AS-BUILT CRANE SPECIFICATION

PRODUCT	PEDESTAL RAM LUFFING OFFSHORE CRANE
PRODUCT REFERENCE	DHC 30/3000 O.S. RL EX (P290)

Pedestal Ram luffing offshore CRANE

This DHC 30/3000 O.S. RL is a Ram Luffing (RL) offshore crane which employs hydraulic power for its main functions – Hoisting, Slewing and Luffing. This Diesel Hydraulic version with a slew bearing diameter of 3000mm is of this size in KenzFigee standard offshore crane range, specifically designed for use on fixed offshore platform installation. This crane is optimised for small to medium day-to-day lifts at moderate radius, specifically suitable offshore production platforms and/or offshore substations.

The Ram Luffing cranes are designed for limited maintenance intervals and offer a very low total cost of ownership for cranes that are not used with high intensity. The crane contain first class West European components and equipment.

This Ram Luffing (RL) offshore crane is designed according Lloyd's Code for Lifting Appliances in a Marine Environment 2009 and supplied with 3rd party Lloyd's Register of Shipping design certificate (Design Approval Document).

The crane is manufactured in 2010 at KenzFigee premises in The Netherlands and installed on the F3-FA production platform. After one decade of loyal service this crane is for sale.

PERFORMANCE

Lifting capacity			
Main hoist	Platform	3-falls - max SWL=30t	30t @ 20m and 14t @ 37,5m
	Supply boat - SWH=0,6m	3-falls – max SWL=30t	30t @ 10m and 11t @ 37,5m
	Supply boat - SWH=3,9m	2-falls – max SWL=20t	20t @ 10m and 6t @ 37,5m
Constant Tensioning Main hoist	0-4t @ 120 m/min 1-fall		
Auxiliary hoist	Platform	1-fall - max SWL=5t	5t @ 40m
	Supply boat - SWH=3,9m	1-fall - max SWL=5t	5t @ 40m
	FRC handling – SWH=3,0m	1-fall - max SWL=4t	4t @ 40m
Constant Tensioning Aux. hoist	0-4t @ 120 m/min 1-fall		
Hook speeds	Variable load dependent speed, step-less from zero to maximum SWL		
Main hoist	*0-15 m/min (3-falls with 30t) 0-30 m/min (3-falls with 0t)*		
Auxiliary hoist	*0-120 m/min (1-fall with 5t) 0-120 m/min (1-fall with 0t)*		
Slewing	Double row ball-bearing with internal gear teeth		
Slewing range	Unlimited (n x 360^0) due to Slip ring body (EX rated)		
Slewing speed	0-1.0 rpm		
Luffing	Two (2) double-acting cylinders		
Luffing time full load	Approx. 100 sec. max to min radius		
Main hoist range	6,6m – 37,5m		
Auxiliary hoist range	7,5m – 40m		
Modes of operation	Deck lift Operations		
	Supply boat Operations		
	FRC Handling		

DESIGN CRITERIA

Main design code	LAME 2009			
Ambient working Temperature	-10° C up to +26° C			
Design wind speeds	20 m/s and 63 m/s stored			
Structural Design life	30 years			
Crane Duty-Cycle Classification	According NEN 2018			
Class of Utilization	B			
State of loading	1 from main hoist and 3 for aux hoist			
Group classification for Crane	3 from main hoist and 5 for aux hoist			
Classification of Mechanisms:	Main hoist	Aux hoist	Luffing	Slewing
Duration of use	T3	T4	T4	T4
Spectrum class	L3	L3	L2	L2
Group classification for Mechanism	M4	M5	M4	M4

Hazardous Area Classification	Crane
Zone	Zone 2
Class	IIA
Temperature Class	T3

INTERFACE DATA

Nominal Weight	
Crane gross wet weight	78t
Pedestal adapter (tapered)	4.5t (1600mm height, interface ø2542mm)
Dynamic overturning moment	(at slew bearing level, +/- 10%)
Max. Dyn. Overturning moment	12400 kNm
Max. Dyn. Axial Force	1120 kN
Max. Dyn. Radial Force	50 kN
Max. Dyn. Slewing Moment	475 kNm
Power Unit	Main driver
*Main power (**DHC**)*	Caterpillar 3406 DI-TA four stroke Diesel engine with exhaust muffler and spark arrestor (Zone 2)

OUTFITTING

Preservation / paint acc	Ameron International Sa 2 1/2 according to ISO 8501-1	
Layer	***Min. DFT (µm)***	***System***
Layer 1	75	Dimetcote 9, inorganic zinc silicate
Layer 2	40	Amercoat 71 TC, epoxy tiecoat
Layer 3	125	PSX 700, epoxy polysiloxane topcoat
Total	240	

Failure philosophy	Cabin support structure will be the last to fail
Mechanical	Fail safe spring loaded hydr. released parking brake on primary shaft of winch drive gear box and slewing gear box
	Emergency shut-off valve in engine air inlet and fuel governor, initiated only by Diesel overspeed, low-booster pressure or emergency stop push-button application
	Main Hoist Hook catcher
	100% RotaBolts at inner and outer slew bearing
Hydraulic	Full size pressure relief valves in all systems
	Hydraulic lock valves directly on winch motors
	Hydraulic lock/brake valve directly mounted to each luffing cylinder and one (1) cylinder can hold the load should the other fail
Electric	Control power batteries back-up for 30 min of autonomous working
	Emergency stop push button in cabin
	Interlock to allow starting only with all function in neutral
	Limit switches on hoists for extreme hook positions
	Luffing-down cut-out at 110% of permissible load moment (reverse possible)
	Aircraft Warning Light at top of boom, Warning horn to deck crew operated by push button, Temperature monitoring on boom

Automatic & Manual Overload Protection System	Manually activated winch brake release and rope pay-out under back tension incl. last windings limit override and break-away rope link to the winch drum
Manual emergency operation	Lowering of the hook, Boom lowering by opening a ball value, Emergency slewing brake release (slewing by external force)
Powered emergency operation	By means of separate E-motor and selector valves, Emergency lowering of hooks and boom, Emergency slewing, Emergency hoisting AH and luffing up 5t
Maintenance	Suitable foundation with removable service crane
	Water tight hatch in mainframe
	Walkway near winch and left side along the complete boom