



نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

DATA SHEETS FOR LV INDUCTION MOTORS

نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادر کننده	بسته کاری	پروژه
D02	0008	DT	EL	120	PEDCO	GCS	BK

شماره صفحه: ۱ از ۷

طرح نگهداشت و افزایش تولید ۲۷ مخزن

DATA SHEETS FOR LV INDUCTION MOTORS

نگهداشت و افزایش تولید میدان نفتی بینک

Rev.	Date	Purpose of Issue/Status	Prepared by:	Checked by:	Approved by:	CLIENT Approval
D02	May. 2022	IFA	H.Shakiba	M.Fakharian	M.Mehrshad	
D01	FEB. 2022	IFA	H.Shakiba	M.Fakharian	M.Mehrshad	
D00	SEP. 2021	IFC	H.Shakiba	M.Fakharian	M.Mehrshad	

Class: CLIENT Doc. Number: F0Z-709025

Status:

- IDC: Inter-Discipline Check
- IFC: Issued For Comment
- IFA: Issued For Approval
- AFD: Approved For Design
- AFC: Approved For Construction
- AFP: Approved For Purchase
- AFQ: Approved For Quotation
- IFI: Issued For Information
- AB-R: As-Built for CLIENT Review
- AB-A: As-Built –Approved



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شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

DATA SHEETS FOR LV INDUCTION MOTORS



نسخه	سریال	نوع مدارک	رشته	تسهیلات	صادر کننده	بسته کاری	پروژه
D02	0008	DT	EL	120	PEDCO	GCS	BK

شماره صفحه: ۲ از ۷



REVISION RECORD SHEET

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3	X	X	X		
4	X	X	X		
5	X	X	X		
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	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک								
	DATA SHEETS FOR LV INDUCTION MOTORS								
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	پروژه BK	بسته کاری GCS	صادر کننده PEDCO	تسهیلات 120	رشته EL	نوع مدرک DT	سریال 0008	نسخه D02	شماره صفحه: ۳ از ۷



Data Sheets for LV Induction Motors			
Item	Category	Required Specification	Vendor Data
1	Driven Machine	Electrical Motor	
2	Driven Machine Tag No.	-	△
3	Manufacturer	By Vendor	△ D01
4	Manufacturer's Number / Type	By Vendor	
5	Manufacturing Standard	IEC 60034 & IPS-M-EL-131(2)	
6	Location	<input checked="" type="checkbox"/> Outdoor (Under Shelter) <input type="checkbox"/> Indoor	
7	Area Classification	Acc. to requisition data	
8	Ambient Temperature	5 to +55°C	
9	Relative Humidity	100 %	
10	Dust	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
11	Corrosion	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
12	Elevation	12.5m Above Sea Level	
13	Quantity	Acc. To Load List (BK-GCS-PEDCO-120-EL-LI-0001)	
14	Tag Number	Acc. To Load List (BK-GCS-PEDCO-120-EL-LI-0001)	
15	Motor Type	Asynchronous, Squirrel Cage	
16	Mounting	<input type="checkbox"/> Horizontal <input type="checkbox"/> Vertical	
17	Rotor Construction	<input type="checkbox"/> Brazed Copper Bars <input type="checkbox"/> Aluminum Die Cast	
18	Frame Material	Steel Sheet or Cast Iron	
19	Rotor Cage Material	By Vendor	
20	Cooling Method	IC411 According to IPS-M-EL-131(2)	
21	Ingress Protection Degree for Motor	IP 54	
22	Ingress Protection Degree for Terminal Box	IP 55	
23	Explosion Protection of Motor	N/A for Safe Area Zone 2, IIB, T3	
24	Explosion Protection of Terminal Box	N/A for Safe Area Zone 2, IIB, T3	
25	Ex. Certificate Authority/Certificate No.	By Vendor	
26	Driven Machine Shaft Power Requirement (P _{mp})	As Per Related Mechanical Data sheet (to be Specified by Vendor)	
27	De-Rating Factor due to Ambient Temperature (K _t)	Vendor Shall Advise	
28	De-Rating Factor Due to Altitude (K _a)	1	
29	Design margin (K _m)	Acc. to IPS Standard (Note 1)	

	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض							
	احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							
شماره پیمان: ۹۱۸۴ - ۰۷۳ - ۰۵۳	DATA SHEETS FOR LV INDUCTION MOTORS				شماره صفحه: ۴ از ۷			
	پروژه BK	بسته کاری GCS	صادر کننده PEDCO	تسهیلات 120	رشته EL	نوع مدرک DT	سریال 0008	نسخه D02



Data Sheets for LV Induction Motors			
Item	Category	Required Specification	Vendor Data
30	Motor Shaft Power Requirement @ Site condition (=Km X P _{mp})	By Vendor	
31	Standard Rated Motor Output =Km X P _{mp} / (K _a K _t)	By Vendor	
32	Frame Size	By Vendor	
33	Frame Earth Boss	External	
34	Rated Voltage	400 V ±10%	
35	Rated Frequency	50 Hz ±5%	
36	Protection Devices	Switch-Fuse	
37	Neutral Earthing System	TNS	
38	Voltage During Motor Start	80% Un	
39	Synchronous Speed	By Vendor	
40	Full Load Speed [RPM]	By Vendor	
41	Over Speed Capability	By Vendor	
42	Number of Poles	By Vendor	
43	Starting Method	Direct on Line	
44	Direction of Rotation (Viewed from coupling end)	Shall be Proposed by MFR Based on Driven Load Rotation of Direction	<input type="checkbox"/> CW <input type="checkbox"/> CCW <input type="checkbox"/> Unidirectional <input checked="" type="checkbox"/> Bidirectional
45	Stator Winding Connection	Delta	
46	Location of Terminal Box (Viewed from DE)	<input type="checkbox"/> Right <input type="checkbox"/> Left	
47	Insulation Class	Class F	
48	Class of Temperature Rise	Class B	
49	Max. Permissible Starting Time [s]	By Vendor	
50	Accelerating Time DOL starting, at 100% U _n [s]	By Vendor	
51	Accelerating Time DOL starting, at 80% U _n [s]	By Vendor	
52	Starting Torque at 100% U _n [N.m]	By Vendor	
53	Starting Torque at 80% U _n [N.m]	By Vendor	
54	Maximum Torque [N.m]	By Vendor	
55	Pull-Up Torque	By Vendor	
56	Locked Rotor Torque	By Vendor	
57	Rated Torque [N.m]	By Vendor	
58	Rated Current [A]	By Vendor	

	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک								
	شماره پیمان: ۹۱۸۴ - ۰۷۳ - ۰۵۳		شماره صفحه: ۵ از ۷						
DATA SHEETS FOR LV INDUCTION MOTORS		پروژه BK	بسته کاری GCS	صادر کننده PEDCO	تسهیلات 120	رشته EL	نوع مدرک DT	سریال 0008	نسخه D02

Data Sheets for LV Induction Motors			
Item	Category	Required Specification	Vendor Data
59	Max Starting Current	By Vendor	
60	No Load Current [A]	By Vendor	
61	Locked Rotor Current [A]	$<7I_n$	
62	Locked Rotor Power Factor [A]	By Vendor	
63	Torque-Speed Class	Shall be Selected Based on Driven Load Torque Requirement	[] A [] B [] C [] D
64	Duty Cycle	S1	
65	Current at 1/2 Rated Load	By Vendor	
66	Current at 3/4 Rated load	By Vendor	
67	Current at Rated Load	By Vendor	
68	Starting Power Factor	By Vendor	
69	Power Factor at 1/2 Rated Load	By Vendor	
70	Power Factor at 3/4 Rated load	By Vendor	
71	Power Factor at Rated Load	By Vendor	
72	Efficiency at 1/2 Rated Load	By Vendor	
73	Efficiency at 3/4 Rated Load	By Vendor	
74	Efficiency at Rated Load	By Vendor	
75	No Load Losses	By Vendor	
76	Stall Time (Hot/Cold) (Sec)	By Vendor	
77	Transient Reactance (X'd)	By Vendor	
78	Sub - Transient Reactance (X" d)	By Vendor	
79	Acceleration Time At 80% Un (Sec)	By Vendor	
80	Bearing (DE)		
	Type (Detail Description by Vendor)	Anti Friction (Ball Bearing)	
	Manufacturer	By Vendor	
	Minimum Life Without Load	Minimum 40000 Hours	
	Minimum Life With Load	Minimum 32000 Hours	
	Lubrication	Grease	
	Cooling Water/ Oil Capacity	N/A	
	Permissible Trust Force [N]	By Vendor	
81	Bearing (NDE)		
	Type (Detail Description by Vendor)	Anti friction (ball bearing)	
	Manufacturer	By Vendor	

 <p>NISOC</p>	<p>نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض</p> <p>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</p>																	
<p>شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴</p>	<p>DATA SHEETS FOR LV INDUCTION MOTORS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>پروژه</td> <td>بسته کاری</td> <td>صادر کننده</td> <td>تسهیلات</td> <td>رشته</td> <td>نوع مدرک</td> <td>سریال</td> <td>نسخه</td> </tr> <tr> <td>BK</td> <td>GCS</td> <td>PEDCO</td> <td>120</td> <td>EL</td> <td>DT</td> <td>0008</td> <td>D02</td> </tr> </table>	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	BK	GCS	PEDCO	120	EL	DT	0008	D02	<p>شماره صفحه: ۶ از ۷</p>
پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه											
BK	GCS	PEDCO	120	EL	DT	0008	D02											

Data Sheets for LV Induction Motors			
Item	Category	Required Specification	Vendor Data
	Minimum Life Without Load	Minimum 40000 Hours	
	Minimum Life With Load	Minimum 32000 Hours	
	Lubrication	Grease	
	Cooling Water/ Oil Capacity	N/A	
	Permissible Trust Force [N]	By Vendor	
	Space Heater	Not Required	
	Space Heater Voltage [V]	230VAC, 50Hz, 1Ph	
	Space Heater Power [W]	By Vendor	
82	Temp. Detector (Winding/Bearing)	By Vendor	
83	Terminal Boxes	[X] Power Terminal Box [X] Space heater (if required)	
84	Main Power Cable Specification & Size & Orientation	According to (BK-GCS-PEDCO-120-EL-CN-0003)	
85	Motor Weight (Net/Shipped)	By Vendor	
86	Rotor Moment of Inertia	By Vendor	
87	Method of Cable Entry	[X] Cable Gland [] Sealing Gasket	
88	Cable Gland Hub of Main Terminal Box	By Vendor	
89	Cable Gland Entry for aux. Terminal Box (if applicable)	1 X M25 (if Required)	
90	Short Circuit Capability of Terminal Box	30 kA for 0.2 S	
91	Sound Level at 1 distance meter From Motor	Max. 85 dB(A)	
92	Finish Color	Manufacturer Standard	
93	Load Torque/Slip, Current/Slip Curves	By Vendor	
94	Motor Torque/Slip, Current/Slip Curves	By Vendor	
95	Time - Current Heating (Thermal Limit) Curve	By Vendor	
96	Motor Thermal Capacity Data	By Vendor	
97	Installation, Operation & Maintenance Instruction	By Vendor	
98	Spare Parts List for Two Years Operation	By Vendor	
99	Commissioning Spare Part List	By Vendor	
100	Dimensional Outline Drawing	By Vendor	
101	Certified Type Test Report & Written Statement	By Vendor	
102	Certified Conformity for EX Type Motors	By Vendor	
103	Deviation List (if Any)	By Vendor	

 شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							 شماره صفحه: ۷ از ۷
	DATA SHEETS FOR LV INDUCTION MOTORS							
	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه
	BK	GCS	PEDCO	120	EL	DT	0008	D02

Data Sheets for LV Induction Motors			
Item	Category	Required Specification	Vendor Data
104	Test & Inspection	Factory Routine Test Report Shall be Submitted	

DE: Drive End
 NDE: Non Drive End
 CW: Clockwise
 CCW: Counter Clockwise

Note 1: IPS design margin is defined in accordance with standard output power rating of motor:

	Standard Output Power Rating	Design margin
1	Up to 22kW	1.25
2	from 22kW to 55kW	1.15
3	Above 55kW	1.10

Note 2: The following values are default unless otherwise specified during finalization of motors:

	Standard Output Power Rating	Cable Size	Gland Size
1	5.5kW	3x6	M25
2	7.5kW	3x6	M25
3	15kW	3x16	M32
4	18.5kW	3x16	M32
5	30kW	3x50	M40
6	37kW	3x50	M40
7	45kW		M50
8	55kW	3x95	M50