13.9	81.906	13.9	82.4
30	5.9635	0.389	0.953	14.5	86.286	14.6	86.9
31	6.0150	0.392	0.961	15.1	90.938	15.3	91.8
32	6.0665	0.396	0.969	15.8	95.868	16.0	96.9
33	6.1180	0.399	0.977	16.5	101.08	16.7	102.
34	6.1695	0.402	0.985	17.3	106.50	17.5	108.
35	6.2210	0.406	0.994	18.0	112.00	18.4	114.
36	6.2725	0.409	1.002	18.7	117.58	19.3	120.
37	6.3240	0.412	1.010	19.5	123.24	20.2	127.
38	6.3755	0.416	1.018	20.2	128.99	21.1	134.
39	6.4270	0.419	1.027	21.0	134.81	22.1	142.
40	6.4785	0.422	1.035	21.7	140.72	23.1	149.
41	6.5300	0.426	1.043	22.5	146.71	24.2	157.

Lampiran 3 Perhitungan Efisiensi Propulsi

$$\eta \text{ propulsi} = \frac{TXV_S}{2\pi Q_D \text{n}} = \frac{K_T}{K_Q}\ x\ \frac{J_S}{2\ x\ \pi}$$

$$J_S = \frac{V_a}{n\ x\ D}$$

Dimana:

V_a $= V_S\ x\ (1 - w)$

$= 5{,}504\ m/s\ x\ (1 - 0{,}225)$

= 4,266 m/s

n = 13,29 put/s

D = 0,76 m

J_S $= \frac{4{,}266\ m/s}{13.29\ s^{-1}\ x\ 0{,}76\ m}$

$=$ 0,422

Tabel 1 KT dan KQ

Konfigurasi	Jarak (m)	KT	KQ
1	0,206	0,212	0,022
2	0,305	0,227	0,023
3	0,403	0,236	0,024
4	0,502	0,246	0,025
5	0,600	0,254	0,026
6	0,665	0,266	0,026
7	0,731	0,268	0,025
8	0,797	0,249	0,024
9	0,863	0,248	0,024

1. Efisiensi propulsi konfigurasi 1

$$\eta \text{ propulsi} = \frac{0{,}212}{0{,}022}\ x\ \frac{0{,}422}{2\ x\ 3{,}14}$$

= 0,630

2. Efisiensi propulsi konfigurasi 2

$$\eta \text{ propulsi} = \frac{0{,}227}{0{,}023} \; x \; \frac{0{,}422}{2 \; x \; 3{,}14}$$

$$= 0{,}660$$

3. Efisiensi propulsi konfigurasi 3

$$\eta \text{ propulsi} = \frac{0{,}236}{0{,}024} \; x \; \frac{0{,}422}{2 \; x \; 3{,}14}$$

$$= 0{,}660$$

4. Efisiensi propulsi konfigurasi 4

$$\eta \text{ propulsi} = \frac{0{,}246}{0{,}025} \; x \; \frac{0{,}422}{2 \; x \; 3{,}14}$$

$$= 0{,}660$$

5. Efisiensi propulsi konfigurasi 5

$$\eta \text{ propulsi} = \frac{0{,}254}{0{,}026} \; x \; \frac{0{,}422}{2 \; x \; 3{,}14}$$

$$= 0{,}660$$

6. Efisiensi propulsi konfigurasi 6

$$\eta \text{ propulsi} = \frac{0{,}266}{0{,}026} \; x \; \frac{0{,}422}{2 \; x \; 3{,}14}$$

$$= 0{,}692$$

7. Efisiensi propulsi konfigurasi 7

$$\eta \text{ propulsi} = \frac{0{,}268}{0{,}025} \; x \; \frac{0{,}422}{2 \; x \; 3{,}14}$$

$$= 0{,}730$$

8. Efisiensi propulsi konfigurasi 8

$$\eta \text{ propulsi} = \frac{0{,}249}{0{,}024} \; x \; \frac{0{,}422}{2 \; x \; 3{,}14}$$

$$= 0{,}697$$

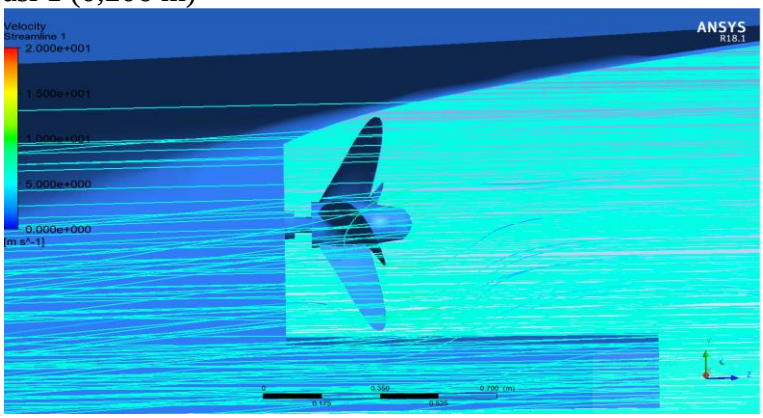
9. Efisiensi propulsi konfigurasi 9

$$\eta \text{ propulsi } = \frac{0{,}248}{0{,}024} \; x \; \frac{0{,}422}{2 \; x \; 3{,}14}$$

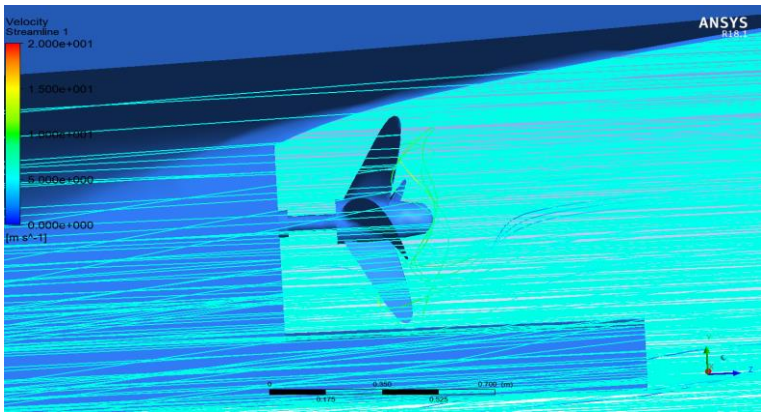
$$= 0{,}690$$

Lampiran 4 Visualisasi Aliran

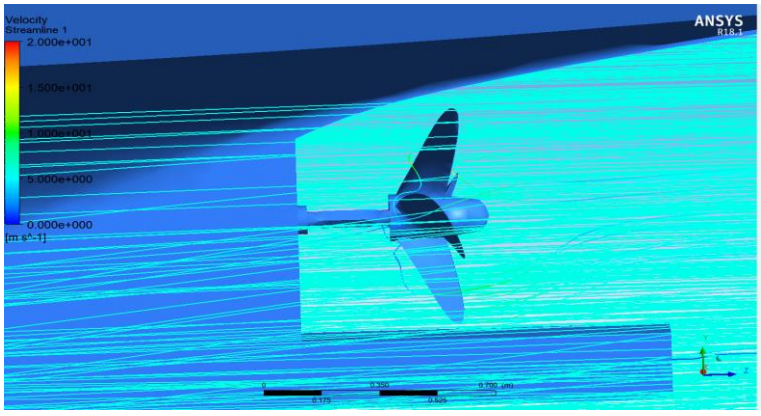
1. Konfigurasi 1 (0,206 m)



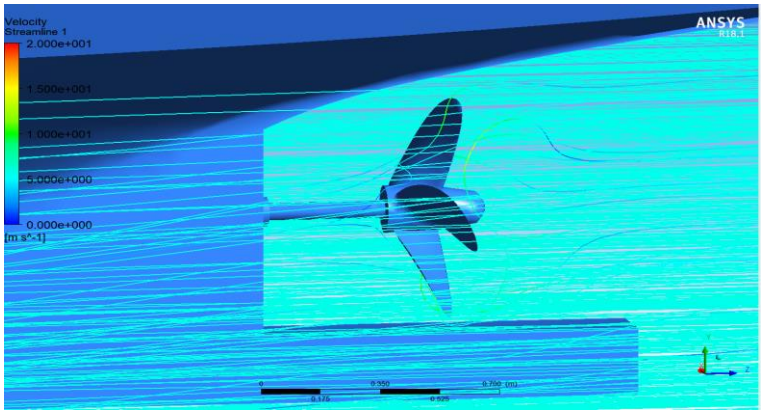
2. Konfigurasi 2 (0,305 m)



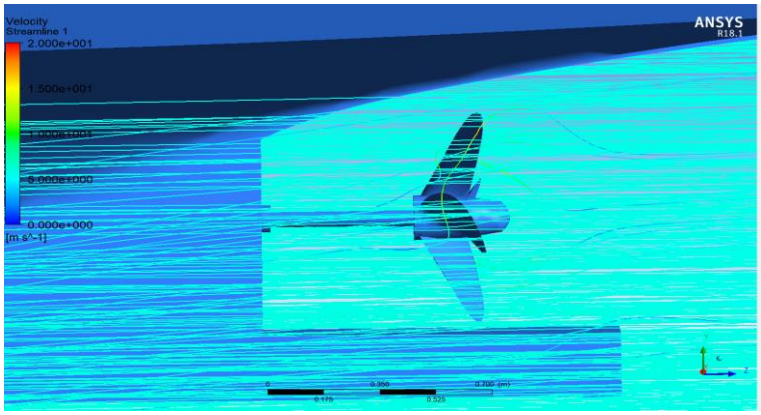
3. Konfigurasi 3 (0,403m)



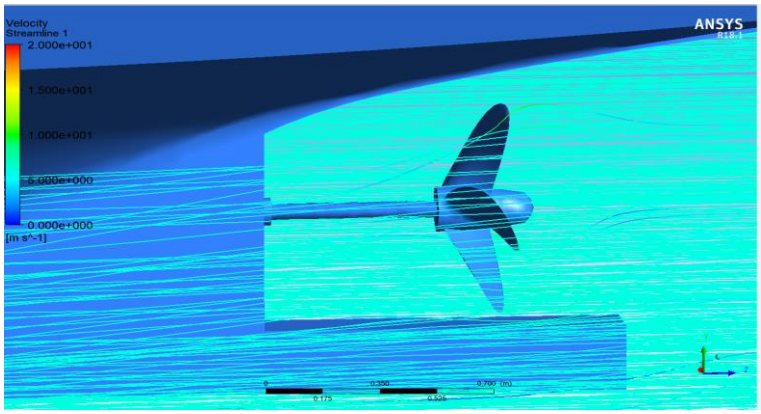
4. Konfigurasi 4 (0,502m)



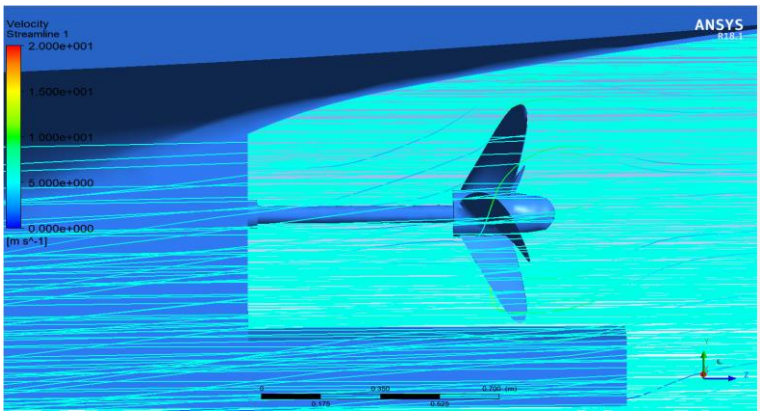
5. Konfigurasi 5 (0,600 m)



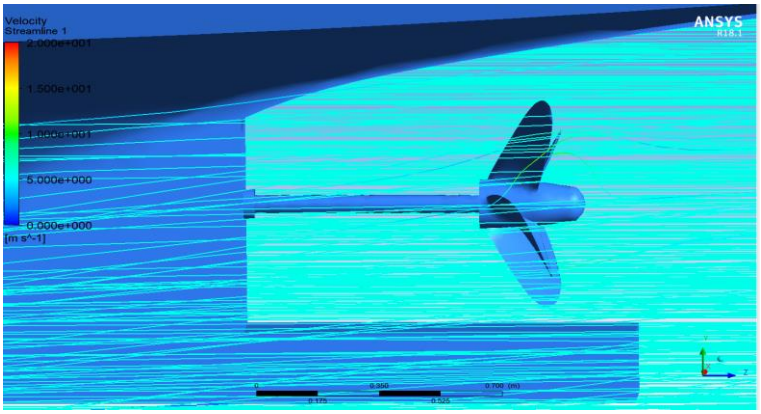
6. Konfigurasi 6 (0,665 m)



7. Konfigurasi 7 (0,731 m)



8. Konfigurasi 8 (0,797 m)



9. Konfigurasi 9 (0,863 m)