طرح نگهداشت و افزایش تولید ۲۷ مخزن

ELECTRICAL LOAD LIST

نگهداشت و افزایش تولید میدان نفتی بینک

D01	Jul.2022	AFC	H.Shakiba	M.Fakharian	M.Mehrshad	
D00	May.2022	IFC	H.Shakiba	M.Fakharian	M.Mehrshad	
Rev.	**Date**	**Purpose of Issue / Status**	**Prepared by:**	**Checked by:**	**Approved by:**	**CLIENT Approval**

Class: 2 | **CLIENT Doc. Number: F0Z-707104**

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

REVISION RECORD SHEET

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شماره پیمان:	پروژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۳ از ۴
۰۵۳ - ۰۷۳ - ۹۱۸۴	BK	GNRAL	PEDCO	220	EL	LI	0001	D01	

Service Type:
N : Normal Load
E : Emergency Load

Load Duty:
C : Continuous Load
I : Intermitant Load
S : Stand By Load
LR/FL: Loacked Rotor / Full Load Current

Load Type:
M: Motor
F: Non-Motor

Definition of API Factor
1.25 for Motor Power < 22kW,
1.15 for Motor Power between, 22kW and 55kW
1.1 for Motor Power > 55kW

Height derating factor can be determined as follows if no manufacturer data is available:

Height Above Sea Level	Height Factor
< 1000 m	1
1000 < Height < 1500 m	0.97
1500 m >	0.94

Coolant (Cooling) Factor is 0.88 according to basic document for motor feeder type.

LV Feeder Type:
F1: Simple 4-Pole MCCB Feeder with Thermal/Magnetic Trips, for I<63A Feeders
F2: Simple 4-Pole MCCB Feeder with Thermal/Magnetic Trips, for 63A=<I<100A Feeders
F3: Simple 4-Pole MCCB Feeder with Thermal/Magnetic Trips, for 100A=<I Feeders
F4: Simple 3-Pole MCCB Feeder with Thermal/Magnetic Trips, for I<63A Feeders
F5: Simple 3-Pole MCCB Feeder with Thermal/Magnetic Trips, for 63A=<I<100A Feeders
F6: Simple 3-Pole MCCB Feeder with Thermal/Magnetic Trips, for 100A=<I Feeders
F7: Simple 2-Pole MCCB Feeder for Feeding Single Phase Loads (Ph+N or 2-Ph)
M1: Direct on Line Motor Starter Feeders for 0.4 ≤ P < 4kW (Switch Fuse + Contactor + Bimetal + R/L Signaling)
M2: Direct on Line Motor Starter Feeders for 4kW ≤ P < 18.5kW (Switch Fuse + Contactor + Bimetal + R/L Signaling + R/L Ammeter)
M3: Direct on Line Motor Starter Feeders for 18.5kW ≤ P <30 (Switch Fuse + Contactor + Bimetal + R/L Signaling + R/L Ammeter (49, 50G, Phase Control))
M4: Direct on Line Motor Starter Feeders for 30kW ≤ P (Switch Fuse + Contactor + Overload CT + R/L Signaling + R/L Ammeter (49, 50G, Phase Control))

MV Feeder Type:
C1: 11 KV Incoming Feeder
C2: Outgoing Transformer 2000 KVA
C3: Outgoing Motor Starter <1000 KW
C4: Bus Coupler 11 KV

Item NO	Rev	Bus	Equipment Number	Load Description	Service Type	No Phases	Rated Voltage (V)	Load Type	Rated Power (Kw)	Eff. (%)	Power Factor	Current Normal Operation (A)
1	D01	A	NISOC Office Building Panel	NO-DP	N	3	400	F	118.76	100	0.9	190.46
2	D01	A	NISOC Residental Building Panel	NR-DP	N	3	400	F	115.28	100	0.9	184.88
3	D01	A	Petro Office Building Panel	PO-DP	N	3	400	F	80.28	100	0.9	128.75
4	D01	A	Petro Residental Building Panel	PR-DP	N	3	400	F	77.28	100	0.9	123.94
5	D01	A	Restaurant Building Panel	RES-DP	N	3	400	F	71.28	100	0.9	114.32
6	D00	A	Driver Building Panel	DR-DV	N	3	400	F	23.28	100	0.9	37.34
7	D00	A	Warehouse Panel	WH-DP	N	3	400	F	7	100	0.9	11.23
8	D01	A	Workshop Panel	WSH-DP	N	3	400	F	38.75	100	0.9	62.15
9	D00	A	Gatehouse Panel	GH-DP	N	3	400	F	5	100	0.9	8.02
10	D01	A	Outdoor Area Panel	CMP-DP	N	3	400	F	4.25	100	0.9	6.82

Building Numbering Procedure

NO: NISOC Office
NR: NISOC Residental
PO: PETRO Office
PR: PETRO Residental
RES: Restaurant
DVR: Driver
WH: WareHouse
WS: WorkShop
GH: Gate House
CMP: Camp

To calculate power demand, below assumptions have been considered:
- Since staffs will present in one building at the same time, therefore the power consumption of NO-DP or NR-DP (each one is bigger), will be considered. This note is valid for PO-DP & PR-DP.
- The power demand of other panels will be considered completely.
- At the end, diversity factor “0.5” will be considered for active power.

Active Power (Kw)
345.12
Active Demand (Kw)
172.56
Reactive Demand (kvar)
75.22

Apparent Power (Kva)
188.24

According to above calculation, one transformer 250 KVA is sufficient to supply power demand in camp area