

Technical Proposal



- Up to 36kV switchgear, AIS technology (fixed type)



- Up to 36kV switchgear metal clad / metal enclosure withdrawable type



- Up to 1000V switchgear withdrawable / fixed type



- Cabling, Cable tray & Cable ladder



- Training & Consulting

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	Project Name: Binak Oilfield Development General	Technical Proposal Runin Sanat Gostar Co.
	Purchaser: Hiran Energy	
	Project Number: R1402 P 107	
	Rev: 01	

1. Introduction


Runin Company is the result of a gathering of experts with experience in the fields of executive consulting, design and manufacture of electrical panels, organization and management of various industries and projects. The purpose of this organization is to provide engineering technical services in a wide range of design up to the implementation stage.

Technical and engineering department: This department is engaged in electrical engineering and automation services in industrial projects, design and implementation of energy management systems (PMS) and PDCS and electrical protection systems, design and implementation of electricity distribution and transmission projects.

Production facility: Runin panel factory in Yazd industrial city, with modern machinery and using years of experience under the supervision of experienced and specialized engineers, always tries to improve the quality of its products technically and in accordance with the latest international standards. This company holds the ISO 9001: 2008 quality management certificate from QAL UK.

The area of factory is about 6000 m2 that 4000 m2 of this allocated for assembling of switchgears. Runin Sanat Co. is able to manufacturing 1500 LV and 1000 MV switchgears annually.



 Switchgear Manufacturer	Project Name: Binak Oilfield Development General	Technical Proposal Runin Sanat Gostar Co.
	Purchaser: Hirgan Energy	
	Project Number: R1402 P 107	
	Rev: 01	

1) Metalworking machinery and equipment

Runin's cubicle manufacturing and production department is able to make all kinds of panels with the best quality by using advanced automatic machines. All stages of manufacturing metal parts of the panel are under the supervision and inspection of quality control and try to be made according to customer needs. The blacksmithing department of Runin company is equipped with CNC machines as follows.

- Punching CNC: TRUMPF260
- Punching CNC: TRUMPF500
- Press break CNC: TRUMPH 130
- Press break CNC TRUMPH230
- GAS LASER CNC : TRUMPH 3kW
- FIBER LASER CNC : DAVOOD , 2kW
- FIBER LASER WELDING MACHIN : 500W
- Sharing CNC: INANLAR
- Notching CNC: INDOMACH

2) Painting

In the coloring section, the activity is divided into the following two categories: Washing and phosphating part Coloring Part in the washing part, first all the parts are lubricated with a degreasing solution and prepared for the washing and phosphating steps. After fiber removal, all the prepared parts are installed on the relevant fence and during a four-step process and immersion, these parts are "zinc" phosphate to a thickness of about 12 microns. Then they are placed inside the cyclone and painted as electrostatic powder and finally baked in the oven.

Due to the importance of color in the electrical panel, Runin company has tested its painted sample in the laboratory, and the results of all tests have been successful.

3) Quality Control

In the quality control unit, in addition to precise control during the process, the panel is also tested and delivered to the customer. According to the type of panel and in accordance with the current world standards, the testing process is performed in the presence of the customer and the relevant test sheets are completed. The quality control unit is equipped with state-of-the-art devices to control during the process and perform various tests on the production board, and all this equipment are calibrated at regular intervals by the competent organs. This equipment includes: 75 kV pot test machine, low pressure pot test machine, 5000-volt Megger machine, thickness gauge machine, current injection machine and etc.



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Technical Proposal

Runin Sanat Gostar Co.

4) Technical Office

Runin Company's technical office, relying on efficient personnel as well as powerful software, is responsible for producing construction drawings, including mechanical drawings and electrical drawings. In this section, and before the project is announced for construction, complete plans are prepared for the customer's approval, as well as the insertion of their requested points, and after final approval, the construction is announced. Finally, this office is responsible for preparing the Final Book and sending the ticket maps to the customer.

5) Assembly Workshop

Panel assembly part from two main parts:

- Mechanical assembly, which includes the assembly of parts made by the manufacturing and production of skeletons, and mechanical assembly of electrical parts, including switches, contactors, etc.
- Electrical assembly, which includes wiring of power circuits, wiring of control circuits, busbars and additional operations. Composed.

All activities in this section are under the supervision of quality control inspectors and the start of any new process requires quality control approval on the previous process. All the documents in this section, in addition to complying with current world standards, have already been coordinated with the customer so that the customer's technical opinions can be applied in the assembly.

Quality control in this section, in addition to monitoring the proper execution of work, also monitors the values. These values include the size of the busbars, the allowable insulation distances, the size of the power and control circuit wires, the size of the output terminals, and so on.

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2. Existing Document

- The subject of proposal is, design, and manufacture, materials & Factory testing of Switchgears according to following description

#	Document Name	Document Number	Rev
1	Single Line Diagram	07-BK-GCS-PEDCO-120-EL-SL-0003	D04
2	MR FOR Existent MV Switchgear Expansion & RCP	BK-GCS-PEDCO-120-EL-MR-0003	D01
3	Wiring Diagram RCP	14-BK-GCS-PEDCO-120-EL-DG-0005	D01
4	Data Sheets For Capacitor Bank	12-BK-GCS-PEDCO-120-EL-DT-0007	D02
5	Data Sheets For Remote Control Panel	10-BK-GCS-PEDCO-120-EL-DT-0015	D02
6	Data Sheets For Expansion Of Mv Switchgear	09-BK-GCS-PEDCO-120-EL-DT-0004	D03
7	Electrical Typical Schematic Diagram	08-BK-GCS-PEDCO-120-EL-DG-0001	D06

3. List of Origin Manufacturers of LV Switchgears


- The following table is the list of acceptable manufacturers in RUNIN but for inform of the manufacturers of proposed equipment please refer to MTO.

Item	Equipment Description	Manufacturer
1	Air Circuit Breakers (ACB)	Schneider /Siemens/ABB/ LS/ Hyundai
2	Circuit Breakers (MCCB&MPCB)	Schneider /Siemens/ABB/ LS/ Hyundai
3	Thermal Overload Relay	Schneider /Siemens/ABB/ LS/ Hyundai
4	Contactor Relay	Schneider /Siemens/ABB/ LS/ Hyundai
5	Disconnectors Switch with Fuse	Pichaz Electric/Zavir
6	Multifunction Protection relay	Siemens/Schneider/ Fanox/PNC
7	Frequency Convertor	ABB/Schneider/Siemens/Emotron/Parto Sanat
8	Soft Starter	ABB/Schneider/Siemens/Emotron
9	Regulator &Capacitor/Reactor	Franke/Frako/Farakoh/Panir/PKC
10	Aux. Relay	Finder/Weidmuller
11	Timer	Finder/Omron/Shiva amvaj
12	Earth Fault Relay	Lovato/Fanox/Contrel
13	Selector Switch	Raad/TRS /Schneider/Electro Kaveh
14	Miniature Circuit Breaker(MCB)	Iskra/Noark/Schneider/LS/Hyundai/Raad
15	Potential Transformer	Azmoon Trans/Sana Isatis
16	Current Transformer	Mag electric/ Electro Pejvak / Harris
17	Transducer	Ziegler/Rael/Iskra
18	Analog Metering Devices	Ziegler/Rael/BEW
19	Digital Metering Device	Schneider/Socomec/Shiva amvaj
20	Push Button	Raad/Schneider
21	Signaling Lamp	Raad/Schneider
22	Terminal	Raad
23	Disconnecter Switch with Fuse (control)	ETI/Raad
24	Heater	Koomesh
25	Cable & Wire	Cable Sazan Yazd
26	Duct & Rail	Raad/Alborz
27	Micro Switch	Sammit/TRS
28	Lighting	Max Light/Mahnoor
29	Thermostat	Sammit/Koomesh
30	Fan	Sammit

4. List of Origin Manufacturers of MV Switchgears


- The following table is the list of acceptable manufacturers in RUNIN but for inform of the manufacturers of proposed equipment please refer to MTO.

Item	Equipment Description	Manufacturer
1	Circuit Breakers (VCB/GCB)	ABB/Hyundai/Fulmen/Pars Switch
2	Load Break Switch (LBS)	ABB/Hyundai/Fulmen/Pars Switch
3	Vacuum Contactor (VC)	ABB/Hyundai/Fulmen/Pars Switch
4	Resin Cast Current Transformer	Mag Electric/Pars Shar/Electro Pejvak
5	Ring Type Current Transformer	Mag Electric/Pars Shar/Electro Pejvak/Novin Harris
6	Resin Cast Voltage Transformer	Mag Electric/Pars Shar/Electro Pejvak
7	Multifunction Protection relay	Siemens/Schneider/ Fanox/PNC
8	discrepancy	Comelectric
9	Semaphore	Cewe/Domo
10	Aux. Relay	Finder/Weidmuller
11	Timer	Finder/Omron/Shiva amvaj
12	Lockout and Trip Relay	Siemens/Arteche
13	Selector Switch	Raad/TRS /Schneider/Electro Kaveh
14	Miniature Circuit Breaker(MCB)	Iskra/Noark/Schneider/LS/Hyundai/Raad
15	Test Block	Entrelec/Fuji/Hamyan Fan
16	Alarm Window	Mabna Niroo
17	Transducer	Ziegler/Iskra
18	Analog Metering Devices	Ziegler/Rael/BEW/Iskra
19	Digital Metering Device	Schneider/Socomec/Shiva amvaj
20	Push Button	Raad/Schneider
21	Signaling Lamp	Raad/Schneider
22	Terminal	Raad
23	Disconnectors Switch with Fuse (control)	ETI/Raad
24	Heater	Koomesh
25	Cable & Wire	Cable Sazan Yazd
26	Duct & Rail	Raad/Alborz
27	Micro Switch	Sammit/TRS
28	Lighting	Max Light/Mahnoor
29	Thermostat	Sammit/Koomesh
30	Fan	Sammit

 Switchgear Manufacturer	Project Name: Binak Oilfield Development General	Technical Proposal Runin Sanat Gostar Co.
	Purchaser: Horgan Energy	
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5. Notes & Deviation List

- There were some conflicts between documents so please refer to comments on sheets of MTO and technical observation in attached file No.3.

 Switchgear Manufacturer	Project Name: Binak Oilfield Development General	Technical Proposal Runin Sanat Gostar Co.
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6. List of Equipment for LV switchgear (LV RCP)

✓ List of equipment

List OF LV Switchgears

R1402 P 107




Item	Description	Panel Type	SWG. QTY
1	RCP	Wall Mounted	1
	TOTAL		1



List OF Equipmens (MTO)

Rev:	01	SWG. NUMBER :	1
DATE:	7/7/2024	SWG. QUANTITY:	1
PRO. No:R1402 P:	107	SWG NAME:	

	PROJECT NAME:	BINAK OILFIELD DEVELOPMENT GENERAL			RCP
ردیف	EQUIPMENT DESCRIPTION	RATING	MANUFACTURER ORIGIN	TYPE	
1	PUSH BUTTON		Schneider Electric		10
2	LAMP SIGNAL		Schneider Electric		20
3	DISCONNECTOR SWITCH, 2POLES, WITH FUSE	32A	RAAD		2
4	RESIDUAL CURRENT BREAKING OVER(RCBO), 2P, B CURVE, iDPN N Vigi30 mA	32A	Schneider Electric	A9D31625	1
5	TERMINAL		RAAD		45
6	Wall Mounted, IP42, with heater & lighting		RUNIN SANAT		1
COMMENT	SALES ENGINEERING DEPT.				
	Prepared by: S.Ghorbani	Checked by:	A.Deighani		

 Switchgear Manufacturer	Project Name: Binak Oilfield Development General	Technical Proposal Runin Sanat Gostar Co.
	Purchaser: Horgan Energy	
	Project Number: R1402 P 107	
	Rev: 01	

7. List of Equipment for MV Switchgear (11KV)

1 Set

✓ **Technical Data**

Technical Data

Project Name: BINAK OILFIELD DEVELOPMENT GENERAL

REV: 01

Drawing No. BK-GCS-PEDCO-120-EL-SL-0003


R1402 P 107

Switchgear Name: 11KV MV Switchgear

Date: 7/7/2024

Description		Rating or Type		
Characteristic	Voltage ratings			
	Rated operating voltage	11 KV		
	Operating voltage	11 KV		
	Rated frequency	50 Hz		
	Site Altitude	<1000 m		
	DesignTemperature	40 °C		
	Humidity	100 %		
	Short-circuit ratings			
	Short-circuit duration	25 KA/1S		
	Current ratings			
	Rated normal current of the busbar	1600 A		
	Rated normal current of circuit Breaker	630 A		
	Power supply ratings (Aux Voltage)			
	Control and protection	110 V DC		
	Signaling Voltage	110 V DC		
	Lighting and heaters ,	230 V AC		
	General data			
	Cubicle Type	WITHDRAWABLE		
	Circuit Breaker Type	Vacum		
	Metal-Enclosed	Yes		
	Metal-Clad	Yes		
	Type	Pars Switch		
	Installation type	Indoor		
	Degree of protection	IP 41		
	Painting	RAL 7032		
	Thickness of steel sheet (frame)	2.5 & 3		
	Thickness of Painting	One Layer and 80-120 Micron		
	Access Type	Front & Rear		
	Cable/Busduct entry(incoming)	Cable/Bottom		
	Cable exit(outgoing)	Cable/Bottom		
	Protection Relay Type	Flush mounted/Fixed type		
	Relay Communication / Type	No/Hardwire		
	Mimic Diagram	Yes		
	Semaphore/Discrepancy	Yes		
	Heater & Thermostat	Yes		
	Micro switch & Lighting	Yes		
	Busbar			
	Material	Copper		
	Insulation	Thermofit		
	Coating	Sliver Plated		
	LV Compartment			
	AC wire color	Phase: Black	Neutral: Blue	
	DC wire color	Positive: Red	Negative: Green	
	CT wire size	2.5	mm²	
	PT wire size	1.5	mm²	
	Control wire size	1.5	mm²	
	Label formatting	White Letters On Black Background		
	Wire Standard	IEC 60332-3-21/isiri 607		
	Terminal Type	Screw Type		
	Packing			
	Packing	According to covering letter		

Prepared by: A.Deighani

 Switchgear Manufacturer	Project Name: Binak Oilfield Development General	Technical Proposal Runin Sanat Gostar Co.
	Purchaser: Horgan Energy	
	Project Number: R1402 P 107	
	Rev: 01	

✓ List of equipment



**LIST OF FEEDERS
R1402 P 107**

ITEM	Description	QTY
1	OUTGOING TYPE C2	3
2	OUTGOING TYPE C3	4
3	OUTGOING TYPE C5	1
4	ADAPTOR	2
TOTAL		10



LIST OF EQUIPMENTS (MTO)

SWG NAME: 11KV MV Switchgear
FEEDER NAME: OUTGOING TYPE C2
DWG No. BK-GCS-PEDCO-120-EL-SL-0003
DATE: 07-Jul-24

PROJECT NAME PROJECT No:

BINAK OILFIELD DEVELOPMENT GENERAL R1402 P 107

QTY 3

OUTGOING TYPE C2

ITEM	EQUIPMENT DESCRIPTION	RATING	QTY	MANUFACTURER ORIGIN	TYPE
1	VACUUM CIRCUIT BREAKER, WITHDRAWABLE TYPE, 12KV,25KA/1Sec WITH MOTOR CHARGE 110VDC, OPENING COIL, CLOSING COIL, AUX. CONTACT	630A	1	PARS SWITCH	VP4E
2	CAPACITIVE INDICATOR		1	JEBAL ELECTRIC	
3	RESIN CURRENT TRANSFORMER, 2CORE, 12KV, 25KA X=75A,100A	X/1/1A	3	PARS SHAR	CL: 1, 15VA CL: 5P20, 15VA
4	CORE BALANCE TRANSFORMER	60/1A	1	PARS SHAR	CL:1, 2,5VA
5	PORTECTION RELAY ANSI CODE (50,51,51N,50G,74TCS) WITH RS485 SERIAL LINK		1	SCHNEIDER	P3U20
6	LOCKOUT RELAY (86)		1	SIEMENS	7PA2331-1
7	TRIP RELAY (94)		1	SIEMENS	7PA2732-0AA00-1
8	CURRENT TRANSDUCER		1	ZIEGLER	E13
9	VOLTAGE TRANSDUCER		1	ZIEGLER	E13
10	POWER TRANSDUCER		1	ZIEGLER	PROP
11	MULTI POWER METER WITH RS485		1	SCHNEIDER	PM2220
12	AMMETR ANALOG,SIZE 96*96, CL.1.5		3	BEW	
13	TEST BOX		4	FUJI	
14	INDICATOR POSITION (SEMAPHORE)		1	CEWE	PI39
15	SEMAPHORE FOR TEST OR SERVICE		1	CEWE	PI36
16	DISCREPANCY SWITCH		1	COMELECTRIC	DR115
17	CONTROL EQUIPMENT (MCB, P.B ,SIGNAL LAMP, TERMINAL, AUX. RELAY,...)		1	CONTROL EQUIPMENT	
18	CUBICLE: METAL ENCLOSED EARTHING SWITCH	11KV, 25KA/1Sec	1	RUNIN SANAT	UNISAFE

SALES ENGINEERING DEPT.

COMMENT	Prepared by: A.Deighani	Checked by:
	86T=94	



LIST OF EQUIPMENTS (MTO)

SWG NAME: 11KV MV Switchgear

FEEDER NAME: OUTGOING TYPE C3

DWG No. BK-GCS-PEDCO-120-EL-SL-0003

DATE: 07-Jul-24

PROJECT NAME	PROJECT No:
BINAK OILFIELD DEVELOPMENT GENERAL	R1402 P 107

QTY 4

OUTGOING TYPE C3

ITEM	EQUIPMENT DESCRIPTION	RATING	QTY	MANUFACTURER ORIGIN	TYPE
1	VACUUM CIRCUIT BREAKER, WITHDRAWABLE TYPE, 12KV,25KA/1Sec WITH MOTOR CHARGE 110VDC, OPENING COIL, CLOSING COIL, AUX. CONTACT	630A	1	PARS SWITCH	VP4E
2	CAPACITIVE INDICATOR		1	JEBAL ELECTRIC	
3	WITHDRAWABLE VOLTAGE TRANSFORMR, 3CORE (11/√3)/(0.1/√3), (11/√3)/(0.1/√3), (11/√3)/(0.1/3)KV		3	PARS SHAR	CL1: 3P, 25VA CL2: 3P, 25VA
4	MV HRC FUSE FOR SWITCH VOLTAGE TRANSFORMR	6A	3	AEG	
5	RESIN CURRENT TRANSFORMER, 3CORE, 12KV, 25KA	100/1/1/1A	3	PARS SHAR	CL: 1, 15VA CL: 5P20, 15VA CL: 5P50, 15VA
6	CORE BALANCE TRANSFORMER	60/1A	1	PARS SHAR	CL:1, 2.5VA
7	PORTECTION RELAY ANSI CODE (50,51,50G,51G,66,51LR,74TCS ,27,46,49,87M,48,49T,50BF) WITH RS485 SERIAL LINK		1	SCHNEIDER	P3M32
8	LOCKOUT RELAY (86)		1	SIEMENS	7PA2331-1
9	CURRENT TRANSDUCER		1	ZIEGLER	E13
10	TEST BOX		5	FUJI	
11	AMMETR ANALOG,SIZE 96*96, CL.1.5		1	BEW	
12	SURGE ARRESTER		3	PARS ARRESTER	PAJ
13	INDICATOR POSITION (SEMAPHORE)		1	CEWE	PI39
14	SEMAPHORE FOR TEST OR SERVICE		1	CEWE	PI36
15	DISCREPANCY		1	COM ELECTRIC	DR115
16	CONTROL EQUIPMENT (MCB, P.B ,SIGNAL LAMP, TERMINAL, AUX. RELAY,...)		1	CONTROL EQUIPMENT	
17	CUBICLE: METAL ENCLOSED EARTHING SWITCH	11KV, 25KA/1Sec	1	RUNIN SANAT	UNISAFE

SALES ENGINEERING DEPT.

COMMENT	Prepared by: M.Golmohammadi	Checked by: M.Eslami



LIST OF EQUIPMENTS (MTO)

SWG NAME: 11KV MV Switchgear
FEEDER NAME: OUTGOING TYPE C5
DWG No. BK-GCS-PEDCO-120-EL-SL-0003
DATE: 07-Jul-24

PROJECT NAME PROJECT No:

BINAK OILFIELD DEVELOPMENT GENERAL R1402 P 107

QTY 1

OUTGOING TYPE C5

ITEM	EQUIPMENT DESCRIPTION	RATING	QTY	MANUFACTURER ORIGIN	TYPE
1	VACUUM CIRCUIT BREAKER, WITHDRAWABLE TYPE, 12KV,25KA/1Sec WITH MOTOR CHARGE 110VDC, OPENING COIL, CLOSING COIL, AUX. CONTACT	630A	1	PARS SWITCH	VP4E
2	CAPACITIVE INDICATOR		1	JEBAL ELECTRIC	
3	RESIN CURRENT TRANSFORMER, 2CORE, 12KV, 25KA	75/1/1A	3	PARS SHAR	CL: 1, 15VA CL: 5P20, 15VA
4	CORE BALANCE TRANSFORMER	60/1A	1	PARS SHAR	CL:1, 2,5VA
5	PROTECTION RELAY ANSI CODE (50,51,51N,50G,74TCS,64REF) WITH RS485 SERIAL LINK		1	SCHNEIDER	P3U20
6	LOCKOUT RELAY (86)		1	SIEMENS	7PA2331-1
7	TRIP RELAY (94)		1	SIEMENS	7PA2732-0AA00-1
8	CURRENT TRANSDUCER		1	ZIEGLER	E13
9	VOLTAGE TRANSDUCER		1	ZIEGLER	E13
10	POWER TRANSDUCER		1	ZIEGLER	PROP
11	MULTI POWER METER WITH RS485		1	SCHNEIDER	PM2220
12	AMMETER ANALOG,SIZE 96*96, CL.1.5		3	BEW	
13	TEST BOX		5	FUJI	
14	INDICATOR POSITION (SEMAPHORE)		1	CEWE	PI39
15	SEMAPHORE FOR TEST OR SERVICE		1	CEWE	PI36
16	DISCREPANCY SWITCH		1	COMELECTRIC	DR115
17	CONTROL EQUIPMENT (MCB, P.B ,SIGNAL LAMP, TERMINAL, AUX. RELAY,...)		1	CONTROL EQUIPMENT	
18	CUBICLE: METAL ENCLOSED EARTHING SWITCH	11KV, 25KA/1Sec	1	RUNIN SANAT	UNISAFE

SALES ENGINEERING DEPT.

COMMENT	Prepared by: A.Deighani	Checked by:
	86T=94	



LIST OF EQUIPMENTS (MTO)

SWG NAME: 11KV MV Switchgear

FEEDER NAME: ADAPTOR

DWG No. BK-GCS-PEDCO-120-EL-SL-0003

DATE: 07-Jul-24

PROJECT NAME	PROJECT No:	QTY
BINAK OILFIELD DEVELOPMENT GENERAL	R1402 P 107	2

ADAPTOR


ITEM	EQUIPMENT DESCRIPTION	RATING	QTY	MANUFACTURER ORIGIN	TYPE
1	CONTROL EQUIPMENT (MCB, P.B ,SIGNAL LAMP, TERMINAL, AUX. RELAY,...)		1	CONTROL EQUIPMENT	
2	CUBICLE: METAL ENCLOSED	11KV, 25KA/1Sec	1	RUNIN SANAT	UNISAFE

SALES ENGINEERING DEPT.

Prepared by: M.Golmohammadi

Checked by: M.Eslami

COMMENT

 Switchgear Manufacturer	Project Name: Binak Oilfield Development General	Technical Proposal Runin Sanat Gostar Co.
	Purchaser: Horgan Energy	
	Project Number: R1402 P 107	
	Rev: 01	

8. List of Equipment for MV Switchgear (3.3KV)

1 Set

✓ **Technical Data**

Technical Data

Project Name: BINAK OILFIELD DEVELOPMENT GENERAL

REV: 01

Drawing No. BK-GCS-PEDCO-120-EL-SL-0003


R1402 P 107

Switchgear Name: 3.3KV MV Switchgear

Date: 7/7/2024

Description		Rating or Type		
Characteristic	Voltage ratings			
	Rated operating voltage	3.3 KV		
	Operating voltage	3.3 KV		
	Rated frequency	50 Hz		
	Site Altitude	<1000 m		
	DesignTemperature	40 °C		
	Humidity	100 %		
	Short-circuit ratings			
	Short-circuit duration	25 KA/1S		
	Current ratings			
	Rated normal current of the busbar	630 A		
	Rated normal current of circuit Breaker	630 A		
	Power supply ratings (Aux Voltage)			
	Control and protection	110 V DC		
	Signaling Voltage	110 V DC		
	Lighting and heaters ,	230 V AC		
	General data			
	Cubicle Type	WITHDRAWABLE		
	Circuit Breaker Type	Vacuum		
	Metal-Enclosed	Yes		
	Metal-Clad	Yes		
	Type	Pars Switch		
	Installation type	Indoor		
	Degree of protection	IP 41		
	Painting	RAL 7032		
	Thickness of steel sheet (frame)	2.5 & 3		
	Thickness of Painting	One Layer and 80-120 Micron		
	Access Type	Front & Rear		
	Cable/Busduct entry(incoming)	Cable/Bottom		
	Cable exit(outgoing)	Cable/Bottom		
	Protection Relay Type	Flush mounted/Fixed type		
	Relay Communication / Type	Yes/Modbus		
	Mimic Diagram	Yes		
	Semaphore/Discrepancy	Yes		
	Heater & Thermostat	Yes		
	Micro switch & Lighting	Yes		
	Busbar			
	Material	Copper		
	Insulation	Thermofit		
	Coating	Sliver Plated		
	LV Compartment			
	AC wire color	Phase: Black	Neutral: Blue	
	DC wire color	Positive: Red	Negative: Green	
	CT wire size	2.5	mm²	
	PT wire size	1.5	mm²	
	Control wire size	1.5	mm²	
	Label formatting	White Letters On Black Background		
	Wire Standard	IEC 60332-3-21/isiri 607		
	Terminal Type	Screw Type		
	Packing			
	Packing	According to covering letter		

Prepared by: A.Deighani

 Switchgear Manufacturer	Project Name: Binak Oilfield Development General	Technical Proposal Runin Sanat Gostar Co.
	Purchaser: Horgan Energy	
	Project Number: R1402 P 107	
	Rev: 01	

✓ List of equipment



LIST OF FEEDERS
R1402 P 107

ITEM	Description	QTY
1	OUTGOING TYPE C6	1
2	RISER	1
TOTAL		2



LIST OF EQUIPMENTS (MTO)

PROJECT NAME	PROJECT No:	DATE:
BINAK OILFIELD DEVELOPMENT GENERAL	R1402 P 107	07-Jul-24
		QTY 1

SWG NAME:	3.3KV MV Switchgear
FEEDER NAME:	OUTGOING TYPE C6
DWG No.	BK-GCS-PEDCO-120-EL-SL-0003

OUTGOING TYPE C6

ITEM	EQUIPMENT DESCRIPTION	RATING	QTY	MANUFACTURER ORIGIN	TYPE
1	VACUUM CIRCUIT BREAKER, WITHDRAWABLE TYPE, 12KV,25KA/1Sec WITH MOTOR CHARGE 110VDC, OPENING COIL, CLOSING COIL, AUX. CONTACT	630A	1	PARS SWITCH	VP4E
2	CAPACITIVE INDICATOR		1	JEBAL ELECTRIC	
3	WITHDRAWABLE VOLTAGE TRANSFORMR, 3CORE (3.3√3)/(0.1/√3), (11/√3)/(0.1/√3), (11/√3)/(0.1/3)KV		3	PARS SHAR	CL1: 3P, 25VA CL2: 3P, 25VA
4	MV HRC FUSE FOR SWITCH VOLTAGE TRANSFORMR	6A	3	AEG	
5	RESIN CURRENT TRANSFORMER, 2CORE, 12KV, 25KA	100/1/1A	3	PARS SHAR	CL: 1, 15VA CL: 5P20, 15VA
6	CORE BALANCE TRANSFORMER	60/1A	1	PARS SHAR	CL:1, 2.5VA
7	PORTECTION RELAY ANSI CODE (50,51,50G,66,51LR,74TCS ,27,46,49,48,38,49T) WITH RS485 SERIAL LINK		1	SCHNEIDER	P3U30
8	LOCKOUT RELAY (86)		1	SIEMENS	7PA2331-1
9	TRIP RELAY (94)		1	SIEMENS	7PA2732-0AA00-1
10	CURRENT TRANSDUCER		1	ZIEGLER	E13
11	TEST BOX		4	FUJI	
12	AMMETR ANALOG,SIZE 96*96, CL.1.5		1	BEW	
13	VOLTMETER, 96*96 WITH V.S	0-6KV	1	BEW / TRS	
14	SURGE ARRESTER		3	PARS ARRESTER	PAJ
15	INDICATOR POSITION (SEMAPHORE)		1	CEWE	PI39
16	SEMAPHORE FOR TEST OR SERVICE		1	CEWE	PI36
17	DISCREPANCY		1	COMELECTRIC	DR115
18	CONTROL EQUIPMENT (MCB, P.B ,SIGNAL LAMP, TERMINAL, AUX. RELAY,...)		1	CONTROL EQUIPMENT	
19	CUBICLE: METAL ENCLOSED EARTHING SWITCH	3.3KV, 25KA/1Sec	1	RUNIN SANAT	UNISAFE

SALES ENGINEERING DEPT.

COMMENT	Prepared by: M.Golmohammadi	Checked by: M.Eslami
	86T=94 49CR=48 49R=49T	




LIST OF EQUIPMENTS (MTO)

SWG NAME:	3.3KV MV Switchgear
FEEDER NAME:	RISER
DWG No.	BK-GCS-PEDCO-120-EL-SL-0003
DATE:	07-Jul-24
QTY	1

PROJECT NAME	PROJECT No:
BINAK OILFIELD DEVELOPMENT GENERAL	R1402 P 107

RISER

ITEM	EQUIPMENT DESCRIPTION	RATING	QTY	MANUFACTURER ORIGIN	TYPE
1	CONTROL EQUIPMENT (MCB, P.B ,SIGNAL LAMP, TERMINAL, AUX. RELAY,...)		1	CONTROL EQUIPMENT	
2	CUBICLE: METAL ENCLOSED	3.3KV, 25KA/1Sec	1	RUNIN SANAT	UNISAFE
SALES ENGINEERING DEPT.					
COMMENT	Prepared by: M.Golmohammadi		Checked by: M.Eslami		

 Switchgear Manufacturer	Project Name: Binak Oilfield Development General	Technical Proposal Runin Sanat Gostar Co.
	Purchaser: Horgan Energy	
	Project Number: R1402 P 107	
	Rev: 01	

9. List of Equipment for MV Switchgear (Cap. Bank)

3 Sets

✓ **List of equipment**



LIST OF FEEDERS
R1402 P 107

ITEM	Description	QTY
1	Cap. Bank 600KVAR	3
TOTAL		3



LIST OF EQUIPMENTS (MTO)

SWG NAME: MV Cap. Bank

FEEDER NAME: Cap. Bank 600KVAR

DWG No. BK-GCS-PEDCO-120-EL-SL-0003


DATE: 07-Jul-24

PROJECT NAME PROJECT No:
BINAK OILFIELD DEVELOPMENT GENERAL R1402 P 107

QTY 3

Cap. Bank 600KVAR

ITEM	EQUIPMENT DESCRIPTION	RATING	QTY	MANUFACTURER ORIGIN	TYPE
1	CAPACITOR UNIT	200KVAR	3	P.K.C	PK200/6.35/EDRI
2	INRUSH CURRENT REACTOR		3	FARA PAYAM	
3	SURGE ARRESTER		3	PARS ARRESTER	PAP
4	MV HRC FUSE		3	AEG	
5	INSULATOR		12	IRAN	
6	CONTROL EQUIPMENT (MCB, P.B ,SIGNAL LAMP, TERMINAL, AUX. RELAY,...)		1	CONTROL EQUIPMENT	
7	CUBICLE: METAL ENCLOSED		1	RUNIN SANAT	
SALES ENGINEERING DEPT.					
COMMENT	Prepared by: M.Golmohammadi		Checked by: M.Eslami		

 Switchgear Manufacturer	Project Name: Binak Oilfield Development General	Technical Proposal Runin Sanat Gostar Co.
	Purchaser: Horgan Energy	
	Project Number: R1402 P 107	
	Rev: 01	

10. List of Spare Part and Accessories (LV RCP)

- ✓ 2 Years Spare Part
- ✓ commissioning Spare Part



LV SPARE PART
R1402 P 107
LV RCP

#	Description	QTY
1	2 YEARS SPARE PART	1
2	COMMISSIONING	1
FEEDER SUM.		2

LIST OF EQUIPMENTS (MTO)

SWG NAME:	LV RCP
PANEL NAME:	2 YEARS SPARE PART
DWG No.	...
DATE:	07-Jul-24
QTY	1

PROJECT NAME	PROJECT No:
BINAK OILFIELD DEVELOPMENT GENERAL	R140 2 P 107

2 YEARS SPARE PART

ITEM	EQUIPMENT DESCRIPTION	FEEDER RATING	QTY	MANUFACTURER ORIGIN	TYPE
1	LIGHTING		1	MAHNOOR	
2	SPACE HEAHER		1	KOOMESH	
3	DISCONNECTOR SWITCH, 2POLES, WITH FUSE	32/4A	2	RAAD	
4	LAMP SIGNAL		10	Schneider Electric	
5	MICRO SWITCH		1	IRAN	
6	SELECTOR SWITCH		0	N-A	
7	PUSH BUTTON		2	Schneider Electric	
8	ALARM ANNUNCIATOR		0	N-A	
9	AUX. RELAY		0	N-A	
SALES ENGINEERING DEPT.					
COMMENT	Prepared by:		Checked by:		


LIST OF EQUIPMENTS (MTO)

SWG NAME:	LV RCP
PANEL NAME:	COMMISSIONING
DWG No.	
DATE:	07-Jul-24
QTY	1

PROJECT NAME	PROJECT No:
BINAK OILFIELD DEVELOPMENT GENERAL	R140 2 P 107

COMMISSIONING

ITEM	EQUIPMENT DESCRIPTION	FEEDER RATING	QTY	MANUFACTURER ORIGIN	TYPE
1	LIGHTING		1	MAHNOOR	
2	DISCONNECTOR SWITCH, 2POLES, WITH FUSE	32/4A	2	RAAD	
3	LAMP SIGNAL		10	Schneider Electric	
4	AUX. RELAY		0	N-A	
SALES ENGINEERING DEPT.					
COMMENT	Prepared by:		Checked by:		

 Switchgear Manufacturer	Project Name: Binak Oilfield Development General	Technical Proposal Runin Sanat Gostar Co.
	Purchaser: Horgan Energy	
	Project Number: R1402 P 107	
	Rev: 01	

11. List of Spare Part and Accessories (MV Switchgears)

- ✓ 2 Years Spare Part
- ✓ commissioning Spare Part



***MV SPARE PART
R1402 P 107
MV SWG***

#	Description	QTY
1	2 YEARS SPARE PART	1
2	COMMISSIONING	1
FEEDER SUM.		2

LIST OF EQUIPMENTS (MTO)

SWG NAME: **MV SWG**
 PANEL NAME: **2 YEARS SPARE PART**
 DWG No. ...
 DATE: **07-Jul-24**

PROJECT NAME: **BINAK OILFIELD DEVELOPMENT GENERAL**
 PROJECT No: **R140 107 2 P**

QTY: **1**

2 YEARS SPARE PART

ITEM	EQUIPMENT DESCRIPTION	FEEDER RATING	QTY	MANUFACTURER ORIGIN	TYPE
1	TRIP COIL FOR VCB, 110VDC		2	PARS SWITCH	
2	CLOSE COIL FOR VCB, 110VDC		2	PARS SWITCH	
3	MOTOR CHARGE FOR VCB, 110VDC		2	PARS SWITCH	
4	ANTI-PUMPING FOR VCB		2	PARS SWITCH	
5	VOLTAGE & CURRENT PROTECTION RELAY (FOR INCOMINGS & BUS TIES)		0	N-A	
6	AUX. RELAY		30	WEIDMULLER	
7	MV HRC FUSE FOR MOTOR/TRANSFORMER		0	N-A	
8	MV HRC FUSE FOR VOLTAGE TRANSFORMR (PT)		3	AEG	
9	MCB,2P,DC	4A	9	NOARK/ISKRA	
	MCB,3P,AC	6A	4	NOARK/ISKRA	
10	LV FUSE (DISCONNECTOR SWITCH), 2P	32A	5	ETI/RAAD	
11	CYLIDRICAL FUSE	2-6A	11	ETI/RAAD	
12	LOCKOUT RELAY (86)		2	SIEMENS	
13	SIGNAL LAMP		14	SCHNEIDER	
SALES ENGINEERING DEPT.					
COMMENT	Prepared by: ...		Checked by:		


LIST OF EQUIPMENTS (MTO)

SWG NAME:	MV SWG
PANEL NAME:	COMMISSIONING
DWG No.	...
DATE:	07-Jul-24
QTY	1

PROJECT NAME	PROJECT No:
BINAK OILFIELD DEVELOPMENT GENERAL	R140 107 2 P

COMMISSIONING

ITEM	EQUIPMENT DESCRIPTION	FEEDER RATING	QTY	MANUFACTURER ORIGIN	TYPE
1	LV FUSE (DISCONNECTOR SWITCH), 2P	32A	5	ETI/RAAD	
2	CYLIDRICAL FUSE	2-6A	11	ETI/RAAD	
3	SIGNAL LAMP		14	SCHNEIDER	
SALES ENGINEERING DEPT.					
COMMENT	Prepared by: ...		Checked by:		

 Switchgear Manufacturer	Project Name: Binak Oilfield Development General	Technical Proposal Runin Sanat Gostar Co.
	Purchaser: Hiran Energy	
	Project Number: R1402 P 107	
	Rev: 01	

12. List of Spare Part and Accessories (MV Cap. Bank)

- ✓ 2 Years Spare Part
- ✓ commissioning Spare Part



***MV SPARE PART
R1402 P 107
MV Cap. Bank***

#	Description	QTY
1	2 YEARS SPARE PART	1
2	COMMISSIONING	1
FEEDER SUM.		2

LIST OF EQUIPMENTS (MTO)

SWG NAME:	MV Cap. Bank
PANEL NAME:	2 YEARS SPARE PART
DWG No.	...
DATE:	07-Jul-24
QTY	1

PROJECT NAME	PROJECT No:
BINAK OILFIELD DEVELOPMENT GENERAL	R140 2 P 107

2 YEARS SPARE PART

ITEM	EQUIPMENT DESCRIPTION	FEEDER RATING	QTY	MANUFACTURER ORIGIN	TYPE
1	TRIP COIL FOR VCB/VC		0	N-A	
2	CLOSE COIL FOR VCB/VC		0	N-A	
3	MOTOR CHARGE FOR VCB/VC		0	N-A	
4	POWER FACTOR REGULATOR		0	N-A	
5	AUX. RELAY		6	WEIDMULLER	
6	ISOLATING TRANSFORMER		0	N-A	
7	LV CONTACTOR		0	N-A	
8	MCB,2P,AC	4A	3	NOARK/ISKRA	
	MCB,3P,AC	6A	1	NOARK/ISKRA	
9	LV FUSE (DISCONNECTOR SWITCH), 2P	32A	3	ETI/RAAD	
10	CYLIDRICAL FUSE	2-6A	5	ETI/RAAD	
11	SIGNAL LAMP		5	SCHNEIDER	
12	FLUORESCENT LAMP		1	IRAN	
SALES ENGINEERING DEPT.					
COMMENT	Prepared by: ...		Checked by:		




LIST OF EQUIPMENTS (MTO)

SWG NAME:	MV Cap. Bank
PANEL NAME:	COMMISSIONING
DWG No.	...
DATE:	07-Jul-24
QTY	1

PROJECT NAME	PROJECT No:
BINAK OILFIELD DEVELOPMENT GENERAL	R140 107 2 P

COMMISSIONING

ITEM	EQUIPMENT DESCRIPTION	FEEDER RATING	QTY	MANUFACTURER ORIGIN	TYPE
1	LV FUSE (DISCONNECTOR SWITCH), 2P	32A	1	ETI/RAAD	
2	CYLIDRICAL FUSE	2-6A	2	ETI/RAAD	
3	SIGNAL LAMP		5	SCHNEIDER	
SALES ENGINEERING DEPT.					
COMMENT	Prepared by: ...		Checked by:		

 Switchgear Manufacturer	Project Name: Binak Oilfield Development General	Technical Proposal Runin Sanat Gostar Co.
	Purchaser: Horgan Energy	
	Project Number: R1402 P 107	
	Rev: 01	

13. List of Operation Tools



LIST OF EQUIPMENTS (MTO)

SWG NAME:

FEEDER NAME: SPECIAL TOOLS

DWG No.

DATE: 07-Jul-24

PROJECT NAME PROJECT No: BINAK OILFIELD DEVELOPMENT GENERAL R1402 P 107

QTY 1


SPECIAL TOOLS




ITEM	EQUIPMENT DESCRIPTION	RATING	QTY	MANUFACTURER ORIGIN	TYPE
1	ALLEN SPANNER (size 6)		3		
2	OPERATING LEVER FOR FEEDER/BUSBAR EARTHING SWITCH		1		
3	HAND CRANK FOR CHARGING THE CIRCUIT-BREAKER CLOSING SPRING.		1		
4	HAND CRANK FOR RACKING THE SWITCHING-DEVICE TRUCK		1		
5	DOUBLE-BIT KEY		5		
6	RELAY SOFTWARE :(1 DVD)		1		
7	OPERATION & MOUNTING INSTRUCTION		1		
8	VCB TRUCK		1		
9	CURRENT TEST BOX CABLE		1		
10	VOLTAGE TEST BOX CABLE		1		
11	CONNECTION RELAY CABLE BETWEEN PC & RELAY		1		
12	VASELINE		1		
13	PAINT		1		
SALES ENGINEERING DEPT.					
COMMENT	Prepared by: S.Ghorbani		Checked by:		




	Project Name: Binak Oilfield Development General	Technical Proposal Runin Sanat Gostar Co.
	Purchaser: Hiran Energy	
	Project Number: R1402 P 107	
	Rev: 01	

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Project Name: Binak Oilfield Development General

Purchaser: Horgan Energy

Project Number: R1402 P 107

Rev: 01

Technical Proposal

Runin Sanat Gostar Co.

15. References

- ✓ Description of the projects that have been done in this company:

Oil & Gas and Petrochemical			
No.	Description	Project Name	Year
1	LV Switchgears	Daniyal Petro Company - Sarkhon Project	2022
2	LCB Panel , Ip65	Kangan Petrochemical	2022
3	LV Switchgears	Negin Mahstan Petrochemical	2022
4	Free Standing And Wall Mounted LV Switchgears	South Pars Phase 14 Reservoir Project	2020
5	LV Switchgears	Gore Jask Pump House Jondishapur Company	2020
6	LV Switchgears	Khash Mir Javeh Gas Pressure Boost	2020
7	Lighting And Explosion Proof MV Switchgears	Tombak Service And Export Port Project	2020
8	Withdrawable MV Switchgears	Bandar Abbas Petrochemical-Niroo Faraz	2019
9	LV Switchgears	Omran Sahel (Kangan)	2019
10	LV Switchgears	Jam Petrochemical	2017
11	Control Switchgears	Esfahan Pressure Reducing Station-Part Niroo Company	2015
12	LV & MV Switchgears And MV Compact Post	Zahedan Gas Station	2015
13	Fixed MV Switchgears	Orumieh Petrochemical	2014
14	Distribution Switchgears	Yadavaran Oil Field - Sarir Energy Supply Company	2011
15	MV Switchgears	Shazand Arak Refinery-Energy Saze Company	2011
16	Development Plan Switchgears	Geranol Morvarid Company	2009
17	Design & Construction, AHUP & Lighting	Petroleum Industry Institute	2009
18	MCC Switchgears	Shahid Dolati Karaj Oil Depot-Sayber Company	2009
19	Main And Subsidiary Distribution Switchgears Generator Control Panel	Nar Project-Central Oil-Rich Areas-Oil Company	2008
20	Main And Subsidiary Distribution Switchgears Generator Control Panel	Kangan Project-Central Oil-Rich Areas-Oil Company	2008
21	Main And Subsidiary Distribution Switchgears Generator Control Panel	Bandar Abbas Project-Central Oil-Rich Areas-Oil Company	2008
22	Subsidiary Switchgears	Barzin Company- Aria Sasool Petrochemical	2008
23	Subsidiary Switchgears	Azarbaiejan Pressure Reducing Station-Aria Petrogaz	2007
24	Subsidiary Switchgears	Aria Sasool Petrochemical-Nargan Company	2007
25	MCC Switchgears & Lighting	Aria Petrogaz- Shanol Multi-Way Station Project	2006
26	Office Complex Switchgears	Vaband Company-Varavi	2006
27	Main And Sub-Distribution Switchgears Generator Control Panel	Plastic Chemical Company	2006
28	Design And Construction, MCC & Lighting	Afra Shimi Company	2005
29	MV Switchgear, Main Distribution Switchgears, Capacitor, MCC & Lighting	Production Of Pressure Vessels Company, CNG Sanka In Ghazvin	2004
30	MCC Switchgears	Siri Island Oil Tanks	2003

Steel Industry			
No.	Description	Project Name	Year
1	LV Switchgears	Pasargad Iron Smelting Complex	2020
2	Lighting & LV Switchgears	Ghaenat Steel Company	2020
3	MV Switchgears	Sepid dasht Steel	2020
4	Lighting Switchgears	South kish Kaveh Steel	2020
5	MV Switchgears	Ghaenat Steel	2020
6	Lighting Switchgears	Rezvan Mine	2020
7	LV Switchgears & Withdrawable MV Switchgears	Miyaneh Steel Company	2019
8	Lighting Switchgears	Fakoor Industry-Gol qohar Steel Project	2018
9	Fixed LV Switchgears & Withdrawable MV Switchgears	Pars Bootil	2017
10	LV Switchgears	Yazd Steel Company	2017
11	LV Switchgears & Withdrawable MV Switchgears	Ardakan Melting Steel Company	2017
12	Fixed LV Switchgears	Ardakan Pelletizing Company	2015
13	Withdrawable LV Switchgears & Withdrawable MV Switchgears	Arfa Steel Company	2014
14	Withdrawable LV Switchgears & Withdrawable MV Switchgears	Atrak Construction and Urban Development Company	2014
15	Withdrawable LV Switchgears & Withdrawable MV Switchgears	Yazd Melting Metals Company	2014
16	MV Switchgears	Yazd Profile Company	2014
17	MV Switchgears (Development plant)	Milad Steel Company	2014
18	LV Switchgears, D-R-I Line	Yazd Steel Company	2014
19	All Main Switchgears	Pars Bootil Company	2013
20	All MV Switchgears	Milad Steel Company	2013
21	690V capacitor bank panels with a capacity of 5 mega VAR with filters	Shahin Steel Company	2013
22	All MV Switchgears	Milad Steel Company	2011
23	MV Switchgear Motor Drive	Arfa Steel Company	2011
24	Fixed MV Switchgears	Arfa Steel Company	2011
25	20kV MV Switchgears of the main post of the iron beam	Yazd Steel Company - Faruzesh Sanat Company	2010
26	20kV withdrawabl panel for the oxygen site	Foruzesh Sanat Company	2010
27	switchgear of Section 2 of Yazd Steel Rolling Line	Foruzesh Sanat Company	2009
28	MV panel - capacitor panel - lighting panel	Fakor Sanat Company - Ardakan Pellets	2009
29	All integrated panels	Electro Ebtakar Co. - Yazd Sheet Metal Cooperative Co	2009
30	Main distribution boards, capacitor, MCC and lighting	Octagonal complementation	2009
31	Withdrawable MCC panel	Fakor Sanat Company - Ardakan Pellet Making Project	2009
32	20KV switchgear of transformer substation and steel passage substation	Yazd Armin Company	2008
33	Design and construction Capacitor Bank Switchgears & Lighting Switchgears	Yazd Steel Complex	2006
34	MV Switchgear With Vacuum Contactor	Isfahan steel company	2005
35	Lighting Switchgears	Yazd Alloy Steel	2004

Mine Projects			
No.	Description	Project Name	Year
1	LV Switchgears	Daralou Copper Concentration	2022
2	LV Switchgears	Mining Company Maadanjou- Tabas	2021
3	MV Switchgears	Chadormaloo Industrial And Mining Company	2021
4	LV Switchgears	Development And Processing Of Iron Tange Zagh Company	2021
5	LV Switchgears	Tange Zagh-Dr Dehghan	2021
6	(LCB & MV\LV\VFD Panel) Switchgears	Ronak Company (Esmalon Project)	2021
7	LV & LCB Switchgears	Mining And Dam Construction Company(Aria Jonoub Iranian)-Zarand Concentrate Plant Optimization Project	2021
8	LV Switchgears	Nipek Copper Industry	2020
9	Control Panel HMI	Iran National Copper Industries Company	2020
10	LV Switchgears	Esmalon Iron Ore Complex	2020
11	LV Switchgears, MV Switchgears & Lighting	Tange Zagh Iron Ore Complex	2020
12	Compact Post	Chadormaloo	2020
13	Withdrawable LV Switchgears (SIVACON)	Copper Mines Complex & Copper Processing (Maskani Naein)	2014
14	Withdrawable MV Switchgears (UNISAFE)	Copper Mines Complex & Copper Processing (Maskani Naein)	2014
15	MCC Switchgears	Chadormaloo Wastewater Treatment Plant Project,Fakoor Industry Company	2012
16	Sub-Distribution Switchgears	Zarand Project (Zisco), Fakoor Industry Company	2012
17	Sub-Distribution Switchgears	Sirjan Project (Sisco), Fakoor Industry Company	2012
18	Emergency Switchgears	Chadormaloo Mines Company	2009
19	Withdrawable MCC Switchgears	Sayber Company- Mineral Processing	2009
20	LV Switchgears	Choghart Mine Development Plan (Itook Iran)	2008
21	Withdrawable LV Switchgears & Withdrawable 6.6 KV Switchgears	Tabas Coal Mines	2007
22	Lighting Switchgears	Bafgh Iron Stone Mine	2007
23	Lighting and Distribution Switchgears	Sechahoun Mines	2007

Textile industry			
No.	Description	Project Name	Year
1	LV Switchgears & Compcat Post	Zarrin Tex Company	2016
2	LV & MV Switchgears, Capacitor Bank	Alyaf Gostar Company	2014
3	Design and construction of Development plan Switchgears	Kavir Semnan Company	2010
4	Design and construction of MV Switchgears, MCC & Distribution Switchgears	Gohar Chap Company	2010
5	Design and construction of MV Switchgears, MCC & Distribution Switchgears	Pars thread Company	2008

Water and Power industry			
No.	Description	Project Name	Year
1	LV Switchgears	Energy Satrap Iranian Company	2021
2	LV Switchgears	Isfahan Electrical Repair Company	2021
3	LV Switchgears & Fixed MV Switchgears	Tabriz CHP Powerhouses- Energy Services Company	2019
4	Fix MV Switchgears	Persia Power Plant	2017
5	Fix LV and MV Switchgears	Pouyan Afzar Power Plant	2017
6	LV Switchgears and Compact post	East Persia Power Plant	2016
7	Compact post	Kerman Power Plant (Sinaco)	2016
8	Compact post	Ardakan Power Plant	2016
9	LV Switchgears	Abbas Abad Power Plant	2016
10	Control Switchgears for Generators	Sirjan Power Plant (Sinaco)	2014
11	Control Switchgears for Generators	Mashhad Power Plant	2015
12	Intelligent Switchgears	Yazd and Kerman Power Distribution Company	2015
13	Control Switchgears for Generators	Saough Power Plant	2014
14	MV Switchgears (20 KV)	Industrial Zoon Power Plant	2014
15	MCC LV Switchgears	Water Transfer of Arfah Steel Company	2014
16	MV Switchgears (20 KV)	Yazd Cable and Wire Company	2014
17	Fix LV Switchgears	Jamper Company	2014
18	Control Switchgears for Generators	Zarand Power Plant (Sinaco)	2013
19	MV Switchgears (20 KV)	Yazd Water Transfer Plant	2013
20	MV Switchgears (20 KV)	East Persai Energy Producing Company	2011
21	MCC Switchgears With Drive & Soft Starter & Plc	Yazd Steel Company Water supply of production line and rolling	2011
22	Distribution Switchgears (1600A)	Jamper Co Karaj Mapna	2011
23	Junction Box Switchgear, Distribution Switchgears (3200A)& 20KV Switchgear	Kia Gostaresh Sanaat, West Tehran Water and Sewerage Company	2009
24	Masjed Soleyman Dam Sub Tunnel Switchgears	Masjed Soleyman Dam-Sayber Company	2009
25	Sub & Main & Lighting Switchgears	Earthy Dam koohban-Yazd Soil & Water Company	2008
26	MCC switchgears	Shahzand Power plant water supply	2003
27	Soft Starter Switchgears (75 KV)	Kish Power and Water	2002

Road and construction industry			
No.	Description	Project Name	Year
1	LV Switchgears	Khatamolanbia Construction Camp-Shahid Rajaei Institute	2021
2	LV Switchgears	Vezva Company	2021
3	LV Switchgears	Pars Fara GAM Company	2021
4	LV & MV Switchgears	Rah-e Yab Melal Consulting Engineers Company-Tehran-Shomal freeway	2021
5	Installation and assembly of RC filters and surge arresters	Toos Asphalt Company	2021
6	LV & MV Switchgears	Tehran-Shomal freeway-Alborz Tunnel	2020
7	LV Switchgears	Iran Mal Complex	2020
8	Free Standing And Wall Mounted LV Switchgears	Kermanshah Science and Technology Park	2020
9	LV Switchgears	Vezva Company-Shahre Aftab Multipurpose hall	2018
10	LV Switchgears	Vezva Company-Shahre Aftab -Sport Complex	2017
11	LV Switchgears	Sepanta Naghshe Parse(Ava Center Commercial Building)	2017

Hospital			
No.	Description	Project Name	Year
1	LV Switchgears	Golestan Hospital	2016
2	LV Switchgears	Navy Hospital (Abnieh Gostar Company)	2016
3	Lighting , LV and MV Switchgears	Minab Hospital	2014
4	LV and MV Switchgears	Bahman Hospital	2014
5	HVAC and MCC Switchgears	Bandar Abbas Hospital	2010
6	MCC and Distribution Switchgears	Kish Hospital	2009
7	Lighting , LV and MV Switchgears	Bandar Abbas Food and Medicine Company	2009

Tile and Ceramic Industry			
No.	Description	Project Name	Year
1	PLC Switchgears	Shirkooh Tile Company	2016
2	Lighting and Main Distribution Switchgears	Yazd Azarin Stone Company	2015
3	Lighting , LV and MV Switchgears	Khatereh Tile Company	2015
4	MV Switchgears	Ifa Ceram Company	2015
5	Control Switchgears	Khatereh Kavir Tile Company	2014
6	LV Switchgears (Development Plant)	Ifa Ceram Company	2014
7	MV Switchgears, Main Distribution Switchgears & Capacitor Bank	Shirkooh Tile Company	2010
8	MV Switchgears, Main Distribution Switchgears & Capacitor Bank	Civil Yazd baft Company	2010
9	Participation in construction of All Complex Switchgears	Faraz Control-Perspolis Tile Company	2010
10	MV Switchgears, Main Distribution Switchgears & Capacitor Bank	Sofal Bam Tile	2009
11	All Development plan switchgears	Yazd Tile Company Development plan	2009
12	Design and construction Of All Complex Switchgears	Pars stone industries Company	2007
13	Design and construction of post 2 MV Switchgear	Yazd Tile Company Development plan	2005
14	Design and construction of Line Control Switchgear- Distribution Switchgears- Capacitor Bank	Sara Loab Meybod Company	2005
15	Loab Meybod Company	Mina Loab Meybod Company	2005
16	Design and construction Of All Complex Switchgears	Omid Loab Meybod Company	2005
17	Design and construction Of Distribution Switchgears(2000A)	Orchin Meybod Tile Company Development plan	2004
18	Design and construction of Line Control Switchgear- Distribution Switchgears- Capacitor Bank	Loab Isatis Company	2004
19	Design and construction of Line Control Switchgear- Distribution Switchgears- Capacitor Bank	Aftab neshan Meybod Company	2003
20	Design and construction of Line Control Switchgear- Distribution Switchgears- Capacitor Bank	Granite Ariya Company	2002

Food industry			
No.	Description	Project Name	Year
1	LV Switchgears	Kale Tehran (Sooliko)	2021
2	LV Switchgears	Kale Tehran	2020
3	LV & MV Switchgears, Capacitor Bank	Kadbanoo Company-Delpazir	2012
4	Distribution Switchgears of Main & Sub Capacitor Bank Switchgears & Control Switchgears for Generators	Food industry (Derajhe)	2009
5	Main Distribution Switchgears, Capacitor Bank Switchgear, Post 20 KV	Chabahar Oil factory- Free trade zone	2009
6	Distribution Switchgears of Main & Sub Capacitor Bank Switchgears	Firoozkooh Starch and glucose	2007
7	Distribution Switchgears of Main & Sub Capacitor Bank Switchgears & Control Switchgears for Generators	Shahrood concentrate	2007
8	Design and construction Of Capacitor Bank Switchgears & Main Distribution Switchgears	Yazd Silo and Grain Administration	2002

Other Industry			
No.	Description	Project Name	Year
1	LV Switchgears	Quality test research company	2021
2	LV Switchgears	Quality test company	2021
3	Wall mounted Frame	Safir Company	2021
4	LV Switchgears	Quality test research company	2021
5	LV Switchgears	Borna Rad - Dynamic Engineering and Technology Development Company	2021
6	LV Switchgears	Abnieh Gostar Company	2020
7	LV Switchgears	Infrastructure and equipment of the Refah bank data center	2020
8	LV Switchgears	Sahand Data Center	2020
9	LV Switchgears	Tehran Electricity Distribution Company Data Center	2020
10	Wall mounted LV Switchgears	Iran National Copper Industries-Nipek Company	2020
11	LV Switchgears	Bojnoord Kimiadaran Ammonium sulfate	2019
12	Distribution & Lighting Switchgears	Tehran-Shomal freeway-Pars Faragam Company	2019
13	VFD Switchgears	Tehran-Shomal freeway-Pars Faragam Company	2019
14	MV Switchgears	Shahid Rajaei wharf-Niroo Faraz Company	2017
15	LV Switchgears	Tehran Metro Line 6 (Ahab)	2017
16	LV Switchgears	Tehran Metro Line 7 (Sub Niroo)	2017
17	MV Switchgears	Niroo Koler Company	2017
18	LV Switchgears	Khuzestan Aluminum Company	2016
19	LV Switchgears	Niroo Koler Company	2014
20	Control and MCC Switchgears	Bandar Abbas Ship Manufacturing	2014
21	PLC Switchgears	Bandar Abbas Ship Manufacturing	2014
22	Distribution Switchgears	Piping Line Company	2014
23	MV Switchgears (20 KV)	Isatis Fadak Paper Company	2014
24	MV Switchgears (UniSafe)	Ardakan Glass Company	2011
25	Main Distribution and Capacitor Bank Switchgears	Iran Kavosh Polymer Pipe Company	2011
26	Capacitor Bank Switchgears	Palayesh Niroo Company	