



Ship Design Project and Presentation

NAME-338

Design of an Inland Bulk Carrier of 2300 Tonnes Capacity

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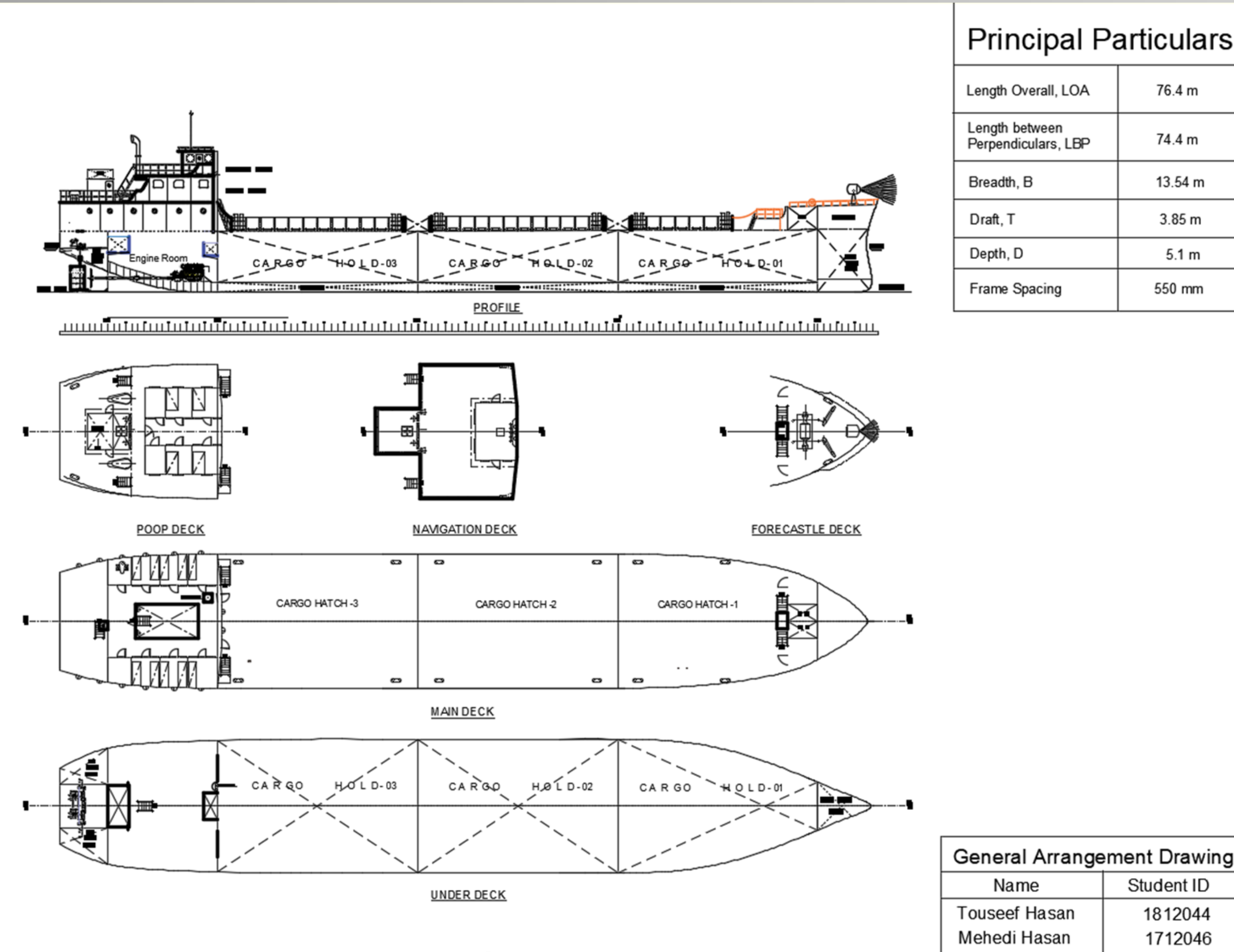
Owner's Requirements:

- Vessel Type: Bulk Carrier
- Capacity: 2300 tonnes
- Service Speed: 10 knots
- Route: Dhaka-Chittagong (Inland)
- Route Distance: 315 km (171 nautical miles)

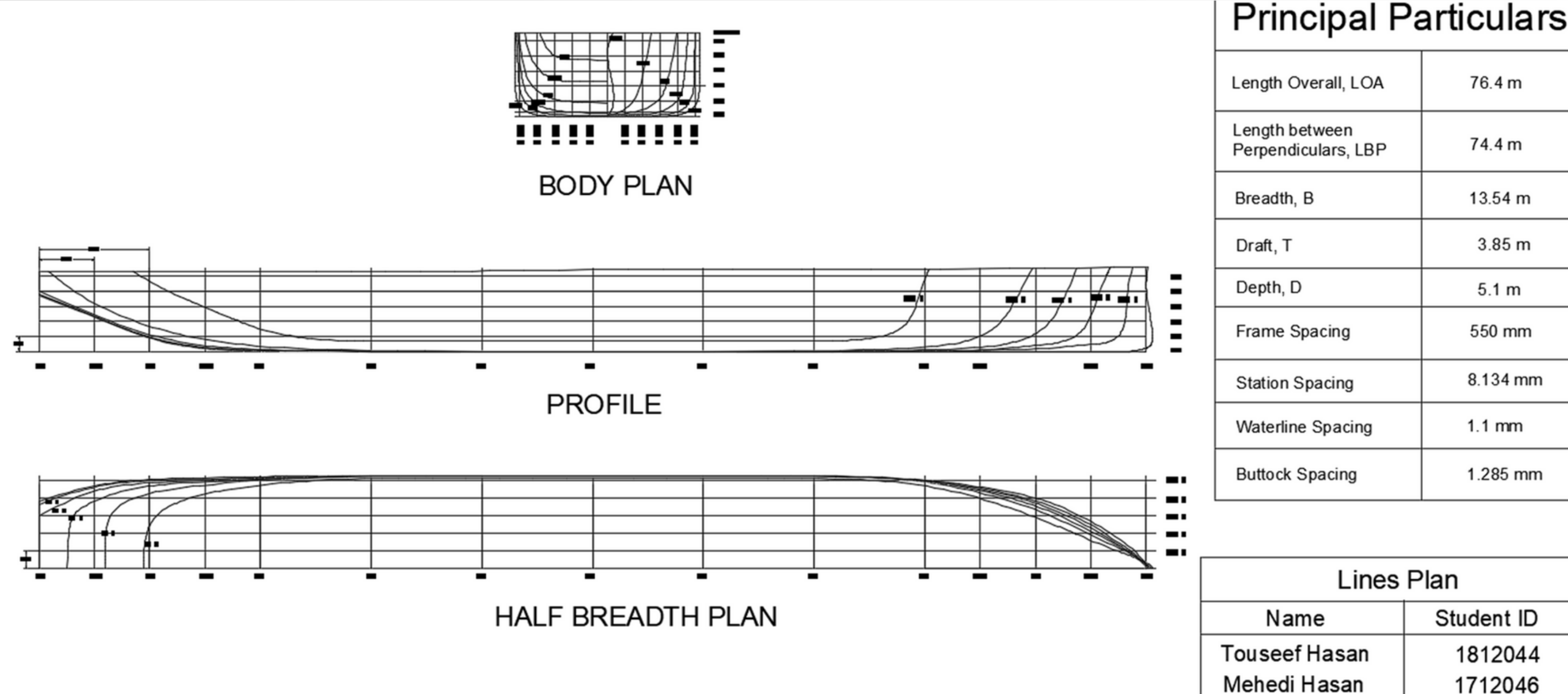
Principal Particulars:

- Length Overall: 76.4 m
- Length Between Perpendiculars: 74.4 m
- Breadth mld.: 13.54 m
- Depth mld.: 5.1 m
- Draft: 3.85 m
- Block Coefficient: 0.79
- Deadweight: 2328 tonnes
- Displacement: 3063 tonnes

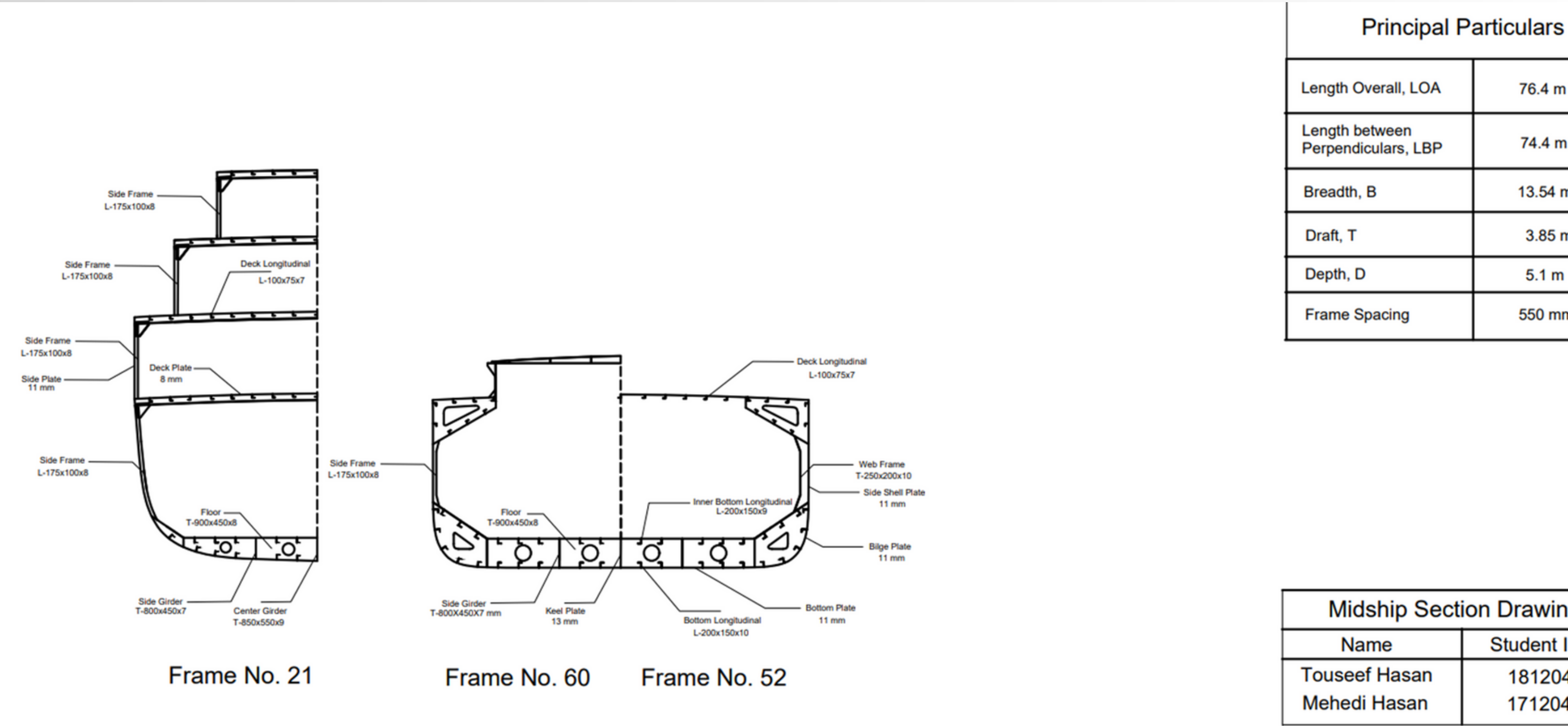
General Arrangement:



Lines Plan:



Midship Section:



Weight Distribution:

	Item	Weight (tonnes)	LCG (m)	Moment (t-m) (about aft)	VCG (m)	Moment (t-m) (about keel)
1	Steel Weight	640.95	29.87	19143.08	2.40	1535.94
2	Wood & Outfit Weight	11.49	8.19	94.07	7.09	81.47
3	Machinery Weight	57.96	25.97	1505.37	3.86	223.48
	Total Lightship Weight	710.40	29.20	20742.52	2.59	1840.88

Stability Criteria:

Properties	IMO value	Lightship Condition	Arrival Condition	Departure Condition	Comment
Area up to 30 degree (m-rad)	≥ 0.055	0.3201	0.1665	0.2529	Satisfied
Area up to 40° (m-rad)	≥ 0.09	0.7450	0.3093	0.4740	Satisfied
Area up to 30° - 40° (m-rad)	≥ 0.03	0.4250	0.1428	0.2210	Satisfied
GZ at 30 degree (m)	≥ 0.2	1.5410	0.5693	0.8984	Satisfied
Max. GZ at (degree)	≥ 30 (preferable) but not ≤ 25	45	52	42	Satisfied
Initial Metacentric Height (m)	Should not be ≤ 0.15	2.3	1.4	1.9	Satisfied