### AKUNA





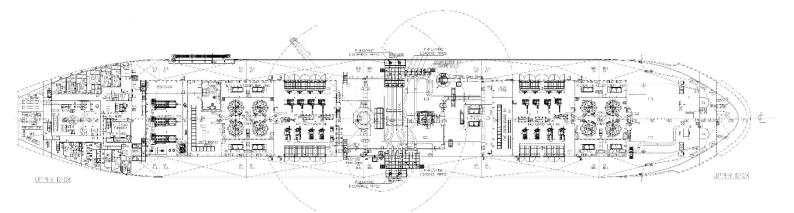
#### **TECHNICAL SPECIFICATIONS**

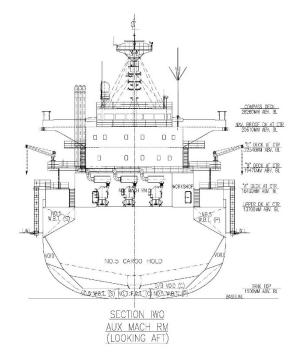
Built	2009 (converted to a cement carrier in 2019)
Classification	ABS ∳A1, E, ∳AMS, ∳ACCU, UWILD, RW, BWT with description 'Cement Carrier'
Length Overall (m)	169.37
Breadth Moulded (m)	27.20
Depth Moulded (m)	14.20
Total Hold Capacity (m <sup>3</sup> )	26,738
Deadweight (t)	26,544
Draft (m)	9.819
Gross Tonnage	17,784
Net Tonnage	7,283
Thruster (kW)	1,300
Discharge Rate (max tph)	1,200 tph

*Akuna* is a cement carrier designed for pneumatic and mechanical loading and unloading.

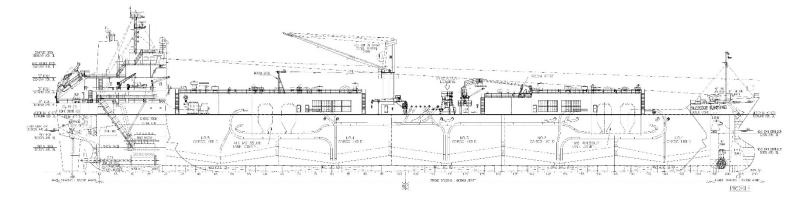
The vessel carries cement and fly ash.

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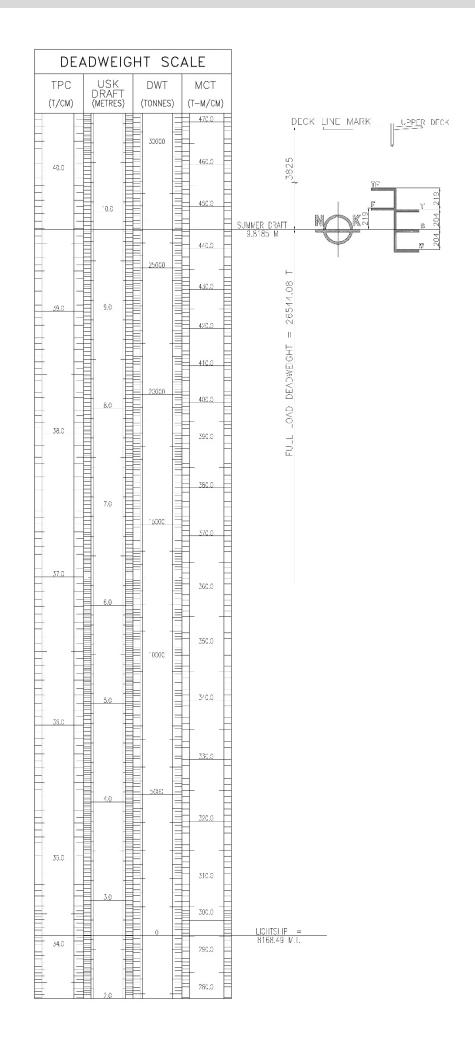




ASSIGNED DRAFT						
LOAD LINE	MARK	DRAFT (M)	DEADWEIGHT (M.T.)			
TROPICAL FRESH WATER	TF	10.242	27,337.28			
FRESH WATER	F	10.038	26,544.93			
TROPICAL	Т	10.023	27,353.16			
SUMMER	S	9.819	26,544.08			
WINTER	W	9.615	25,737.81			







**E**SL

# AKUNA

### **CEMENT CARRIER**

#### HATCH AND HOLD SPECIFICATIONS

HOLD VOLUMES (CUBIC METRES)							
HOLD NUMBER	1	2	3	4	5	TOTAL	
Total Volume (m <sup>3</sup> )*	3,544.62	5,398.25	5,680.33	5,415.24	4,804.09	24,842.53	
Weight (t) Max	4,253.54	6,477.90	6,816.40	6,498.29	5,764.91	29,811.04	

#### \* Data calculated 1.10 m below Upper Deck

#### CARGO HANDLING EQUIPMENT

MECHANICAL LOADING	PNEUMATIC LOADING POINT – STARBOARD SIDE
Through midship hopper, rated capacity 1,000 tph with cement at	Loading rate
bulk density 1.20 t/m <sup>3</sup>	2 x lines 300 tph each (600 tph total)
<b>Loading Hopper Air Draft</b>	Manifold Arrangement
19.20 m to guardrail  18.20 m to inlet flange	2 x lines, 400 NB DIN PN10 flanges
<b>Consumption</b>	(OD 565, 16x M24 bolts on 515 PCD)
2.60 mt/day idle no cargo operation, 2.20 + 8.50 unloading with	Distance from bow to centre of loading pipes = 78.50 m
two AE's Total: 10.70	Distance from ship side to manifold Flange = 5.50 m
PNEUMATIC LOADING POINT – PORT SIDE	PNEUMATIC UNLOADING
Loading rate	<b>Port and Starboard Side</b>
4 x lines 300 tph each (1,200 tph total)	4 x 400 NB lines @ 300 tph ea or
Manifold Arrangement	2 x 400 NB lines @ 600 tph ea
4 x lines, 400 NB DIN PN10 flanges	(max, basis cement cargo and subject to shore receival piping
(OD 565, 16 x M24 bolts on 515 PCD)	arrangement)
Distance from bow to centre of loading pipes = 78 m	Max Air delivery to shore: 30,480 m <sup>3</sup> /hr
Distance from ship side to manifold Flange = 3.40 m <b>Air Supply to Shore</b> 2 x Lines Port only, 250 NB DIN PN10 Flanges (OD 395, 12 x M20 bolts on 350 PCD) Distance from bow to centre of air lines = 74.90 m	CARGO HOLD DUST COLLECTORS 2 x 7,200 m <sup>3</sup> /hr per cargo hold 72,000 m <sup>3</sup> /hr total capacity
Distance from ship side to manifold Flange = 2.96 m	HOSE HANDLING CRANES 1 x 25 toppe @ 24 m on ship centreline

1 x 25 tonne @ 24 m on ship centreline
(outreach 10.40 m from ship side)
1 x 10 tonne @ 16 m port side (outreach 11.45 m from ship side)
1 x 1.50 tonne @ 8 m starboard side
(outreach 3.20m from ship side)

CARGO HANDLING EQUIPMENT (CON'T)

#### CONSUMPTION (TONNES PER DAY)

	SPEED		MAIN ENGINE HFO		MAIN ENGINE DO		A/E		
	Loaded	Ballast	Loaded	Ballast	Loaded	Ballast	HFO		
Sea	13.70	14.20	22.50	22.50	0.21	0.21	1.50		
Port/ Anchorage			N/A	N/A	N/A	N/A	2.60		
Loading/ Discharge			N/A	N/A	N/A	N/A	2.60 / 13.0		

All specifications given in good faith but without guarantee.

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