

SIDE LIST

(REV. 6)

IMPORTANT NOTE :

It should be noted that : This list is only for special cases and all companies in this list shall have the second priority compared to Iranian and European companies.

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1.3.3- FLANGE

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1.3.10- SPRING SUPPORT AND HANGER

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1.4.1- UTILITY PACKAGE

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1.4.2.10- AIR SEPARATION UNIT (ASU)

1.4.3- SPECIAL PACKAGE

1.4.3.10- LOADING & UNLOADING ARM

1.4.3.14- GANG WAY

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1.5-GENERAL ITEMS

1.5.1- INSULATION

1.5.7- STEEL PLATE

1.5.8- TUBE FOR HEAT EXCHANGER

COMPANY NAME

ORIGIN

1.1- ROTARY EQUIPMENT

1.1.1- PUMP

1.1.1.1- CENTRIFUGAL WATER PUMP

CW-HYDRO	S.KOREA
DANAI PUMP	CHINA
DEEP BLUE PUMP	CHINA
HIDROTECAR	SPAIN
HUNAN NEPTUNE PUMP	CHINA
KER PUMP	CHINA
SHANGHAI LIANCHENG	CHINA
SHIJIAZHUANG DAMEI KINGMECH PUMP CO.,LTD	CHINA
V-FLO	CHINA

1.1.1.2- CENTRIFUGAL API TYPE PUMP

DANAI PUMP	CHINA
DEEP BLUE PUMP	CHINA
HUNAN NEPTUNE PUMP	CHINA
KER PUMP	CHINA
NASOENERGOMASHJSC	UKRAIN
SHANGHAI LIANCHENG	CHINA
SHIJIAZHUANG DAMEI KINGMECH PUMP CO.,LTD	CHINA
V-FLO	CHINA

1.1.1.4- VERTICAL PUMP

1.1.1.4.1- VERTICAL WATER PUMP

DANAI PUMP	CHINA
HUNAN NEPTUNE PUMP	CHINA
KER PUMP	CHINA
SHANGHAI LIANCHENG	CHINA
SHIJIAZHUANG DAMEI KINGMECH PUMP CO.,LTD	CHINA
V-FLO	CHINA

1.1.1.4.2- VERTICAL API TYPE PUMP

DANAI PUMP	CHINA
HUNAN NEPTUNE PUMP	CHINA
KER PUMP	CHINA
SHANGHAI LIANCHENG	CHINA
SHIJIAZHUANG DAMEI KINGMECH PUMP CO.,LTD	CHINA
V-FLO	CHINA

1.1.2- COMPRESSOR

1.1.2.1- CENTRIFUGAL / AXIAL COMPRESSOR

KAZANCOMPRESSORMASHJSC	RUSSIA
NEW JCM	CHINA
SBW	CHINA
SUMY NPO	UKRAIN

	<u>COMPANY NAME</u>	<u>ORIGIN</u>
<u>1.1.2.2- RECIPROCATING COMPRESSOR</u>		
	SBW	CHINA
	SUMY NPO	UKRAIN
<u>1.1.3.1- STEAM TURBINE</u>		
	HTC	CHINA
	TRIVENI	INDIA
	SINO SEAL HOLDING	CHINA
<u>1.1.5- MECHANICAL SEAL</u>		
<u>1.1.6- FAN & BLOWER</u>		
	SBW	CHINA
<u>1.2- FIXED EQUIPMENT</u>		
<u>1.2.1- DRUM & COLUMN</u>		
	CFHI	S.KOREA
	DAEKYUNG TECHNOS CO. LTD. (DKT)	S.KOREA
	DBI CORP.	S.KOREA
	JIANGNAN BOILERS & PRESSURE VESSELS (ZHANGJIAGANG) CO.	CHINA
	SEOUL MACHINERY	S.KOREA
	SUMY NPO	UKRAIN
	ZHENJIANG JINMEN	CHINA
<u>1.2.2- H.P. STEAM DRUM</u>		
	DAEKYUNG TECHNOS CO. LTD. (DKT)	S.KOREA
<u>1.2.4- SPHERICAL TANK</u>		
	WIN-TECO	S.KOREA
<u>1.2.5- CRYOGENIC TANK</u>		
	WIN-TECO	S.KOREA

	COMPANY NAME	ORIGIN
<u>1.2.7- HEAT EXCHANGER</u>		
<u>1.2.7.1- SHELL & TUBE HEAT EXCHANGER</u>		
	DAEKYUNG TECHNOS CO. LTD. (DKT)	S.KOREA
	JIANGNAN BOILERS & PRESSURE VESSELS (ZHANGJIAGANG) CO.	CHINA
	SEOUL MACHINERY	S.KOREA
	SUMY NPO	UKRAIN
<u>1.2.7.2- H.T. SHELL & TUBE HEAT EXCHANGER</u>		
	SEOUL MACHINERY	S.KOREA
<u>1.2.7.3- PLATE HEAT EXCHANGER</u>		
	LHE	S.KOREA
	LANPEC	CHINA
	ZHONGTAI	CHINA
<u>1.2.7.5- AIR COOLED EXCHANGER</u>		
	SUMY NPO	UKRAIN
<u>1.2.7.6- SPIRAL HEAT EXCHANGER</u>		
	SUMY NPO	UKRAIN
<u>1.2.9- REACTOR</u>		
	CFHI	S.KOREA
<u>1.2.10- INTERNAL PART</u>		
<u>1.2.10.1- TRAY</u>		
	JEONJIN ENTECH	S.KOREA
	YT PROCESS ENGINEERING (YTPE)	CHINA
	ZEHUA	CHINA
<u>1.2.16- SEPARATOR & FILTER SYSTEM</u>		
	JFC CORPORATION	S.KOREA
	SEOUL MACHINERY	S.KOREA
	XINXIANG SHENGEDA FILTRATION TECHNIQUE	CHINA
	TRISTAR	SINGAPORE
<u>1.2.17- CENTRICAST TUBE & OUTLET MANIFOLD</u>		
	ENGEMASA	BRAZIL
	CENTRAVIS	UKRAIN
<u>1.2.20- REFRACTORY</u>		
	WINDSOR	INDIA
<u>1.2.21- DEAERATOR</u>		
	DBI CORP.	S.KOREA

COMPANY NAME

ORIGIN

1.3- PIPING

1.3.1- PIPE

CENTRAVIS	UKRAIN
DONG YANG STEEL PIPE	S.KOREA
JIULI	CHINA
PANGANG GROUP CHENGDU IRON F STEEL CO. LTD.	CHINA
RATNAMANI	INDIA
ZAFFERTEC	SPAIN
ZHEJIANG	CHINA

1.3.2- FITTING

JIANGYIN TIANNING METAL PIPE FITTING (TNF)	CHINA
ZAFFERTEC	SPAIN
BOTH WELL	TAIWAN
ZHEJIANG	CHINA

1.3.3- FLANGE

CHW FORGE	INDIA
JIANGYIN TIANNING METAL PIPE FITTING (TNF)	CHINA
ST&H CORPORATION	S.KOREA
ZAFFERTEC	SPAIN
ZIBO WEL-FIT	CHINA
ZIBO WEL-PIPING syste Co.LTD	CHINA

1.3.9- VALVE

1.3.9.1- MECHANICAL VALVES

BAOYI	CHINA
BEIJING VALVE GENERAL FACTORY GROUP CO.	CHINA
CEPAI	CHINA
DELVAL FLOW CONTROLS	INDIA
DHV	CHINA
FBV INC	CHINA
I.B.C	CZECH REPUBLIC
RAYS FLOW CONTROL	CHINA
SHANGHAI MECCO VALVE	CHINA
SHK VALVE	CHINA
SWI VALVE CO.	S.KOREA
ZAFFERTEC	SPAIN
ZHEJIANG WUZHOU VALVE	CHINA

COMPANY NAME

ORIGIN

1.4-PACKAGE UNIT

1.4.1- UTILITY PACKAGE

1.4.1.1- POWER GENERATION

1.4.1.2- BOILER (WATER/FIRE TUBE)

1.4.1.2.1- WATER TUBE BOILER

DBI CORP.	S.KOREA
JIANGNAN BOILERS & PRESSURE VESSELS (ZHANGJIAGANG) CO.	CHINA
ZHENJIANG JINMEN	CHINA

1.4.1.6- WASTE WATER TREATMENT

ION EXCHANGE	INDIA
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1.4.1.7- WATER TREATMENT

ION EXCHANGE	INDIA
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1.4.2.7- COLD BOX

FORTUNE	CHINA
ZHONGTAI	CHINA

1.4.2.10- AIR SEPARATION UNIT (ASU)

FORTUNE	CHINA
SICHUAN AIR SEPARATION PLANT GROUP CO.,LTD(SASPG)	CHINA

1.4.3- SPECIAL PACKAGE

1.4.3.10- LOADING & UNLOADING ARM

CCL	CHINA
SHANGHAI EMINENT ENGINEERING CO.,LTD	CHINA
WOOD FIELD (Onshore)	INDIA

1.4.3.12- CRYOGENIC LOADING & UNLOADING ARM

SHANGHAI EMINENT ENGINEERING CO.,LTD	CHINA
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1.4.3.14- GANG WAY

CCL	CHINA
SHANGHAI EMINENT ENGINEERING CO.,LTD	CHINA

1.4.3.15- QUICK RELEASE HOOK

CCL	CHINA
SHANGHAI EMINENT ENGINEERING CO.,LTD	CHINA

1.5- GENERAL ITEMS

1.5.1- INSULATION

FINETEC CORP./PETRO ARTON	S.KOREA/IRAN
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1.5.7- STEEL PLATE

ACRONI	SLONEY
JINDAL	INDIA
WUYANG IRON & STEEL	CHINA

1.5.8- TUBE FOR HEAT EXCHANGER

SIDE LIST

2. ELECTRICAL

2.ELECTRICAL

2.1- POWER TRANSFORMER

2.3- BATTERY

2.3.2 NICKEL CADMIUM BATTERY

2.11- ELECTRICAL MOTOR

2.11.1 EXPLOSION PROOF L.V. ELECTRIC MOTOR

2.11.2 INDUSTRIAL L.V. ELECTRIC MOTOR

2.11.3 EXPLOSION PROOF M.V. ELECTRIC MOTOR

2.11.4 INDUSTRIAL M.V. ELECTRIC MOTOR

2.12- BUS DUCT

2.20- COMPONENTS

2.20.1 PROTECTION RELAY

2.20.3 CONTACTORS

2.20.4 AUXILIARY CONTACTOR

2.20.9 CIRCUIT BREAKER

2.20.9.1 LV CIRCUIT BREAKER

2.20.9.1.1 MINIATURE CB

2.20.9.1.2 MCCB

2.20.9.1.3 ACB

2.20.9.2 MV CIRCUIT BREAKER

2.20.9.2.1 VACUUM

	<u>COMPANY NAME</u>	<u>ORIGIN</u>
2.1- POWER TRANSFORMER		
	FORTUNE ELECTRIC Co. LTD	TAIWAN
2.3- BATTERY		
2.3.2 NICKEL CADMIUM BATTERY		
	CHANGHONG	CHINA
2.11- ELECTRICAL MOTOR		
2.11.1 EXPLOSION PROOF L.V. ELECTRIC MOTOR		
	NANYANG EXPLOSION PROTECTION GROUP CO. ltd	CHINA
	UMEB SA	ROMANIA
2.11.2 INDUSTRIAL L.V. ELECTRIC MOTOR		
	NANYANG EXPLOSION PROTECTION GROUP CO. ltd	CHINA
2.11.3 EXPLOSION PROOF M.V. ELECTRIC MOTOR		
	NANYANG EXPLOSION PROTECTION GROUP CO. ltd	CHINA
2.11.4 INDUSTRIAL M.V. ELECTRIC MOTOR		
	NANYANG EXPLOSION PROTECTION GROUP CO. ltd	CHINA
2.12- BUS DUCT		
	EAE ELEKTRIK A.S	TURKEY
	RTC-ELECTRO-M	RUSSIA
2.20- COMPONENTS		
2.20.1- PROTECTION RELAY		
	LS INDUSTRIAL SYSTEMS	SOUTH KOREA
2.20.3- CONTACTORS		
	LS INDUSTRIAL SYSTEMS	SOUTH KOREA
2.20.4- AUXILIARY CONTACTORS		
	LS INDUSTRIAL SYSTEMS	SOUTH KOREA
2.20.9- CIRCUIT BREAKER		
2.20.9.1- LV CIRCUIT BREAKER		
2.20.9.1.1- MINIATURE CB		
	LS INDUSTRIAL SYSTEMS	SOUTH KOREA
2.20.9.1.2- MCCB		
	LS INDUSTRIAL SYSTEMS	SOUTH KOREA
2.20.9.1.3- ACB		
	LS INDUSTRIAL SYSTEMS	SOUTH KOREA
2.20.9.2- MV CIRCUIT BREAKER		
2.20.9.2.1- VACUUM		
	LS INDUSTRIAL SYSTEMS	SOUTH KOREA

3.INSTRUMENTATION

3.INSTRUMENTATION

3.1.3- *ADVANCED PROCESS CONTROL (APC)*

3.1.29- *FLOW METERING STATION*

3.1.30- *FLOW METERING PROVER*

3.2 - *ON - LINE ANALYZER*

3.2.16- *ANALYZER INTEGRATION*

3.4.5- *ULTRASONIC TYPE LEVEL TRANSMITTER*

3.4.7- *MAGNETIC LEVEL GAUGE*

3.4.9- *LEVEL SWITCH (FLOAT & DISPLACER TYPE)*

3.4.13- *CONTROL VALVE (GLOBE)*

3.4.14- *CONTROL VALVE (BALL)*

3.4.46- *MASS FLOWMETER (THERMAL TYPE)*

3.4.55- *ORIFICE PLATE*

3.4.56- *VENTURI TUBE AND NOZZLE*

	<u>COMPANY NAME</u>	<u>ORIGIN</u>
3.1.1- DCS / FCS		
	ZHEJIANG SUPCON TECHNOLOGY	CHINA
3.1.3- ADVANCED PROCESS CONTROL (APC)		
	SUPCON	CHINA
3.1.5- ESD SYSTEM		
	ZHEJIANG SUPCON TECHNOLOGY	CHINA
3.1.7- BMS		
	ZHEJIANG SUPCON TECHNOLOGY	CHINA
3.1.29- FLOW METERING STATION		
	IMS INDUSTRIES	RUSSIA
3.1.30- FLOW METERING PROVER		
	IMS INDUSTRIES	RUSSIA
3.2 - ON - LINE ANALYZER		
3.2.16- ANALYZER INTEGRATION		
	ADVANCED CAEPte.LTD	SINGAPORE
3.3.1- F & G SYSTEM		
	ZHEJIANG SUPCON TECHNOLOGY	CHINA
3.4.5- ULTRASONIC TYPE LEVEL TRANSMITTER		
	HITROL	SOUTH KOREA
3.4.7- MAGNETIC LEVEL GAUGE		
	HITROL	SOUTH KOREA
	SAMIL	SOUTH KOREA
3.4.9- LEVEL SWITCH (FLOAT & DISPLACER TYPE)		
	HITROL	SOUTH KOREA
3.4.13- CONTROL VALVE (GLOBE)		
	SEOJEON VALMAC CO., LTD	SOUTH KOREA
3.4.14- CONTROL VALVE (BALL)		
	SEOJEON VALMAC CO., LTD	SOUTH KOREA
3.4.46- MASS FLOWMETER (THERMAL TYPE)		
	HITROL	SOUTH KOREA
3.4.55- ORIFICE PLATE		
	HITROL	SOUTH KOREA
3.4.56- VENTURI TUBE AND NOZZLE		
	HITROL	SOUTH KOREA

4. TELECOMMUNICATION

4. TELECOMMUNICATION

4.1- TRANSMISSION SYSTEM & ACCESSORIES

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- 4.1.2- COPPER CABLE
- 4.1.3- TRANSMISSION EQUIPMENT & ACCESSORIES
 - 4.1.3.1- OPTICAL BASED SYSTEM
 - 4.1.3.2- SDH SYSTEM
 - 4.1.3.3- COPPER WIRE BASED SYSTEM
 - 4.1.3.4- RADIO BASED SYSTEM
- 4.1.4- PULSE CODE MODULATION (PCM) SYSTEM
- 4.1.5- COMMUNICATION TOWER STRUCTURE

4.2- SWITCH SYSTEM & INTEGRATOR

- 4.2.1- SWITCH SYSTEM INTEGRATOR

4.3- RADIO SYSTEM & INTEGRATOR

- 4.3.1- RADIO SYSTEM INTEGRATOR
- 4.3.2- MOBILE SYSTEM
- 4.3.3- HAND SET SYSTEM
- 4.3.4- REPEATER SYSTEM

4.4- INTERCOM PAGING/PUBLIC ADDRESS & INTEGRATOR

- 4.4.1- INTERCOM PAGING/PUBLIC ADDRESS INTEGRATOR
- 4.4.2- NON INDUSTRIAL
- 4.4.3- CONFERENCE SYSTEM
- 4.4.4- EXPLOSION PROOF

4.5- CCTV

- 4.5.1- CCTV SYSTEM (FIX & PC BASE)
 - 4.5.1.1- SECURITY
 - 4.5.1.2- NON SECURITY
- 4.5.2- CCTV EQUIPMENT
 - 4.5.2.1- MONITORING EQUIPMENT
 - 4.5.2.2- CAMERA

4.6- TELEPHONE SYSTEM

4.6.1- EXPLOSION PROOF TELEPHONE SET

4.6.2- INDUSTRIAL TELEPHONE SET

4.6.3- OFFICE TELEPHONE SET

4.6.4- FAX SYSTEM

4.6.5- CENTRAL AND IP PHONE/PABX SYSTEM

4.6.6- TELEPHONE SYSTEM INTEGRATOR

4.7- NETWORK SWITCH

4.8- ETHERNET SWITCH

SIDE LIST

4. TELECOMMUNICATION

<i>Company Name</i>	<i>Origin</i>
4.1- <u>TRANSMISSION SYSTEM & ACCESSORIES</u>	
4.1.3- TRANSMISSION EQUIPMENT & ACCESSORIES	
4.1.3.1- OPTICAL BASED SYSTEM	
MOXA INC	TAIWAN
4.1.3.3- COPPER WIRE BASED SYSTEM	
MOXA INC	TAIWAN
4.1.3.4- RADIO BASED SYSTEM	
MOXA INC	TAIWAN
4.2- <u>SWITCH SYSTEM & INTEGRATOR</u>	
4.2.1- SWITCH SYSTEM INTEGRATOR	
3WNETWORK	UAE
4.3- <u>RADIO SYSTEM & INTEGRATOR</u>	
4.3.1- RADIO SYSTEM INTEGRATOR	
3WNETWORK	UAE
4.4- <u>INTERCOM PAGING/PUBLIC ADDRESS & INTEGRATOR</u>	
4.4.1- INTERCOM PAGING/PUBLIC ADDRESS INTEGRATOR	
3WNETWORK	UAE
4.5- <u>CCTV</u>	
4.5.1- CCTV SYSTEM (FIX & PC BASE)	
4.5.1.1- SECURITY	
MOXA INC	TAIWAN
3WNETWORK	UAE
4.5.1.2- NON SECURITY	
MOXA INC	TAIWAN
3WNETWORK	UAE
4.5.2- CCTV EQUIPMENT	
4.5.2.1- MONITORING EQUIPMENT	
MOXA INC	TAIWAN
4.5.2.2- CAMERA	
MOXA INC	TAIWAN
4.6- <u>TELEPHONE SYSTEM</u>	
4.6.6- TELEPHONE SYSTEM INTEGRATOR	
3WNETWORK	UAE
4.7- <u>NETWORK SWITCH</u>	
MOXA INC	TAIWAN
4.8- <u>ETHERNET SWITCH</u>	
MOXA INC	TAIWAN

5. HSEQ EQUIPMENT

5.2. SAFETY & FIRE FIGHTING

COMPANY NAME

ORIGIN

5.2.1.4- F.F PUMP ON TRUCK

HUNAN NEPTUNE PUMP

CHINA

5.2.2- PORTABLE EQUIPMENT

5.2.2.1- EXTINGUISHER

5.2.2.1.1- DRY POWDER / WATER

SOYUZ

RUSSIA

7. CATALYST / CHEMICALS / OIL

COMPANY NAME

ORIGIN

7.1. CATALYST

7.1.1- NON POLYMERIC PLANT

SINOPEC

CHINA

SK ENERGY CO LTD.

KOREA

7.2- ADSORBENT, DESORBENT & RESIN

7.2.3- ION EXCHANGE RESIN / MEMBRANE

CSM

S.KOREA

7.3- CHEMICALS / ADDITIVES / ABSORBENTS

ATOFINA

INDIA

PANREAC

SPAIN

SK ENERGY CO LTD.

S.KOREA

8. LABORATORY EQUIPMENT

8 - LABORATORY

COMPANY NAME

ORIGIN

8.14- LABORATORY CHEMICALS

PANREAC

SPAIN