

Rev.	Point no.	Field	Revision or remarks	Date	Checked by	Approved by
B		Vessel Outline	Updated according to-nominal	2009-07-14	Miho	PU
C			Updated according to-nominal Rev C	2009-08-21	Miho	PU
D			Sea chest and Volume of zero dumping tank updated	2009-09-03	Miho	PU
E			According to-nominal Rev D and new dry tank DT1	2009-09-03	Miho	PU
			BW 7 changed to DT 7	2010-03-04	Miho	PU

NAPA ID = Identification name in NAPA-system  
 CODE = Tank code  
 DES = Tank description  
 NETI = Net volume, m<sup>3</sup>  
 FRMIN = Lower frame limit of the tank  
 FRMAX = Upper frame limit of the tank  
 CGX = Longitudinal centre of volume, m  
 CGY = Transversal centre of volume, m  
 CGZ = Vertical centre of volume, m  
 TANK = Vertical moment of inertia of liquid surface, m<sup>4</sup>  
 RHD = Density of liquid, t/m<sup>3</sup>

NAPA ID	CODE	DES	NETI	FRMIN	FRMAX	CGX	CGY	CGZ	TANK	RHD
			m <sup>3</sup>	m	m	m	m	m	m <sup>4</sup>	t/m <sup>3</sup>

CAPACITY OF DIESEL OIL (RHD=0.86)

R020103	DO1S	Diesel Oil 1	143.6	18	33	14.61	-3.28	2.85	173.1	
R020104	DO1P	Diesel Oil 1	171.1	18	33	15.84	-2.85	2.79	127.4	
R060102	DO2	DO Dry	16.0	73	77	45.58	-5.45	3.30	5.1	
R060103	DO3	DO Dry	17.1	73	77	45.58	-2.63	3.30	6.2	
R070103	DO4S	Diesel Oil 1	128.9	77	87	49.77	-3.74	2.72	112.7	
R070104	DO4P	Diesel Oil 1	123.9	77	87	49.77	3.74	2.72	112.7	
R050401	DO5	EDG DO	2.1	66	67	40.50	0.30	10.70	0.3	
SUBTOTAL			601.7			31.46	-0.18	2.83	537.5	

CAPACITY OF LUBRICATING OIL (RHD=0.9)

R060105	LO1	Lubricating Oil 1	12.0	73	77	45.60	4.95	2.70	0.6	
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CAPACITY OF FRESH WATER (RHD=1)

R030104	FW1S	Fresh Water	52.7	34	39	22.50	-3.20	2.40	65.5	
R030105	FW1P	Fresh Water	46.9	34	39	22.50	2.85	2.40	46.3	
SUBTOTAL			99.6			22.50	-0.35	2.40	111.8	

CAPACITY OF TECHNICAL WATER (RHD=1)

R060002	TW1	Technical Water	5.6	66	70	41.40	0.00	0.50	2.8	
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CAPACITY OF MISCELLANEOUS (RHD=1)

R030107	M1	Zero Dumping Drain	64.8	27	33	18.29	-4.71	2.71	34.1	
R030002	M2	Cooling Water Drain	4.2	63	66	39.30	0.00	0.50	2.1	
R060001	M3	Treated Sewage Water	97.3	18	17	43.62	-0.00	0.51	248.0	
R060101	M4	Differential	18.1	73	77	45.63	-3.80	1.60	52.4	
R060104	M5	Bi-lge Water Treatment	14.4	73	77	45.00	2.40	2.70	4.7	
R060101	M6	Sludge	10.4	73	77	45.60	6.35	2.70	0.4	
SUBTOTAL			209.2			36.03	-1.31	1.54	231.7	

CAPACITY OF BALLAST WATER (RHD=1.01)

R020001	BW1	Ballast Water	99.3	18	27	13.27	0.00	0.84	1970.6	
R020010	BW2S	Ballast Water	25.6	18	27	13.50	-7.60	3.39	0.8	
R020010	BW2P	Ballast Water	25.6	18	27	13.50	7.60	3.39	0.8	
R030001	BW3	Ballast Water	122.0	27	39	20.10	0.00	0.51	2895.8	
R030101	BW4S	Ballast Water	31.6	27	39	20.06	-7.60	2.72	1.1	
R030102	BW4P	Ballast Water	31.6	27	39	20.06	7.60	2.72	1.1	
R050001	BW5	Ballast Water	129.6	51	66	35.67	-0.02	0.51	3308.6	
R070101	BW6S	Ballast Water	26.1	77	87	49.95	-7.49	2.61	3.3	
R070102	BW6P	Ballast Water	26.1	77	87	49.95	7.49	2.61	3.3	
R090001	BW8	Ballast Water	97.9	95	101	59.38	0.08	2.79	657.5	
R100001	BW9	Ballast Water	36.2	101	108	62.46	0.00	3.46	135.0	
SUBTOTAL			697.3			33.46	0.01	1.61	9493.9	

CAPACITY OF DRY TANK (RHD=1)

R010001	DT1	Dry Tank	97.0	-0	9	2.93	0.00	3.28	1758.9	
R010002	DT2	Dry Tank	122.0	9	18	8.12	0.00	2.30	1604.2	
R040001	DT3	Dry Tank	170.3	39	51	27.60	0.00	1.25	2646.6	
R050102	DT4S	Dry Tank	30.1	51	66	36.41	-7.60	2.76	1.3	
R050101	DT4P	Dry Tank	36.0	51	66	35.70	7.60	2.76	1.3	
R060107	DT5S	Dry Tank	26.4	66	77	43.50	-7.60	2.70	1.0	
R060108	DT5P	Dry Tank	26.4	66	77	43.50	7.60	2.70	1.0	
R070001	DT6	Dry Tank	82.9	82	87	48.68	0.00	0.51	2025.0	
R080001	DT7	Dry Tank	35.6	87	95	54.98	-0.00	0.47	522.0	
SUBTOTAL			596.0			23.20	0.08	1.98	8019.7	

P27032 SHALLOW DRAUGHT ICEBREAKING TUG (SDBT)  
 STX BRALLA HULL NUMBER 710  
 IMO NUMBER XXX

**STATUS** Date: 2009-05-28  
 1 KEY PRELIMINARY 2 FOR OTHER DESIGN 3 FOR WORKSHOP DESIGN 4 AS DESIGN 5 AS BUILT  
 6 FOR OTHER DESIGN 7 FOR OTHER DESIGN 8 FOR OTHER DESIGN 9 FOR OTHER DESIGN 10 FOR OTHER DESIGN 11 FOR OTHER DESIGN 12 FOR OTHER DESIGN

**TANK PLAN**  
 Aker Arctic  
 Drawing number/revision: 740-101-020  
 Scale: 1:200  
 Date: 2009-05-28  
 Author: A. (5948811)  
 Checked: A. (5948811)  
 Approved: A. (5948811)

