as-built crane specification

product range - Knuckle Boom Crane

product reference - EHC 200/4300 OS KB

A crane next to a body of water

Description generated with high confidence

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **PERFORMANCE** | | | | | |
|  | ***Lifting/Load Capacity*** |  | (heel/trim - 3°/2°) | | |
|  | *Main Hoist* |  | Onboard SWH=0m: 2-fall, 200t @ 20m // 1-fall, 100t @ 37m | | |
|  |  |  | 100t weight in air / 80t submerged weight, lifting from 3300m water depth | | |
|  | *Aux. Hoist* |  | Offboard SWH=2m: 1-fall, 25t @ 47m | | |
|  |  |  | 25t weight in air / 20t submerged weight, lifting from 100m water depth | | |
|  | *Tugger Winch* |  | 2-off, 0-10t including constant tension, 1-fall | | |
|  |  |  |  | | |
|  | ***Hook Speeds*** |  | Variable load dependent speed, step-less from zero to maximum | | |
|  | *Main Hoist* |  | Offboard lifts | | Onboard Lifts |
|  | *Fall arrangement* |  | 1-fall | 2-fall | 1-fall & 2-fall |
|  | *Speed @ max. SWL 1st layer [m/min]* |  | 29 m/min | 15 m/min | Reduced to 50% of normal speeds |
|  | *Speed @ max. SWL last layer [m/min]* |  | 45 m/min | 22.5 m/min | Reduced to 50% of normal speeds |
|  | *Speed @ empty hook last layer [m/min]* |  | 120 m/min | 60 m/min | Reduced to 50% of normal speeds |
|  |  |  |  | | |
|  | *Aux Hoist* |  |  | | |
|  | *Speed with maximum SWL [m/min]* |  | 40 m/min | | |
|  | *Speed with empty hook [m/min]* |  | 100 m/min | | |
|  | *Tugger Winch* |  | 75m/min constant tension speed | | |
|  |  |  |  | | |
|  | ***Active Heave Compensation*** |  |  | | |
|  | *Main hoist* |  | 100t weight in air / 80t submerged weight @ 60 m/min at 3300m water depth | | |
|  |  |  | Empty hook @ 90 m/min at 3300m water depth | | |
|  |  |  |  | | |
|  | ***Slewing*** |  | Three row roller-bearing | | |
|  | *Slewing Range* |  | n x 360°. | | |
|  | *Slewing speed* |  | Up to 1.0 rpm | | |
|  |  |  |  | | |
|  | *Modes of operation* |  | Deck lift operations | | |
|  |  |  | Barge lift operations | | |
|  |  |  | Supply boat operations | | |
|  |  |  | Personnel lift operations | | |
|  |  |  | Subsea operations | | |
|  |  |  |  | | |

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| **DESIGN CRITERIA** | | | | | | | | | | | | | |
|  | | ***Design*** |  | |  | | | | | | | | |
|  | | *Classification by* |  | | Lloyds Register | | | | | | | | |
|  | | *Main Design Codes* |  | | LR CLAME, 2016 | | | | | | | | |
|  | |  |  | | NMA, DSB regulations concerning deck cranes on mobile offshore units | | | | | | | | |
|  | |  |  | |  | | | | | | | | |
|  | | ***Crane Duty-Cycle Classification*** |  | | according FEM 1.001 | | | | | | | | |
|  | | *Class of Utilization* |  | | U5 | | | | | | | | |
|  | | *State of loading* |  | | Q1 | | | | | | | | |
|  | | *Group classification for Crane* |  | | A4 | | | | | | | | |
|  | |  |  | |  | | | | | | | | |
|  | | ***Classification of Mechanisms:*** |  | | Aux. hoist | | Main hoist | Slewing | | Luffing | Folding | Tuggers | |
|  | | *Duration of use* |  | | T5 | | T5 | T6 | | T6 | T6 | T2 | |
|  | | *Spectrum class* |  | | L1 | | L1 | L1 | | L1 | L1 | L3 | |
|  | | *Group classification for Mechanism* |  | | M4 | | M4 | M5 | | M5 | M5 | M3 | |
| **INTERFACE DATA** | | | | | | | | | | | | |
|  | ***Weights*** | | |  | |  | | | | | | |
|  | *Crane gross measured mass* | | |  | | 443t (1000m wire, excluding factors) | | | | | | |
|  | *Delta 3380m – 1000m wire* | | |  | | 64t | | | | | | |
|  | *Pedestal* | | |  | | Subject to height, deck interface and access | | | | | | |
|  |  | | |  | |  | | | | | | |
|  | ***Pedestal Dyn. Overturning moment*** | | |  | | (at slew bearing level, 88t @ 25m, SWH2m Barge Lift, +/- 5%, factored load incl wind) | | | | | | |
|  | *Max. Dyn. Overturning moment* | | |  | | 64000kNm | | | | | | |
|  | *Max. Dyn. Axial Force* | | |  | | 7100kN | | | | | | |
|  | *Max. Dyn. Radial Force* | | |  | | 1500kN | | | | | | |
|  | *Max. Dyn. Slewing Moment* | | |  | | 9100kNm | | | | | | |
|  |  | | |  | |  | | | | | | |
|  | ***Power Unit*** | | |  | | S1 | | | S6 | | Starting method | |
|  | *Main Power* | | |  | | 3 x 400kW (S1-100%) | | | 3 x 560kW (S6-10%) | | Star/Delta | |
|  | *Emergency Power* | | |  | | 1 x 100kW (S1-100%) | | |  | | DOL | |
|  |  | | |  | |  | | | | | | |
|  | ***Utilities*** | | |  | | Power and signals via slip ring | | | | | | |
|  | *Main Power* | | |  | | 440V / 60Hz, 3-ph (3-off main driver motor) | | | | | | |
|  | *Auxiliary Power* | | |  | | 440V / 60Hz, 3-ph (for Lighting & heating, Air conditioner and Power socket) | | | | | | |
|  | *Emergency Power* | | |  | | 440V / 60Hz, 3-ph (for Emergency pump motor and Crane control system) | | | | | | |
|  | *UPS* | | |  | | 230V / 60Hz, 1-ph (Aircraft warning lights) | | | | | | |
|  |  | | |  | |  | | | | | | |
|  | ***Power consumption*** | | |  | |  | | | | | | |
|  | *Main* | | |  | | 3 x 680kVA intermittent, 3 x 485kVA continuous | | | | | | |
|  | *Auxiliary* | | |  | | 21kVA | | | | | | |
|  | *Emergency* | | |  | | 125kVA | | | | | | |
|  | *UPS* | | |  | | 72VA | | | | | | |