

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک فعالیت‌های روزمینی در بسته‌های کاری تحت‌الارض عمومی و مشترک							 شرکت توسعه و پخش ایران	
	DATA SHEETS FOR DC CHARGER OF WELL PADS							 	
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	پروژه BK	بسته کاری SSGRL	صادر کننده PEDCO	تسهیلات 110	رشته EL	نوع مدرک DT	سریال 0003	نسخه D04	شماره صفحه: ۱ از ۷

طرح نگهداشت و افزایش تولید ۲۷ مخزن

DATA SHEETS FOR DC CHARGER OF WELL PADS

نگهداشت و افزایش تولید میدان نفتی بینک

D04	Jun.2023	AFC	H.Shakiba	M.Fakharian	A.M.Mohseni	
D03	Apr.2023	AFC	H.Shakiba	M.Fakharian	M.Mehrshad	
D02	Apr.2022	IFA	H.Shakiba	M.Fakharian	M.Mehrshad	
D01	Mar.2022	IFA	H.Shakiba	M.Fakharian	M.Mehrshad	
D00	Jan.2022	IFC	H.Shakiba	M.Fakharian	M.Mehrshad	
Rev.	Date	Purpose of Issue / Status	Prepared by:	Checked by:	Approved by:	Client Approval
Class: 1		Client Doc. Number: F0Z-707390				

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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نگهداشت و افزایش تولید میدان نفتی بینک
فعالیت‌های روزمینی در بسته‌های کاری تحت‌الارض

عمومی و مشترک

DATA SHEETS FOR DC CHARGER OF WELL PADS



شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه
D04	0003	DT	EL	110	PEDCO	SSGRL	BK

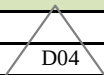
شماره صفحه: ۲ از ۷

REVISION RECORD SHEET

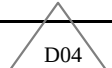
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 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک فعالیت‌های رو زمینی در بسته‌های کاری تحت‌الارض عمومی و مشترک								 
	DATA SHEETS FOR DC CHARGER OF WELL PADS								
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۷ از ۳
	BK	SSGRL	PEDCO	110	EL	DT	0003	D04	

Technical Data For Industrial Battery & Battery Charger for 110 VDC of Wellpads			
Item	Description	Required	Vendor Data
1-General			
1.1	Name of Project / Plant	Binak Oilfield in Bushehr Province	
1.2	Manufacturer	By Vendor	
1.3	Manufacturer Model	By Vendor	
1.4	Average Ambient Temperature (Min/Max)	Min ~ Max: -5 ~ +52°C	
1.5	Max.Design Temperature:	52 °c	
1.6	Max. Sun Temperature:	+ 85 °c	
1.7	Max.Relative Humidity:	100%	
1.8	Mean Sea Level:	12.5 m above Sea Level	
1.9	Seismic Factor:	0.3g	
1.10	Max. Wind Velocity(Max)	120 km/hr	
1.11	Standard(s)	IEC,IPS-M-EL-174(2), IPS-E-EL-100(1)	
1.12	Quantity	6 Complete set (2×100% Charger) with commissioning and two years Spare Parts, Two battery bank(2×92cell), Battery Stand with special tools for Batteries, switch-fuse For Battery Banks: Exd IIC-T3 type.	
1.13	Service	110 VDC for LV Switchgear	
1.14	Tag Number	WellXX-110-CHG-001 & WellXX-110-CHG-002	
1.15	Applicable SLD	BK-SSGRL-PEDCO-110-EL-SL-0002	
1.16	Applicable Specification	BK-GNRAL-PEDCO-000-EL-SP-0005	
1.17	Location	Indoor	
2-Environment			
2.1	Area classification	Safe Area	
2.2	Site Elevation	12.5 m	
2.3	Ambient Temperature	Min/Max: -5/52°C	
2.4	Relative humidity	100%	
2.5	Atmosphere	Tropical & Dusty	
2.6	Building Temperature Control	Not Required	
2.7	Seismic Acceleration	0.3g	
3.AC Input			
3.1	Rectifiers Input Voltage	380/400/440, 3Ph, Cable 4 Core, 50 Hz	
3.2	Max.allowable input voltage variation	±10%	
3.3	Max.allowable input frequency variation	±5%	
3.4	Network short circuit current (rms)	50KA	
3.5	Network short circuit current (Peak)	By Vendor	
3.6	Max. short circuit clearing time	1 sec	
3.7	Max. power consumption	By Vendor	
3.8	Input THDi% (acc to IEEE-519)	<10%	
4.DC Output			
4.1	Rated voltage	110 VDC	 D04
4.2	Max. Allowable Voltage Variation	±1%	
4.3	Rated Output Current (Amp)	18.8 Amp	
4.4	Allowable Ripple voltage (r.m.s)	<1%	
4.6	Rectifier control voltage (Full Control)	12 Pulse	
4.7	Charger Topology	Hot Duty Standby	
4.8	Rectifier Input Filter type	R.F.I & Surge Arrester	
4.9	Constant Voltage Control	Required	
4.10	Constant Current Control	Required	
4.11	Rectifier Over Load (%)	110% Continues	
4.12	Rectifiers Protection	Required	
4.13	MCCB for AC Inputs	Required	
4.14	MCCB for DC Output	Required	

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شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	پروژه BK	بسته کاری SSGRL	صادرکننده PEDCO	تسهیلات 110	رشته EL	نوع مدرک DT	سریال 0003	نسخه D04	شماره صفحه: ۴ از ۷

Technical Data For Industrial Battery & Battery Charger for 110 VDC of Wellpads			
Item	Description	Required	Vendor Data
4.15	Ultra Fast Fuse to Protect Thrusters	Required	
4.16	Charger Output Fuse	Required	
4.17	AC Input Voltmeter	Required	
4.18	AC Input Ammeter	Required	
4.19	Charger DC Voltmeter	Required	
4.20	Charger DC Ammeter	Required	
4.21	Charger DC LC Filter	Required	
4.22	Load Current Ammeter	Required	
4.23	Charger Selector Switch	Required	
4.24	Battery Low DC Alarm (Indicator & Dry Contact)	Required	
4.25	Load Low DC Alarm (Indicator & Dry Contact)	Required	
4.26	Load Hi DC Alarm (Indicator & Dry Contact)	Required	
4.27	Batteries Disconnected (Indicator)	Required	
5.Battery Charger Cabinet			
5.1	Type	Flat Face	
5.2	Construction	Floor Mounted, Free Standing	
5.3	Ingress protection class	IP42	
5.4	Access for maintenance	Front	
5.5	Body material	Carbon Steel Sheet	
5.6	Thickness of body material	Min.2 mm	
5.7	Finish color	RAL 7032	
5.8	Cable entrance	Bottom and Cable Gland	
5.9	Bottom closing method	By Vendor	
5.10	Cooling method	Natural	
5.11	Space Heater	Required	
5.12	Illumination	Required	
5.13	Noise level	70dBA	
5.14	Wiring	Power and Control Min.2.5mm ² , Metering Min.1.5mm ²	
5.15	Nameplate	English Black in White Background	
5.16	Earthling System	IT	
Note1: Data shown are typical; manufacturer shall provide his own data			
Note2: The blank items shall be filled by battery manufacture			
6.Batteries			
6.1	Manufacturer	SAFT	
6.2	Manufacturer Model	By Vendor	
6.3	Standard	IEC 60623, IEEE 1115 2014	
6.4	Quantity	1 Complete set (2×50% Battery Bank)	
6.5	Service	110 VDC for LV Switchgear	
6.6	Applicable Specification	BK-GNRL-PEDCO-000-EL-SP-0005	
6.7	Location	Indoor	
6.8	Battery requirements	By Vendor	
6.9	Battery type	Nickel-Cadmium (IEC60623)	
6.10	Battery charging method	Constant Voltage-Dual Rate and Current Limit with Float/Auto/Equalize/Initial Mode charging	
6.11	Back-up time	8 Hr	
6.12	Emergency Mode Voltage for each cell (Activated by Battery Room Fan Failure)	1.35 V ± 0.01 V	
6.13	Battery float charging voltage	1.4~1.45 V/Cell	
6.14	Battery Equalize charging voltage (0-30Hr Timer and Reset Push Button are required)	1.45~1.55 V/Cell	
6.15	Battery boost charging voltage (0-30Hr Timer and Reset Push Button are required)	1.55~1.65 V/Cell	
6.16	Battery initial charging voltage (0-30Hr Timer and Returnable Switch are required)	1.75 V/Cell	



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فعالیت‌های رو زمینی در بسته‌های کاری تحت‌الارض
عمومی و مشترک



DATA SHEETS FOR DC CHARGER OF WELL PADS

شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

پروژه

BK

بسته کاری

SSGRL

صادرکننده

PEDCO

تسهیلات

110

رشته

EL

نوع مدرک

DT

سریال

0003

نسخه

D04

شماره صفحه: ۵ از ۷

Technical Data For Industrial Battery & Battery Charger for 110 VDC of Wellpads

Item	Description	Required	Vendor Data
6.17	Battery nominal voltage	1.2 V/Cell	D04
6.18	Final discharge voltage per cell(V)	1.14 V/Cell	
6.19	Rated capacity of each cell at 20 °C	40 Ah	
6.2	Re-charging time to 90% Rated Capacity	8 Hours	
6.21	Required battery ampere-hour (C5)	40Ah , SBLE Type	
6.22	Total quantity of cells	184	
6.23	No. of battery banks	2	
6.24	No. of batteries per each bank	92	
6.25	Battery cell dimension (W × D × H)	By Vendor	
6.26	Battery cell weight	By Vendor	
6.27	Batteries shall be performed from SAFT,ALCAD Batteries	Required	
6.28	All type of Batteries and Battery accessories shall be original and approved by Iranian representative	Required	
6.29	Rate of H2 production during charging	Liter/Cell	
6.3	Required air volume of exchange in battery room	m ³ /Hours	
6.31	Required air volume of electrolyte	By Vendor	
6.32	Composition of electrolyte	By Vendor	
6.33	Required volume of electrolyte	Liter	
6.34	Required Max. charging current	By Vendor	

7.Data sheet for Battery

7.1	Battery Discharging Rate	Long Rate	
7.2	Container	Plastic	
7.3	Construction	Vented	

8.Accessories & Special Tools

8.1	Thermometer	Required	
8.2	Hydrometer	Required	
8.3	Voltmeter	Required	
8.4	Battery Racks	Required (Seismic Factor:0.3g)	
8.5	Flame Arrester	Required	
8.6	Stand Type	By Vendor	

9.Load Profile Graph



9.1	T1 : 1 Min	D04
9.2	I1 : 515 W	
9.3	T2 : 7Hr , 57 Min	
9.4	I2 : 155 W	
9.5	T3 : 1 Min	
9.6	I3 : 875 W	
	T4 : 1 Min	
9.6	I4 : 515 W	

10.Data Sheet for Distribution Board

10.1	Standard	IEC,IPS-M-EL-174(2), IPS-E-EL-100(1)	
10.2	Quantity	1 Complete set	
10.3	Service	DC Distribution Panel	

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	DATA SHEETS FOR DC CHARGER OF WELL PADS								
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	پروژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۷ از ۶
	BK	SSGRL	PEDCO	110	EL	DT	0003	D04	

Technical Data For Industrial Battery & Battery Charger for 110 VDC of Wellpads			
Item	Description	Required	Vendor Data
11.Mechanical specification			
11.1	Mounting type	Floor Mounted, Free Standing	
11.2	Body martial	Carbon Steel Sheet	
11.3	Thickness	Min.2 mm	
11.4	Access for maintenance	Front	
11.5	Protection class	IP42	
11.6	Illumination	Required	
11.7	Space heater	Required	
11.8	Weight	By Vendor	
11.9	Dimensions	By Vendor	
11.10	Name plate	English Black in White Background	
11.12	Finished color	RAL 7032	
12.Electrical Specification			
12.1	Rated incoming voltage	110 VDC	
12.2	Rated insulation voltage	By Vendor	
12.3	Wiring	Power and Control Min.2.5mm²,Metering Min.1.5mm²,	
13.Incoming			
13.1	Incoming Cables Size & Tag no.	BK-SSGRL-PEDCO-110-EL-LI-0002	D04
13.2	Entry Side	Bottom by Cable Gland	
13.3	Cable Entry	Via Removable Gland Plate	
13.4	Incoming Circuit breaker	MCCB	
14.3	Terminal Type and quantity	By Vendor	
13.5	Circuit breaker construction	Fix	
14.Outgoing			
14.1	Outgoing cable size and tag no.	BK-SSGRL-PEDCO-110-EL-CN-0005	
14.2	Entry side	Bottom by Cable Gland	
15.Data Sheet for Distribution Board			
15.1	Cable entry	Via Removable Gland Plate	
15.2	Outgoing circuit breaker	MCB	
15.3	Circuit breaker constructor	Fix	
16.Indicating lights , Alarms and Accessories			
16.1	Battery Low DC alarm	Required ,With Dry Contacts	
16.2	Load Low DC alarm	Required ,With Dry Contacts	
16.3	Load Hi DC alarm	Required ,With Dry Contacts	
16.4	Batteries disconnected	Required	
16.5	Battery voltmeter	Required	
16.6	Battery ammeter	Required	
16.7	Load voltmeter	Required	
16.8	Load ammeter	Required	
16.9	Cable gland	Required	
16.10	Removable gland plate	Required	
17.Tests (Factory Acceptance test and Site Acceptance Test shall be performed By the Vendor)			
17.1	Visual Inspection & Dimensional Check	Required	
17.2	Performance and Function Test	Required	
17.3	Sequence , Operation and Logic Test	Required	
17.4	Dielectric Strength Test	Required	
17.5	Output Voltage and Ripple Check	Required	
17.6	Charger Voltage Adjustment Test	Required	
17.7	THDi% Check	Required	
17.8	Output Regulation / Adjustments Test	Required	
17.9	Alarms Check	Required	

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	DATA SHEETS FOR DC CHARGER OF WELL PADS								
شماره پیمان:	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۷ از ۷
۰۵۳ - ۰۷۳ - ۹۱۸۴	BK	SSGRL	PEDCO	110	EL	DT	0003	D04	

Technical Data For Industrial Battery & Battery Charger for 110 VDC of Wellpads			
Item	Description	Required	Vendor Data
17.10	Autonomy Test	Required	
17.11	Current Limit Test	Required	
17.12	Short Circuit test	Required	
17.13	Other Tests shall be performed in Accordance with IEC60146 (Battery Charger Testing)	Required	
17.14	Hardware and Software for Communication, Programming or Setting up the CPU or MPU Boards (If Required),	Required	
18.Accessories And Special Tools			
18.1	MIMIC Panel With LED To Show Operation Condition (shall be finalized by vendor) .	Required	
18.2	Commissioning and two years spare parts shall be provided	Required	
18.3	The Accuracy of all meters shall be better than 1.5%	Required	
18.4	On load break switch-fuse For Battery Banks:Exd type IIC-T3	Required	
18.5	Training	The Supplier /Vendor shall be assumed the maintenance and repair training course at least for 5 People	
18.6	Battery Room Fan failure (Activated by external Signal)	Required	
19.Electromagnetic Compatibility (EMC)			
All DC-UPS units shall comply with the requirements for EMC as defined in IEC 62040-2, in order to ensure:Conducted emissions in both, the power supply input and output of the DC- UPS are controlled within acceptable limits;Any electromagnetic disturbance generated by the UPS and its individual components do not exceed a level which would affect the correct operation of both, radio and telecommunications equipment; The complete set of battery & battery charger shall be considered for each well. Wellpads are BK-12, BK-15, BK-05, Well 007, Well 046 & BK-14 A serial link communication protocol shall be considered or sending alarms and indications to DCS.			