

TECHNICAL SPECIFICATION

EQUIPMENT MODEL:		PROJECT NO.	
		REVISION:	01
EQUIPMENT NAME:		SHT.	1/1
		DATE:	06/05/2014
DOCUMENT NO:		PREPARED BY:	
		CHK'D & APP'D	Z

REF. GA DWG. NO.							
SERIAL NO.							
QUANTITY	1 PER SHIPSET						
	2 (TOTAL)						

SPECIFICATION		MAIN HOIST					AUX.HOIST	
		CASE 1	CASE 2	CASE 3	CASE 4	case 5	CASE 5	CASE 6
		Cargo Lift		Subsea Lift			Cargo Lift	Man-Riding
Dynamic factor		1.7	1.7	1.7	1.7	1.7	2.2	2.2
Lifting capacity (SWL)	Ton	100	25	100	75	60	6	1.5
Number of Falls	Part	1	1	1	1	1	1	1
Max. Outreach	Mtr	10	21	10	11.5	13	22	22
Min. Outreach	Mtr	7	7	7	7	7	8	8
Hook Speed	m/min	15	15	110	110	110	20	40
Hook Travel	Mtr	60	60	3000	3000	3000	60	60
Luffing speed, average	Sec	0~60						
Slewing Speed	RPM	0~1.0						
Slewing sector	Degree	0~360 Continuous						
List/ Trim	Degree	5/2						
Dead Weight	Ton	~280						
Pedestal Height	mm	2500						
Pedestal Diameter	mm	4020						
Design temperature	deg.	-10deg to +50deg.						

Note: Main hoist --SWL excluding 10Ton hook block.

ACTIVE Heave feature:		
Heave period	Sec	8~12
Displacement	M	±1.5
Max. compensation speed	m/s	1.8
SWL	Ton	1. 100Te payload + 10Te Block =110 Te, SWL @ 3000 metre water depth
		2. 75Te payload + 10Te Block =85 Te, SWL @ 3000 metre water depth
		3. 60Te payload + 10Te Block =70 Te, SWL @ 3000 metre water depth

CRANE POWER PACK SPECIFICATION	
HPU Arrangement	Built-in
Ship Main Supply	690V , 60Hz , 3ph
Ship Aux. Supply	230V, 60Hz, 3ph
Electric Motor Data	
- Duty Class	S1, Continuously
- Rating	(Refer to separate list)
- Enclosure	IP55
- Insulation class	F
- Temperature rise class	F (MAIN ELECTRICAL MOTOR)
- Stand Still heater	(Refer to separate list)
- Starter	Soft-Starter
- Protection	Thermic Relay
Total power	~2100kw
Control station	Control Cabin mounted on Crane Upper Column
Other Electric Component	
Slip Ring	Yes,
Flood Light	Yes, one unit at boom tip
Aircraft Warning Light	Yes, one unit at boom tip

ISSUED
 20 MAY 2014
 For Approval

FINISHING COLOUR	White
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CLASS	ABS & DNV class
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REACTION AXIAL LOAD	~ 530 Ton
REACTION OVERTURNING MOMENT	~ 2500 Tm

Note:

Max. reactive axial load and reaction overturning moment above includes dynamic factor , but does not include pedestal load factor PF as per API2C (7th ED) section 6.2 .

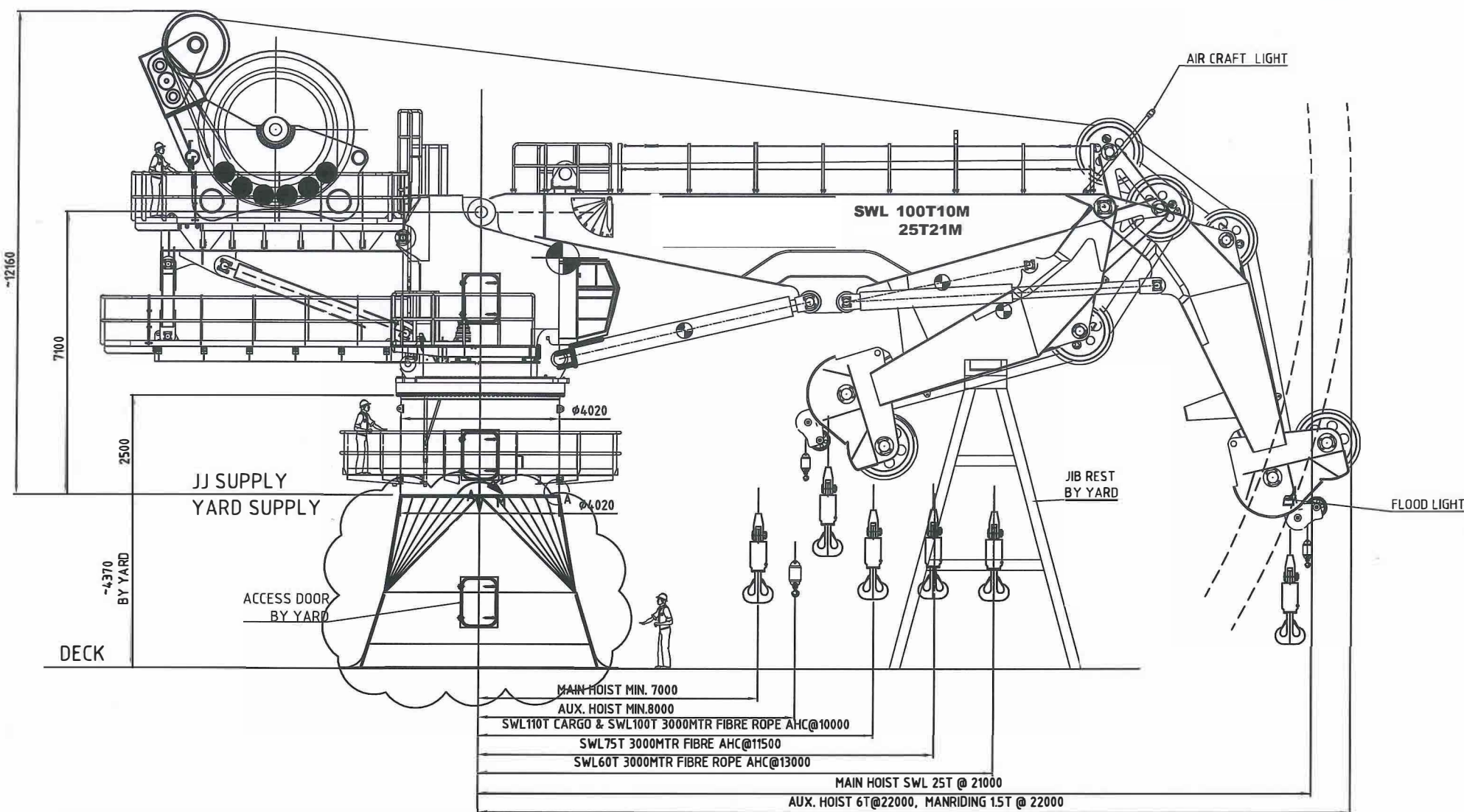
100 Ton AHC Crane Power supply from Vessel

Base on given crane spec and improved hydraulic system design by adopting Hi/Low Pressure accumulators, the calculation of 100 ton AHC crane power as below

- Total power is 2 Pumps x 550KW + 2 Pumps x 315KW + 265KW (Aux motors) + 30KW + 6KW = 2031KW
 - Emergency power supply: 55KW + 2KW = 57KW
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1. Main power source 1: 690V/60Hz/3Ph + PE 550KW (S1-100% motor, for main pump 1)
 2. Main power source 2: 690V/60Hz/3Ph 550KW (S1-100% motor, for main pump 2)
 3. Main power source 3: 690V/60Hz/3Ph 315kw (S1-100% motor, for main pump 3)
 4. Main power source 4: 690V/60Hz/3Ph 315kw (S1-100% motor, for main pump 4)
 5. Main power source 5: 690V/60Hz/3Ph (75kw +30kw + 3x11kw = 138KW) (S1-100% motor, for 1 Screw pump, 3 coolers & 1 circulation pump)
 6. Main power source 6: 690V/60Hz/3Ph (75kw +30kw + 2x11kw = 127KW) (S1-100% motor, for 1 Screw pump, 2 coolers & 1 circulation pump)
 7. Crane main utility supply: 230V/60Hz/3 Ph + PE 30KW
 8. Aviation light & Control Supply (**UPS**): 230V/60Hz/1Ph 6KW
 9. 24VDC supply (**UPS**) for Emergency MOPS 20Amp

10. Emergency power supply 440V/60Hz/3Ph + PE 55KW (S1-100%, emergency pump)
11. Emergency supply control 230V/60Hz/2Ph 2KW

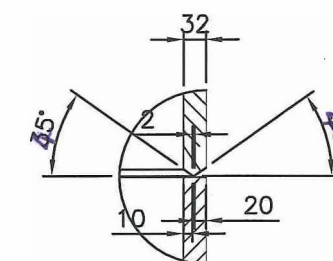
Note: All 4 main pump motors over load setting will be 1.25 of full load current.



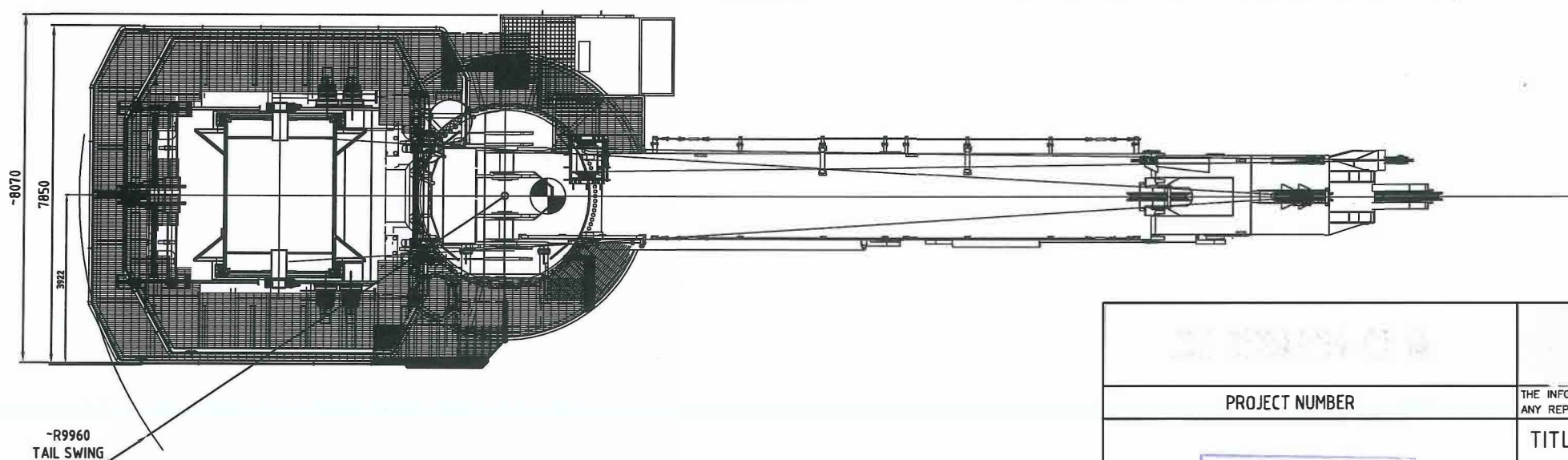
NAME OF PART	WEIGHT(kg)	GRAVITY POINT (m)
MAIN JIB	CA 31000	X=7.5 Y=11
KNUCKLE JIB	CA 23500	X=13 Y=9
CYLINDER-KJ	2x4500	X=11.5 Y=10
CYLINDER-MJ	2x8300	X=5.0 Y=8.5

Axis definitions:
 Origo located in pedestal center at shipdeck level.
 x = parallel to jib
 y = normal to shipdeck
 z = normal to jib

Estimated weight of the crane ~ 280 t
 x = 2000mm
 y = 10000mm
 (CoG in position as shown)



DETAIL A
 WELD PREPARATION
 N.T.S.



GENERAL TOLERANCES: ACCORDING TO ISO 2768

LINEAR TOLERANCES ACCORDING TO ISO 1101									
LINEAR (mm)	RANGE	>0.5-3	>3-6	>6-30	>30-120	>120-400	>400-1000	>1000-2000	>2000-6000
	M/C	±0.1	±0.1	±0.2	±0.3	±0.5	±0.8	±1.2	±2
	UN M/C	±0.2	±0.3	±0.5	±0.8	±1.2	±2	±3	±4
ANGULAR (Deg)	RANGE	UP TO 10		>10-50		>50-120		>120-400	
	M/C	±1°		±0°30'		±0°20'		±0°10'	
	UN M/C	±1°30'		±1°		±0°30'		±0°15'	

REV	DESCRIPTION	DATE	DRAWN
01	RE-ISSUED FOR APPROVAL	19.05.14	YDG
0	ISSUED FOR APPROVAL	28.04.14	YDG

PROJECT NUMBER

ISSUED ON
 20 MAY 2014
 For Approval

STATUS

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TITLE :
 AHC KNUCKLE BOOM CRANE
 GENERAL ASSEMBLY

MODEL CODE:

DRAWING NO:

ALL DIMENSIONS IN MM UNLESS OTHERWISE STATED

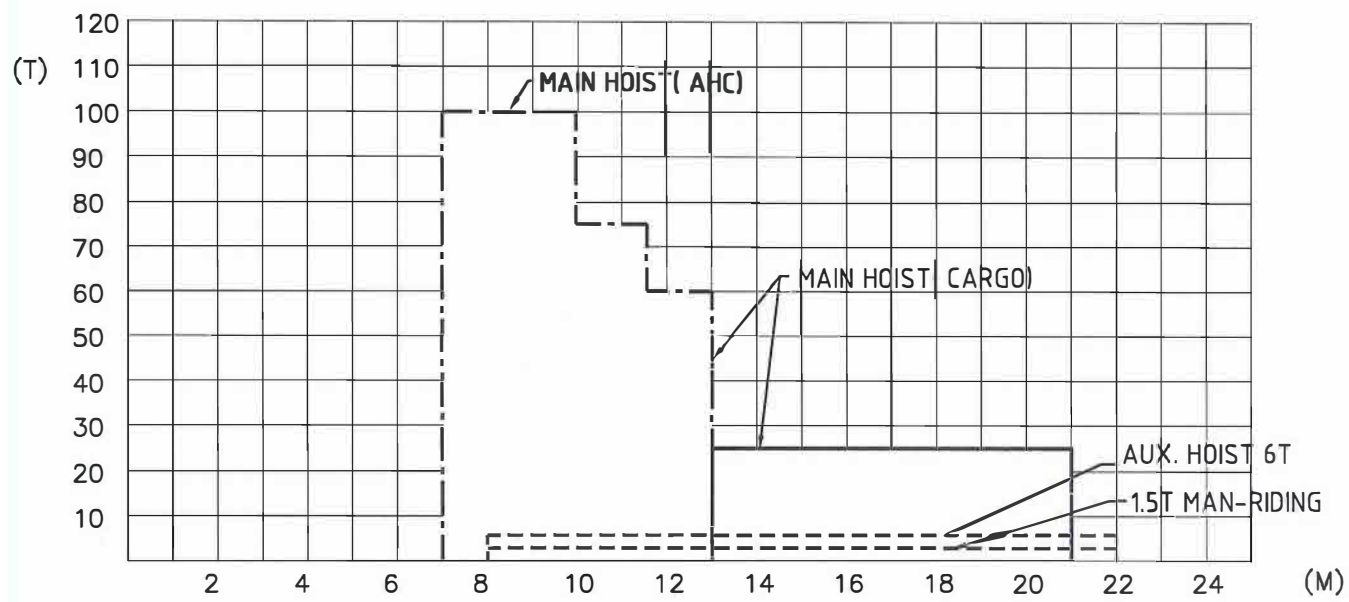
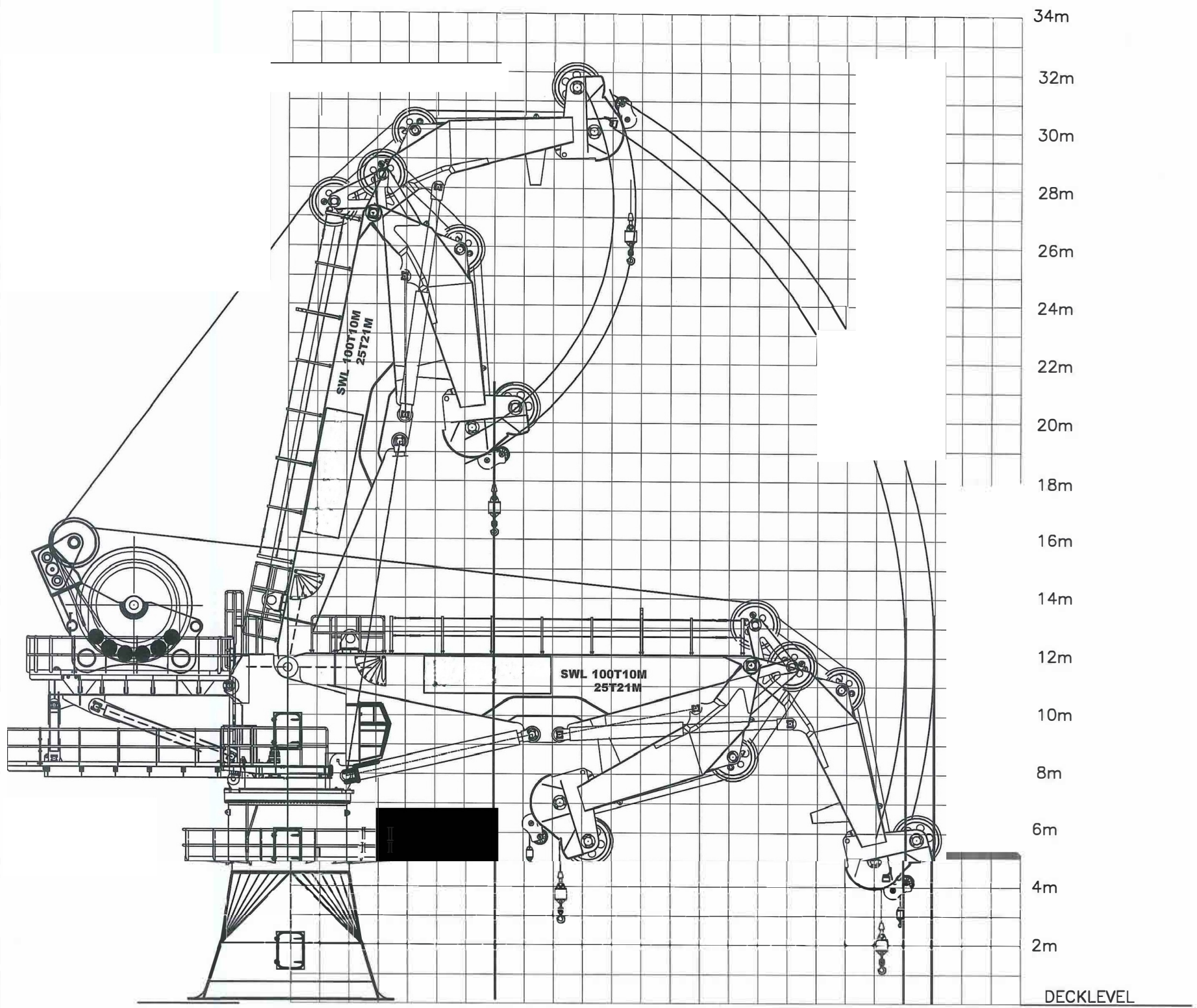
THIRD ANGLE PROJECTION

CHK'D & APP'D
 SCALE
 WT.
 SHEET

1:170

-280 T

1/1



CRANE WORKING CHART

— MAIN HOIST(ONE PART LINE)
 --- MAIN HOIST(ONE PART LINE)
 ... AUX. HOIST

01	RE-ISSUED FOR APPROVAL	16.05.14	YDG
00	ISSUED FOR APPROVAL	28.04.14	YDG
REV	DESCRIPTION	DATE	DRAWN

PROJECT NUMBER		THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION IS PROHIBITED.	
ISSUED ON 20 MAY 2014 For Approval		TITLE :	
		AHC KNUCKLE BOOM CRANE WORKING AREA	
STATUS		MODEL CODE:	CHK'D & APP'D
		ALL DIMENSIONS IN MM UNLESS OTHERWISE STATED	CCC
		THIRD ANGLE PROJECTION	SCALE
			WT.
			SHEET