



Majestic Offshore, Inc

TECHNICAL PROPOSAL POWER CATWALK™ For Quotation # 7256

STRIKE PUMPS

March 21, 2011

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POWER CATWALK 3000

PROJECT INFORMATION

Application: TBD

Rig No: TBD

Location: TBD

Inquiry Date:

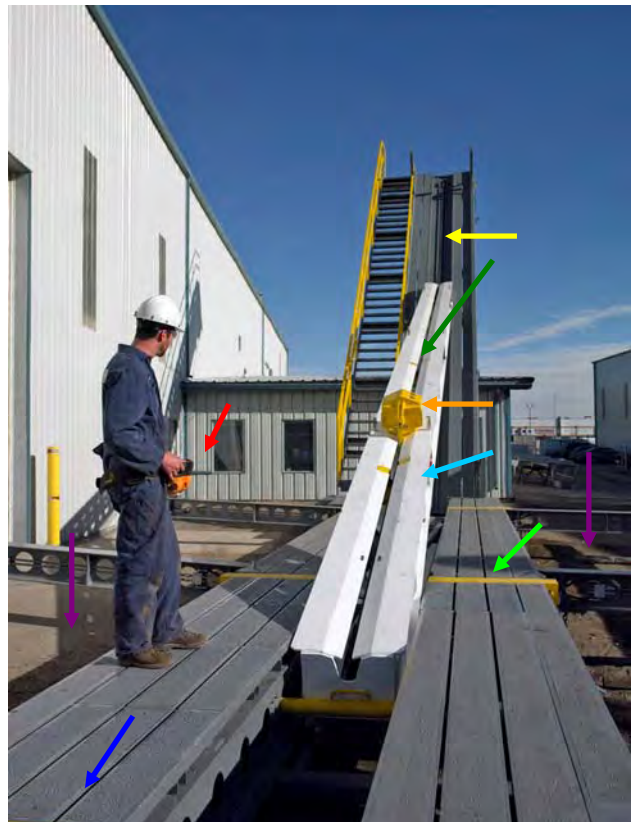
Client Ref. No:

SYSTEM SCOPE OF SUPPLY

1. INTRODUCTION

Canrig's line of Automated Power Catwalks set the standard for efficiency, safety and reliability by transferring all tubulars from the pipe racks to the drill floor. The automated system eliminates the necessity for any manual handling of tubulars. The ranges of products offered are suitable for virtually any drilling rig regardless of size or configuration.

- ← Wireless Remote Control
- ← Carrier
- ← Catwalk Deck
- ← Skate
- ← Pipe Rack Arm
- ← Kicker
- ← Indexer
- ← V-door Ramp



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2. Catwalk/Pipe Racks

- 2.1. Pipe rack configuration consists of three pipe arms hinged to catwalk, complete with hydraulically actuated angle adjustments. This feature allows operators to transfer tubular to and from the indexers on the Catwalk. Pipe rack arm length - 10ft / 3 meters.
- 2.2. Working Height: 26 or 42 in. (to be specified by customer).
- 2.3. Three indexers per side feed pipe into and away from center on either side of the catwalk.
- 2.4. Maximum tubular length capacity: 45 ft.

3. Carrier

- 3.1. Integral to the catwalk and located in the center of it, the carrier moves the tubulars from the horizontal position to the rig floor and back again.
- 3.2. Accommodates tubulars that have the following characteristics:
 - 3.2.1. Length 5ft to 48ft / range 3 single.
 - 3.2.2. OD 20 in. or less.
 - 3.2.3. Weight 10,000 lbs or less.
- 3.3. Hydraulic winch mechanism features a tail lift design allowing presentation of tubulars to the drill floor position at the correct angle and height to facilitate a safe and efficient transfer to and from the elevators. Winch cable safety factor of 100% is achieved through the dual cable system. Ton-/Mile statistics are logged and recorded via the system PLC.
- 3.4. Carrier is equipped with a skate which can be hydraulically positioned along the length of the carrier. This feature allows the transfer of tubulars of any length between 5ft and 48ft.
- 3.5. Cycle time to transfer tubular from catwalk to rig floor or from the rig floor to the catwalk is less than 20 seconds.
- 3.6. Equipped with safety pins that engage automatically to prevent tubulars from rolling off of the carrier inadvertently.

4. V-Door Ramp

- 4.1. Replaces conventional V-door and provides travel path for the carrier. If required, the ramp can be used as a conventional V-door.
- 4.2. Mounted to substructure.
- 4.3. Available in structure height from 18ft to 35 ft (customer specified)
- 4.4. Hinged to catwalk allowing simple rig up/down, rapid deployment and ease of transport.
- 4.5. Available in structure height from as low as 16 ft if the 42" deck option is chosen

5. Hydraulic Power Unit

- 5.1. 75 HP, 3 phase TEFC electric motor.
- 5.2. Direct Coupled 5000 PSI, 65 GPM Axial Piston Pump.

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- 5.3. Proportional Control Valves with manual override.
- 5.4. Forced Air Cooled
- 5.5. High temperature and Low level shut downs.

6. Control System

- 6.1. State of the art Programmable Logic Controller (PLC) facilitates full automation and advanced safety features.
- 6.2. Control Console located at rear driller's side position of catwalk.
- 6.3. Controlled functions:
 - 6.3.1. Pipe rack arm up/down.
 - 6.3.2. Indexer activation
 - 6.3.3. Kicker activation
 - 6.3.4. Carrier up/down.
 - 6.3.5. Skate position adjustment.
- 6.4. **OPTION – Wireless Remote Control Device** (priced separately). Lightweight wireless device capable of operating all functions from a distance of up to 1500ft of PLC. C/W harness allowing operator to move freely while maintaining ability to duplicate the control of all functions. All weather protective stand and holder for Remote Control; comes complete with the mounting post for mounting to the rig floor or any handrail.
 - 6.4.1. Allows for proportional control of carrier/skate

- 7. **OPTION – Installation, Supervision & On-Site training** (priced separately). Canrig to supply one field technician to facilitate installation (Max 6 days including travel time). Includes complete installation and commissioning. Training will include rig up rig down procedures, operational training and routine maintenance. Additional technician days for training available at applicable call out rate.

8. OPTION – INITIAL SPARE PARTS – TBD

9. Custom Paint Upgrade – Color code to be specified at time of order.

10. Electrical Requirements

- 10.1. 480/600 Volt, 3 phase, 100 Amp service with Crouse Hinds / Appleton AR male connector on junction box mounted under catwalk.

11. General Customer Responsibilities

- 11.1. Electrical Supply as detailed above.
- 11.2. Supply all required labor and materials including welder for installation.
- 11.3. All travel and sustenance expenses to be charged at cost plus 10%
- 11.4. Service “check-up” at 3 and 12 month intervals.
- 11.5. All oils and lubricants in accordance with Canrig Specifications.
- 11.6. Any required structural modifications or analysis to customer's equipment.

12. General Canrig Responsibilities

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- 12.1.Pre-Installation rig survey (exclusive of travel and sustenance expenses).
- 12.2.Installation Drawing
- 12.3.Operating and maintenance manuals in electronic and hard copy format.

13. SPECIFICATIONS

	Power Catwalk™ 500	Power Catwalk™ 1000	Power Catwalk™ 2000	Power Catwalk™ 3000	Power Catwalk™ 4000	Power Catwalk™ 5000
Rig Type	Workover	Workover	Drilling	Drilling	Drilling	Offshore Drilling
Tubular Length Maximum	28' to 32'	32' - Range 2 Single	45' - Range 3 Single	45' - Range 3 Single	50' - Range 3 Single / 65' - Range 2 Double	45' - Range 3 Single
Tubular OD Maximum	N/A	6.25"	13.375"	20"	24"	24"
Tubular Weight Maximum	1,000 lbs	2,000 lbs	6,000 lbs	10,000 lbs	10,000 lbs	10,000 lbs
Cycle Time	30 seconds	15 seconds	18 seconds	20 seconds	30 seconds	40 seconds
Drill Floor Height Range	4' to 10'	7' to 14'	12' to 18'	18' to 35'	22' to 40'	Build to Suit
Catwalk Height	42"	42"	42"	26" or 42" (*H)	42"	42"
Working Dimensions	7' 6" H x 12' W x 36' L	42" H x 9' 6" W x 45' L	42" H x 30' 6" W x 60' L	*H x 28' 6" W x 60' L	42" H x 28' 6" W x 65' or 74' L	Build to Suit
Transport Dimensions	7' 6" H x 8' W x 36' L	5' 6" H x 5' 6" W x 45' L	8' 6" H x 11' 6" W x 60' L	10' 6" H x 10' 6" W x 60' L	10' 6" H x 10' W x 60' L	Build to Suit
Weight Total	10,000 lbs	12,000 lbs	35,000 lbs	60,000 lbs	76,000 lbs	71,000 lbs
Standard HPU Drive System	Diesel	Diesel	Electric	Electric	Electric	Electric
Supply Power Required	N/A	N/A	48V / 100 Amp	480V / 100 Amp	480V / 150 Amp	480V / 150 Amp

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