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**LAMPIRAN**

Lampiran 1. Hasil *Running Wyman* Sampel Kapal 1 Muatan Kosong

| | Item | Value | Units | Wyman |
|---|---|---|---|---|
| 1 | LWL | 17,31 | m | 17,31 |
| 2 | Beam | 4,195 | m | -- |
| 3 | Draft | 1,45 | m | -- |
| 4 | Displaced volume | 46,462 | m^3 | 46,462 |
| 5 | Wetted area | 81,209 | m^2 | 81,209 |
| 6 | Prismatic coeff. (Cp) | 0,644 | | -- |
| 7 | Waterpl. area coeff. (Cwp) | 0,791 | | -- |
| 8 | 1/2 angle of entrance | 23,3 | deg. | -- |
| 9 | LCG from midships(+ve for' | -0,627 | m | -- |
| 10 | Transom area | 0,762 | m^2 | -- |
| 11 | Transom wl beam | 2,89 | m | -- |
| 12 | Transom draft | 0,434 | m | -- |
| 13 | Max sectional area | 4,167 | m^2 | -- |
| 14 | Bulb transverse area | 0,053 | m^2 | -- |
| 15 | Bulb height from keel | 0 | m | -- |
| 16 | Draft at FP | 1,45 | m | -- |
| 17 | Deadrise at 50% LWL | 15,4 | deg. | -- |
| 18 | Hard chine or Round bilge | Round bilge | | -- |
| 19 | | | | |
| 20 | Frontal Area | 0 | m^2 | |
| 21 | Headwind | 0 | kn | |
| 22 | Drag Coefficient | 0 | | |
| 23 | Air density | 0,001 | tonne/ | |
| 24 | Appendage Area | 0 | m^2 | |
| 25 | Nominal App. length | 0 | m | |
| 26 | Appendage Factor | 1 | | |
| 27 | | | | |
| 28 | Correlation allow. | 0,0004 | | |
| 29 | Kinematic viscosity | 0,0000011 | m^2/s | |
| 30 | Water Density | 1,026 | tonne/ | |

Lampiran 2. Hasil *Running Wyman* Sampel Kapal 1 Muatan Penuh

|  | Item | Value | Units | Wyman |
|---|---|---|---|---|
| 1 | LWL | 17,31 | m | 17,31 |
| 2 | Beam | 4,195 | m | -- |
| 3 | Draft | 1,45 | m | -- |
| 4 | Displaced volume | 46,462 | m^3 | 46,462 |
| 5 | Wetted area | 81,209 | m^2 | 81,209 |
| 6 | Prismatic coeff. (Cp) | 0,644 |  | -- |
| 7 | Waterpl. area coeff. (Cwp) | 0,791 |  | -- |
| 8 | 1/2 angle of entrance | 23,3 | deg. | -- |
| 9 | LCG from midships(+ve for' | -0,627 | m | -- |
| 10 | Transom area | 0,762 | m^2 | -- |
| 11 | Transom wl beam | 2,89 | m | -- |
| 12 | Transom draft | 0,434 | m | -- |
| 13 | Max sectional area | 4,167 | m^2 | -- |
| 14 | Bulb transverse area | 0,053 | m^2 | -- |
| 15 | Bulb height from keel | 0 | m | -- |
| 16 | Draft at FP | 1,45 | m | -- |
| 17 | Deadrise at 50% LWL | 15,4 | deg. | -- |
| 18 | Hard chine or Round bilge | Round bilge |  | -- |
| 19 |  |  |  |  |
| 20 | Frontal Area | 0 | m^2 |  |
| 21 | Headwind | 0 | kn |  |
| 22 | Drag Coefficient | 0 |  |  |
| 23 | Air density | 0,001 | tonne/ |  |
| 24 | Appendage Area | 0 | m^2 |  |
| 25 | Nominal App. length | 0 | m |  |
| 26 | Appendage Factor | 1 |  |  |
| 27 |  |  |  |  |
| 28 | Correlation allow. | 0,0004 |  |  |
| 29 | Kinematic viscosity | 0,0000011 | m^2/s |  |
| 30 | Water Density | 1,026 | tonne/ |  |

Lampiran 3. Hasil *Running Wyman* Sampel Kapal 2 Muatan Kosong

|  | Item | Value | Units | Wyman |
|---|---|---|---|---|
| 1 | LWL | 19,668 | m | 19,668 |
| 2 | Beam | 3,911 | m | -- |
| 3 | Draft | 1,1 | m | -- |
| 4 | Displaced volume | 31,73 | m^3 | 31,73 |
| 5 | Wetted area | 82,282 | m^2 | 82,282 |
| 6 | Prismatic coeff. (Cp) | 0,6 | | -- |
| 7 | Waterpl. area coeff. (Cwp) | 0,721 | | -- |
| 8 | 1/2 angle of entrance | 17,8 | deg. | -- |
| 9 | LCG from midships(+ve for' | -0,593 | m | -- |
| 10 | Transom area | 0,191 | m^2 | -- |
| 11 | Transom wl beam | 1,892 | m | -- |
| 12 | Transom draft | 0,188 | m | -- |
| 13 | Max sectional area | 2,687 | m^2 | -- |
| 14 | Bulb transverse area | 0 | m^2 | -- |
| 15 | Bulb height from keel | 0 | m | -- |
| 16 | Draft at FP | 1,1 | m | -- |
| 17 | Deadrise at 50% LWL | 15,3 | deg. | -- |
| 18 | Hard chine or Round bilge | Round bilge | | -- |
| 19 | | | | |
| 20 | Frontal Area | 0 | m^2 | |
| 21 | Headwind | 0 | kn | |
| 22 | Drag Coefficient | 0 | | |
| 23 | Air density | 0,001 | tonne/ | |
| 24 | Appendage Area | 0 | m^2 | |
| 25 | Nominal App. length | 0 | m | |
| 26 | Appendage Factor | 1 | | |
| 27 | | | | |
| 28 | Correlation allow. | 0,0004 | | |
| 29 | Kinematic viscosity | 0,0000011 | m^2/s | |
| 30 | Water Density | 1,026 | tonne/ | |

Lampiran 4. Hasil *Running Wyman* Sampel Kapal 2 Muatan Penuh

| | Item | Value | Units | Wyman |
|---|---|---|---|---|
| 1 | LWL | 19,668 | m | 19,668 |
| 2 | Beam | 3,911 | m | -- |
| 3 | Draft | 1,1 | m | -- |
| 4 | Displaced volume | 33,208 | m^3 | 33,208 |
| 5 | Wetted area | 77,332 | m^2 | 77,332 |
| 6 | Prismatic coeff. (Cp) | 0,628 | | -- |
| 7 | Waterpl. area coeff. (Cwp) | 0,772 | | -- |
| 8 | 1/2 angle of entrance | 17,8 | deg. | -- |
| 9 | LCG from midships(+ve for' | -0,562 | m | -- |
| 10 | Transom area | 0,191 | m^2 | -- |
| 11 | Transom wl beam | 1,892 | m | -- |
| 12 | Transom draft | 0,188 | m | -- |
| 13 | Max sectional area | 2,687 | m^2 | -- |
| 14 | Bulb transverse area | 0 | m^2 | -- |
| 15 | Bulb height from keel | 0 | m | -- |
| 16 | Draft at FP | 1,1 | m | -- |
| 17 | Deadrise at 50% LWL | 15,3 | deg. | -- |
| 18 | Hard chine or Round bilge | Round bilge | | -- |
| 19 | | | | |
| 20 | Frontal Area | 0 | m^2 | |
| 21 | Headwind | 0 | kn | |
| 22 | Drag Coefficient | 0 | | |
| 23 | Air density | 0,001 | tonne/ | |
| 24 | Appendage Area | 0 | m^2 | |
| 25 | Nominal App. length | 0 | m | |
| 26 | Appendage Factor | 1 | | |
| 27 | | | | |
| 28 | Correlation allow. | 0,0004 | | |
| 29 | Kinematic viscosity | 0,0000011 | m^2/s | |
| 30 | Water Density | 1,026 | tonne/ | |

Lampiran 5. Hasil Running *Wyman* Sampel Kapal 3 Muatan Kosong

| | Item | Value | Units | Wyman |
|---|---|---|---|---|
| 1 | LWL | 22,506 | m | 22,506 |
| 2 | Beam | 4,408 | m | -- |
| 3 | Draft | 1,33 | m | -- |
| 4 | Displaced volume | 50,837 | m^3 | 50,837 |
| 5 | Wetted area | 107,268 | m^2 | 107,268 |
| 6 | Prismatic coeff. (Cp) | 0,609 | | -- |
| 7 | Waterpl. area coeff. (Cwp) | 0,725 | | -- |
| 8 | 1/2 angle of entrance | 17,3 | deg. | -- |
| 9 | LCG from midships(+ve for' | -0,671 | m | -- |
| 10 | Transom area | 0,245 | m^2 | -- |
| 11 | Transom wl beam | 2,018 | m | -- |
| 12 | Transom draft | 0,227 | m | -- |
| 13 | Max sectional area | 3,709 | m^2 | -- |
| 14 | Bulb transverse area | 0 | m^2 | -- |
| 15 | Bulb height from keel | 0 | m | -- |
| 16 | Draft at FP | 1,33 | m | -- |
| 17 | Deadrise at 50% LWL | 15,4 | deg. | -- |
| 18 | Hard chine or Round bilge | Round bilge | | -- |
| 19 | | | | |
| 20 | Frontal Area | 0 | m^2 | |
| 21 | Headwind | 0 | kn | |
| 22 | Drag Coefficient | 0 | | |
| 23 | Air density | 0,001 | tonne/ | |
| 24 | Appendage Area | 0 | m^2 | |
| 25 | Nominal App. length | 0 | m | |
| 26 | Appendage Factor | 1 | | |
| 27 | | | | |
| 28 | Correlation allow. | 0,0004 | | |
| 29 | Kinematic viscosity | 0,0000011 | m^2/s | |
| 30 | Water Density | 1,026 | tonne/ | |

Lampiran 6. Hasil *Running Wyman* Sampel Kapal 3 Muatan Penuh

| | Item | Value | Units | Wyman |
|---|---|---|---|---|
| 1 | LWL | 22,506 | m | 22,506 |
| 2 | Beam | 4,408 | m | -- |
| 3 | Draft | 1,33 | m | -- |
| 4 | Displaced volume | 52,085 | m^3 | 52,085 |
| 5 | Wetted area | 101,921 | m^2 | 101,921 |
| 6 | Prismatic coeff. (Cp) | 0,624 | | -- |
| 7 | Waterpl. area coeff. (Cwp) | 0,77 | | -- |
| 8 | 1/2 angle of entrance | 17,3 | deg. | -- |
| 9 | LCG from midships(+ve for' | -0,685 | m | -- |
| 10 | Transom area | 0,245 | m^2 | -- |
| 11 | Transom wl beam | 2,018 | m | -- |
| 12 | Transom draft | 0,227 | m | -- |
| 13 | Max sectional area | 3,709 | m^2 | -- |
| 14 | Bulb transverse area | 0 | m^2 | -- |
| 15 | Bulb height from keel | 0 | m | -- |
| 16 | Draft at FP | 1,33 | m | -- |
| 17 | Deadrise at 50% LWL | 15,4 | deg. | -- |
| 18 | Hard chine or Round bilge | Round bilge | | -- |
| 19 | | | | |
| 20 | Frontal Area | 0 | m^2 | |
| 21 | Headwind | 0 | kn | |
| 22 | Drag Coefficient | 0 | | |
| 23 | Air density | 0,001 | tonne/ | |
| 24 | Appendage Area | 0 | m^2 | |
| 25 | Nominal App. length | 0 | m | |
| 26 | Appendage Factor | 1 | | |
| 27 | | | | |
| 28 | Correlation allow. | 0,0004 | | |
| 29 | Kinematic viscosity | 0,0000011 | m^2/s | |
| 30 | Water Density | 1,026 | tonne/ | |

Lampiran 7. Hasil *Running Trim Wyman* Sampel Kapal 1 yang kritis


Tampak atas


Tampak bawah


Tampak samping


Pofil design