P.K.S.K	**South Pars Gas Field Development Phases 15&16 Onshore Facilities**	N.I.O.C.
	Doc Title : MECHANICAL DATA SHEET FOR CRANE 105-X-101/201/301/401	Pars Oil and Gas Company
	Doc. Number:VP-1051-105-X-101-046	**Rev.: 3 Class: 1**

		Unit	CONTRACTOR DATA	VENDOR DATA	Rev.
1	PURPOSE		Maintenance of Expander Compressor 105-XK-101		
2	DUTY		Intermittent maintenance	Intermittent maintenance	
3	QUANTITY		4 (Note 1)	4 (Note 1)	
4	DRIVER TYPE				
5	Travel (Manual or Electric Motor)		Electric Motor	Electric Motor	
6	Trolley (Manual or Electric Motor)		Electric Motor	Electric Motor	
7	Hoist (Manual or Electric Motor)		Electric Motor	Electric Motor	
8	MANUFACTURER NAME		By Vendor	STAHL	
9	TYPE (Overhead Travelling / Suspension / Gantry / Crab / Jib)		Overhead Travelling / Top Riding	Overhead Travelling / Top Riding	
10	MODEL		**To be specified Later**	**SH4010-25EX 4/1 L3 (STAHL)**	
11	LOCATION		Under Shleter and Outdoor	Under Shleter and Outdoor	
12	AREA CLASSIFICATION		Zone 2, IIB, T3	Zone 1, IIB, T4	
13	DESIGN DATA				
14	Main hook rated load	Kg	**3300**	4000	
15	Auxiliary hook rated load	Kg	N/A	N/A	
16	Span (B)	mm	6600	**6600**	
17	Beam (Girder)			BOX	
18	Travel (Runway) Length (T)	mm	17000	**17000**	
19	Elevation (L)	mm	8500	**GL+8500**	
20	Highest Hook Elevation (F)	mm	8530	**GL+8530**	
21	Min. Head Room (E)	mm	By Vendor	2000	
22	Beam Size	mm	By Vendor	N/A	
23	Working floor elevation	mm	G.L + 0	G.L + 0	
24	Control floor elevation (U)	mm	N.A	N.A	
25	Power supply		400V 50Hz 3ph	400V 50Hz 3ph	
26					
27	DESIGN CODES		**RP-1516-999-2123-001**	**RP-1516-999-2123-001**	
28					
29	**OPERATING DATA**				
30	Lifting capacity				
31	Main hoist	Kg	**3300**	4000	
32	Auxiliary hoist	Kg	N/A	N/A	
33	Normal/Slow speed				
34	Main hoist	m / min	Variable	6.3/1	
35	Main travel (runway)	m / min	Variable	20/5	
36	Main trolley	m / min	Variable	20/5	
37	Auxiliary hoist	m / min	N/A	N/A	
38	Auxiliary travel (runway)	m / min	N/A	N/A	
39	Auxiliary trolley	m / min	N/A	N/A	
40					
41	**CONSTRUCTION FEATURES**				
42	Girder type				
43	Box girder		N/A	N/A	
44	Latticed girder		N/A	N/A	
45	Beam girder (Single/Double)		Single	Single	
46	Bolted / Welded / Riveted		By Vendor	Bolted / Welded	
47	Deflection rate (δ / L)		By Vendor	1/1000	
48	Maintenance type				
49	Walkway on girder		By Vendor	N/A	
50	Type (Checked plate, Plate)		By Vendor	N/A	
51	Location (one side or both side)		By Vendor	N/A	
52	Handrail		By Vendor	N/A	
53	Access Ladder & Inspection deck		By Vendor	N/A	
54					

NOTES:

1) This Datasheet is also valid for 105-XK-201,105-XK-301-105-XK-401 crane
2) All equipment & accessories, mentioned in this data sheet shall be provided by Vendor.
(All equipment required for crane operation shall be provided by Vendor, except shelter itself only.)
3) The hoist shall be equipped with 2 brakes each capable of holding full rated load independently of each other.
4) The crane shall be equipped with long travel and cross traversing motion brakes capable of bringing a fully loaded crane to rest, without shock from the highest speed it can attain.
5) All electrical & instrument shall be designed & provided, in accordance with area classification.
6) If provided, it should be along the entire length of one side of the crane bridge.
7) Crane should be operated by Mobile pendant (moving along with cross travelling beam should be considered. But pendant cable should be provided up to G.L + 1000mm.

NARGAN

This document is the property of N.I.O.C.. Any unauthorized attempt to reproduce it, in any form, is strictly prohibited.

		Unit	CONTRACTOR DATA		VENDOR DATA		Rev.
1	Travel (Runway) rail						
2	Type		By Vendor		REC		
3	Deflection rate (δ / L)		By Vendor		1/750		
4	Size (H x W)	mm	By Vendor		40x30		
5	Wheels		BRIDGE	TROLLEY	BRIDGE	TROLLEY	
6	Number / Diameter		By Vendor	By Vendor	125X4	100X4	
7	Loads (Max. / Min.) per each wheel		By Vendor	By Vendor	2250/375	950/125	
8	Material		Non-Sparking	Non-Sparking	Non-Sparking	Non-Sparking	
	Type		Double Flanged		Double Flanged		
9	Brakes type						
10	Holding brake		By Vendor		EL-magnetic disk		
11	Control brake		By Vendor		ELECTRICAL		
12	Hooks						
13	Material		Non-Sparking		Non-Sparking		
14	Type		Spring safety catch		Spring safety catch		
	Block Type		Free Rotating		360'		
15	Main hoist wire ropes						
16	Material (Stands/Core)		steel / steel		steel / steel		
17	Type (Number of stands per rope)		By Vendor		152		
18	Number of wire per stand		By Vendor		6		
19	Rope diameter		By Vendor		9		
20	Maximum allowable strength	kg	By Vendor		64		
21	Auxiliary hoist wire ropes		N/A		N/A		
22	Material (Stands/Core)		N/A		N/A		
23	Type (Number of stands per rope)		N/A		N/A		
24	Number of wire per stand		N/A		N/A		
25	Rope diameter		N/A		N/A		
26	Maximum allowable strength	kg	N/A		N/A		
27	Chains type & size						
28	Main hoist / Auxiliary hoist		By Vendor		WIRE ROPE		
29	Travel (runway) conductors and collectors						
30	Type		Cable Trolley with Festoon		Cable Trolley with Festoon		
31	Enclosure (Sheaths/Ducts/Exposed)		By Vendor		Exposed		
32	Trolley conductors and collectors						
33	Type		Cable Trolley with Festoon		Cable Trolley with Festoon		
34	Enclosure (Sheaths/Ducts/Exposed)		By Vendor		Exposed		
35	Main hoist drum						
36	Type (Solid/Hollow)		By Vendor		hollow		
37	Material		By Vendor		steel		
38	Diameter		By Vendor		166.5		
39	Auxiliary hoist drum		N/A		N/A		
40	Type (Solid/Hollow)		N/A		N/A		
41	Material		N/A		N/A		
42	Diameter		N/A		N/A		
43	Safety features						
44	Over load limiter		Required		provided		
45	Upper & Lower limit switches		Required		provided		
46	Trolley limit switches		Required		provided		
47	Travel (runway) limit switches		Required		provided		
48	End stopper		Required		provided		
49	Saddle (Bridge) bumpers		Required		provided		
50	Fail safe		Required		provided		
51	Controls for travelling, trolley, hoisting						
	Radio Control		Required		II 3G EX nA (Zone 2)		
52	From cabin		N/A		N/A		
53	Cabin location(left, right, center)		N/A		N/A		
54	From pendant on (service) floor		Pendant on floor		N/A		
55	Pendant location (left, right, on trolley)		on trolley		N/A		
56	Pendant type		Double insulated type		N/A		
57	Signaling devices (Audible/Light)		Audible & Light		Audible		
58	Aux .voltage of control circuit		230V / 1ph / 50Hz		DC-48 V BY IRAN SAKHT		
59							

NOTES:

1) Guards shall be provided in front of each outside wheel and shall project below the top of the runway rail.
2) Material of wheels shall be spark proof and can withstand against loads to avoid any wear and deformation

NARGAN

This document is the property of N.I.O.C.. Any unauthorized attempt to reproduce it, in any form, is strictly prohibited.

		Unit	CONTRACTOR DATA	VENDOR DATA	Rev.
1	General for All Electric Motors				
2	Manufacturer		By Vendor	STAHL	
3	Voltage / Phase / Hz		400 V, 3Ph, 50Hz	400 V, 3Ph, 50Hz	
4	Insulation class / Temp. rise		F / B	F / B	
5	Enclosure (Type / IP Grade)		TEFC / IP 55	TEFC / IP 55	
6	Gears manufacturer		By Vendor	STAHL	
7	Travelling (runway) electrical motor design				
8	Total Q'ty of motor		By Vendor	2 SETS LONG TRAVEL DRIVE	
9	Travelling BHP / Nameplate Power		By Vendor	0.71/4.8	
10	Speed	rpm	2 Speed Required	2 Speed Required	
11	Trolley electrical motor design				
12	Total Q'ty of motor		By Vendor	1SET CROSS TRAVEL	
13	Trolley BHP / Nameplate Power		By Vendor	0.06/0.25	
14	Speed	rpm	2 Speed Required	2 Speed Required	
15	Main hoist electrical motor design				
16	Total Q'ty of motor		By Vendor	1 SET HOIST MOTOR	
17	Hoisting BHP / Nameplate Power		By Vendor	0.06/0.32	
18	Speed	rpm	2 Speed Required	2 Speed Required	
19	Auxiliary hoist electrical motor design		N/A	N/A	
20	Total Q'ty of motor		N/A	N/A	
21	Hoisting BHP / Nameplate Power		N/A	N/A	
22	Speed	rpm	N/A	N/A	
23					
24	**INSPECTION AND TESTS AT WORKS**				
25	QC Control review		Yes Review	Yes Review	
26	Material certificates		Yes Review	Yes Review	
27	Checking of dimensions		Yes Witnessed	Yes Witnessed	
28	Test of limit switches		Yes Witnessed	Yes Witnessed	
29	Speed test		Yes Witnessed	Yes Witnessed	
30	Static load test (125% rated load)		Yes Witnessed	Yes Witnessed	
31	Statical weld inspection with die penetrant		Yes Witnessed	Yes Witnessed	
32					
33	**TESTS AFTER ERECTION**				
34	Full functional test		Yes Witnessed	Yes Witnessed	
35	Test of limit switches		Yes Witnessed	Yes Witnessed	
36	Speed test		Yes Witnessed	Yes Witnessed	
37	Static load test (125% rated load)		Yes Witnessed	Yes Witnessed	
38	Dynamic load test		Yes Witnessed	Yes Witnessed	
39	Checking of controls and safety features		Yes Witnessed	Yes Witnessed	
40					
41	**LOADS**				
42	Static load		By Vendor	OK	
43	Dynamic load		By Vendor	OK	
44	Max vertical load per wheel		By Vendor	21.7 Kn	
45	Max cross horizontal load per wheel		By Vendor	4.4 Kn	
46	Max long horizontal load per rail		By Vendor	5.5 Kn	
47					
48	**WEIGHTS**				
49	Total	kg	By Vendor	1700	
50	Hoist with trolley itself	kg	By Vendor	500	
51	Travelling (runway) rail	kg	By Vendor	350	
52	Girder including all attached structures	kg	By Vendor	1150	
53					

NOTES:

NARGAN

This document is the property of N.I.O.C.. Any unauthorized attempt to reproduce it, in any form, is strictly prohibited.

P.K.S.K	**South Pars Gas Field Development Phases 15&16 Onshore Facilities**	N.I.O.C. Pars Oil and Gas Company
	Doc Title : MECHANICAL DATA SHEET FOR CRANE 105-X-101/201/301/401	
	Doc. Number:VP-1051-105-X-101-046	**Rev.: 3 Class: 1**

		Unit	CONTRACTOR DATA	VENDOR DATA	Rev.
1	**SCOPE OF SUPPLY**				
2	Overhead crane with auxiliaries		Required	OK	
3	Girder & other steel structure for crane operation.		Required	OK	
4	Walkway with handrail on girder		By Vendor	N/A	
5	Access Ladder & Inspection deck		By Vendor	N/A	
6	Travelling (runway) rails with fixing devices		Required	WELDING BY CUSTOMER	
7	Electrical equipment & instrumentation (Refer to the page 8 & 9 of this data sheet)		Required	OK	
8	Travel (runway) conductors and collectors		Required	Cable Trolley with Festoon	
9	Trolley conductors and collectors		Required	Cable Trolley with Festoon	
10	Pendant Controller		Required	N/A	
11	Crane Lighting		Required	N/A	
12	Warning devices, such as warning lamps and sirens		Required	HORN	
13	Non-sparking protection for wheel, hook & wire		Required	OK	
14	Name plates		Required	OK	
15	Special tools		Required, if any	N/A	
16	Spare parts for precommissioning		Required	N/A	
17	Spare parts for commissioning		Required	N/A	
18	Spare parts for two years of operation		Required	OK	
19	Others required in this data sheet & requisition		Required		
20					
21	**MISCELLANEOUS**				
22	ISO 9001 certification		Required	N/A	
23	References		Required	OK	
24	Documentation		Required as per Material Requisition List		
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					

NOTES:

NARGAN

This document is the property of N.I.O.C.. Any unauthorized attempt to reproduce it, in any form, is strictly prohibited.

** Elevation Schematic

** Plan Schematic

DIMENSION TABLE

Unit : mm

No.	DESCRIPTION	Contractor	Vendor
A	DISTANCE BETWEEN BUILDING AND RUNWAY BEAM	480	480
B	SPAN	6600	6600
C	DISTANCE BETWEEN BUILDING AND RUNWAY BEAM	480	480
D	TOTAL CRANE LENGTH	By Vendor	6766
E	HEADROOM	By Vendor	430
F	HIGH HOOK ELEVATION	8530	GL+8530
G	HOOK APPROACH	By Vendor	1113
H	TOTAL HOOK TRAVEL	By Vendor	4575
K	HOOK APPROACH	By Vendor	912
L	DISTANCE BETWEEN WORK. FLOOR AND TOP OF BEAM	8500	8500
M	HEIGHT BETWEEN TOP OF BEAM AND HIGHEST POINT OF CRANE GIRDER (for single girder) & HOIST (for double girder)	By Vendor	Max 1000
N	LONGITUDINAL TRAVEL	15000	15000
O	DISTANCE BETWEEN GROUND FLOOR AND PENDANT	1000	1000
P	CLEARANCE (LONGITUDINAL) as minimum as possible	By Vendor	1000
Q	CLEARANCE (LONGITUDINAL) as minimum as possible	By Vendor	1000
R	OVER HEAD CLEARANCE	2500	2000
T	RUNWAY BEAM LENGTH	17000	17000
U	DISTANCE BETWEEN CONTROL FLOOR AND PENDANT	Not Applicable	Not Applicable
V	DISTANCE BET. WORK. FLOOR AND PRIMARY SWITCH BOX	1200	1200
W	WHEEL SPACING	By Vendor	1520

This document is the property of N.I.O.C.. Any unauthorized attempt to reproduce it, in any form, is strictly prohibited.

SCOPE OF ELECTRICAL & INSTRUMENT (1 OF 2)

Note) "*" marks mean Vendor's scope of supply. (Conduit pipe and fixing device, cable hanger, traveling hanger rail and support shall be included in Vendor's scope of supply.)

This document is the property of N.I.O.C.. Any unauthorized attempt to reproduce it, in any form, is strictly prohibited.

SCOPE OF ELECTRICAL & INSTRUMENT (2 OF 2)

1. Purchaser will provide only one (1) main power feeder of 400V, 3ph, 3 wire, 50Hz for the equipment. All other secondary circuit including control panel with suitable contactor, power & control cable, control circuit shall be included in Vendor's scope of supply. All electrical & instrument materials should be complied with hazardous requirements.

2. One (1)-ISO metric female threaded hub shall be provided at bottom side of primary switch panel for external cable connection. This hub size will be informed later on. If Vendor's standard hub size is different from Purchaser requirement, the appropriate male-female metric threaded adaptor shall be provided by Vendor.

3. All cable connection shall be the packing type cable gland. And cable gland should be provided by Vendor.

4. The specification of cables supplied by Vendor shall be approved by Purchaser.

5. Primary switch panel will be installed at floor accessible level (e.g. Floor Level +1.2 meter). Therefore, Vendor should consider this information for the cable length estimation between primary switch panel and local control panel.

6. Vendor should inform the details of primary switch panel as follows:

   6.1. Type of primary switch in panel (MCCB or Disconnecting Switch) (If disconnecting switch will be provided, it shall be capable of circuit disconnecting under full load current of motors during normal operation.)

   6.2. Dimensional outline drawing or dimension information (including location drawings for electrical devices)

   6.3. Terminal arrangement for external cable connection

7. Short circuit protection device (10kA) such as MCCB shall be provided at the primary side of motor feeders at Vendor's local control panel for hosting, traversing and travelling motors respectively.

NARGAN

This document is the property of N.I.O.C.. Any unauthorized attempt to reproduce it, in any form, is strictly prohibited.