



Persian Gulf Petrochemical Industries Company

## **APPROVED VENDOR LIST**

**REV. 8**

Prepared By : P I D M C O

## **INDEX :**

<b>1</b>	<b>MECHANICAL</b>	<b>(34 Pages)</b>
<b>2</b>	<b>ELECTRICAL</b>	<b>(23 Pages)</b>
<b>3</b>	<b>INSTRUMENTATION</b>	<b>(37 Pages)</b>
<b>4</b>	<b>TELECOMMUNICATION</b>	<b>(7 Pages)</b>
<b>5</b>	<b>HSE</b>	<b>(11 Pages)</b>
<b>6</b>	<b>CIVIL &amp; STRUCTURE</b>	<b>(6 Pages)</b>
<b>7</b>	<b>CATALYST , CHEMICALS &amp; OIL</b>	<b>(5 Pages)</b>
<b>8</b>	<b>LABORATORY</b>	<b>(14 Pages)</b>
<b>9</b>	<b>WORKSHOP</b>	<b>(15 Pages)</b>

# **MECHANICAL**

## **1. MECHANICAL**

### **1.1- ROTARY EQUIPMENT**

#### **1.1.1- PUMP**

- 1.1.1.1- CENTRIFUGAL WATER PUMP**
- 1.1.1.2- CENTRIFUGAL API TYPE PUMP**
- 1.1.1.3- SLURRY PUMP**
- 1.1.1.4- VERTICAL PUMP**
- 1.1.1.4.1- VERTICAL WATER PUMP**
- 1.1.1.4.2- VERTICAL API TYPE PUMP**
- 1.1.1.5- DOSING PUMP**
- 1.1.1.6- CENTRIFUGAL HIGH SPEED PUMP (INTEGRAL GEAR)**
- 1.1.1.7- SCREW PUMP**
- 1.1.1.8- GEAR PUMP**
- 1.1.1.9- CRYOGENIC SUBMERGED PUMP**
- 1.1.1.10- LIQUID RING VACUUM PUMP**
- 1.1.1.11- SEAL LESS PUMP**
- 1.1.1.12- JET PUMP**

#### **1.1.2- COMPRESSOR**

- 1.1.2.1- CENTRIFUGAL / AXIAL COMPRESSOR**
- 1.1.2.2- RECIPROCATING COMPRESSOR**
- 1.1.2.3- SCREW COMPRESSOR**
- 1.1.2.4- LIQUID RING TYPE COMPRESSOR**
- 1.1.2.5- LOBE COMPRESSOR**
- 1.1.2.6- CENTRIFUGAL HIGH SPEED COMPRESSOR**

#### **1.1.3- TURBINE**

- 1.1.3.1- STEAM TURBINE**
- 1.1.3.2- GAS COMBUSTION TURBINE**
- 1.1.3.3- TURBO EXPANDER**
- 1.1.3.4- TURBINE AUXILIARIES**

#### **1.1.4- MIXER & AGITATOR**

#### **1.1.5- MECHANICAL SEAL**

#### **1.1.6- FAN & BLOWER**

#### **1.1.7- GEAR UNIT**

#### **1.1.8- EXTRUDER**

#### **1.1.9- COUPLING**

### **1.2-FIXED EQUIPMENT**

#### **1.2.1- DRUM & COLUMN**

#### **1.2.2- H.P. STEAM DRUM**

#### **1.2.3- ATMOSPHERIC STORAGE TANK**

- 1.2.3.1- TANK ACCESSORIES**

*1.2.4- SPHERICAL TANK*

*1.2.5- CRYOGENIC TANK*

*1.2.6- SILO / HOPPER*

*1.2.7- HEAT EXCHANGER*

*1.2.7.1- SHELL & TUBE HEAT EXCHANGER*

*1.2.7.2- H.T. SHELL & TUBE HEAT EXCHANGER*

*1.2.7.3- PLATE HEAT EXCHANGER*

*1.2.7.4- DOUBLE PIPE HEAT EXCHANGER*

*1.2.7.5- AIR COOLED EXCHANGER*

*1.2.7.6- SPIRAL HEAT EXCHANGER*

*1.2.8- EJECTOR*

*1.2.9- REACTOR*

*1.2.10- INTERNAL PART*

*1.2.10.1- TRAY*

*1.2.10.2- CYCLONE*

*1.2.10.3- SCRUBBER PACKAGE / FLUE GAS FILTER*

*1.2.10.4- PACKING*

*1.2.11- FIRED HEATER*

*1.2.12- AIR PREHEATER / START UP HEATER*

*1.2.13- SILENCER*

*1.2.14- STATIC MIXER*

*1.2.15- DESUPERHEATER*

*1.2.16- SEPARATOR & FILTER SYSTEM*

*1.2.17- CENTRICAST TUBE & OUTLET MANIFOLD*

*1.2.18- CONVECTION COIL / RADIATION TUBE*

*1.2.19- BURNER*

*1.2.20- REFRACTORY*

*1.2.21- DEAERATOR*

### **1.3-PIPING**

*1.3.1- PIPE*

*1.3.2- FITTING*

*1.3.3- FLANGE*

*1.3.4- BOLT & NUT*

*1.3.5- GASKET*

*1.3.6- STEAM TRAP*

*1.3.7- STRAINER*

*1.3.8- FLEXIBLE / EXPANSION JOINT*

*1.3.9- VALVE*

*1.3.10- SPRING SUPPORT AND HANGER*

*1.3.11- RUPTURE DISK*

*1.3.12- BREATHER VALVE*

## **1.4-PACKAGE UNIT**

### **1.4.1- UTILITY PACKAGE**

*1.4.1.1- POWER GENERATION*

*1.4.1.2- BOILER*

*1.4.1.2.1- WATER TUBE BOILER*

*1.4.1.2.2- FIRE TUBE BOILER*

*1.4.1.3- HEAT RECOVERY STEAM GENERATION*

*1.4.1.4- N<sub>2</sub>/ O<sub>2</sub> UNIT*

*1.4.1.5- COOLING TOWER*

*1.4.1.6- WASTE WATER TREATMENT*

*1.4.1.7- WATER TREATMENT*

*1.4.1.8 - DESALINATION UNIT*

*1.4.1.9- PLANT / INSTRUMENT AIR PACKAGE*

*1.4.1.10- INCINERATOR PACKAGE*

*1.4.1.11- COOLING WATER REFRIGERATION PACKAGE*

*1.4.1.12- POLISHING UNIT*

### **1.4.2- PROCESS PACKAGE**

*1.4.2.1- REFRIGERATION PACKAGE*

*1.4.2.2- DRYER PACKAGE*

*1.4.2.3- CHEMICAL INJECTION*

*1.4.2.4- HYDROGEN PACKAGE*

*1.4.2.5- PSA*

*1.4.2.6- HRU*

*1.4.2.7- COLD BOX*

*1.4.2.8- CATALYST PNEUMATIC TRANSPORT*

*1.4.2.9- CENTRIFUGAL PACKAGE*

*1.4.2.10- FILTRATION PACKAGE*

### **1.4.3- SPECIAL PACKAGE**

*1.4.3.1- HVAC SYSTEM*

*1.4.3.1.1- COMPRESION CHILLING*

*1.4.3.1.2- ABSORBTION CHILLING*

*1.4.3.2- FLARE SYSTEM*

*1.4.3.3- BAGGING / PALLETIZING / SHRINKING SYSTEM*

*1.4.3.3.1- PALLET*

*1.4.3.4- BIG BAG SYSTEM*

*1.4.3.5- DRUM FILLING PACKAGE*

- 1.4.3.6- CONVEYING SYSTEM
- 1.4.3.7- BUCKET ELEVATOR
- 1.4.3.8- CRUSHER
- 1.4.3.9- RECLAIMER
- 1.4.3.10- LOADING & UNLOADING ARM
- 1.4.3.11- ELEVATOR / LIFT (EX.)
- 1.4.3.12- PIG LAUNCHER & RECEIVER
- 1.4.3.12.1- PIG CUP & SPHERE
- 1.4.3.12.2- LAUNCHER & RECEIVER

## **1.5-GENERAL ITEMS**

1.5.1- INSULATION

1.5.2- PAINT

1.5.3- FLEXIBLE METAL HOSE

1.5.4- COATING & WRAPPING

1.5.5- ELECTRODE & FILLER

1.5.6- NON-METALIC EQUIPMENT/BULK MATERIAL

1.5.6.1- DRUM

1.5.6.2- PIPE

1.5.6.3- FITTING

1.5.6.4- VALVE

1.5.7- PLATE

1.5.8- TUBE FOR HEAT EXCHANGER

1.5.9- HEAD OF VESSEL

1.5.10- RUBBER PARTS

COMPANY NAME

ORIGIN

**1.1- ROTARY EQUIPMENT**

**1.1.1- PUMP**

**1.1.1.1- CENTRIFUGAL WATER PUMP**

KALAYE PUMP	IRAN
NAVID SAHAND	IRAN
PUMP IRAN	IRAN
PUMP RIZAN	IRAN
IRAN INDUSTRIAL PUMPS	IRAN
TOLID PUMPHAYE BOZORG & TURBINE ABI (PETCO)	IRAN
ABS GROUP	SWEDEN
DICKOW PUMPEN	GERMANY
DMW CORP.	JAPAN
EBARA	JAPAN
ENSIVAL / MORET GROUP	FRANCE / BELGIUM
FLOWSERVE CORPORATION	USA / W. EUROPE / CANADA
ICHIKAWA	JAPAN
K.S.B.	GERMANY
RUHR PUMPEN	GERMANY
STORK	THE NETHERLANDS
SULZER	USA / W. EUROPE / CANADA
TORISHIMA PUMP	JAPAN
VOGEL	AUSTRIA
WEIR GROUP PLC (GABBIONETA)	UK / ITALY

**1.1.1.2- CENTRIFUGAL API TYPE PUMP**

NAVID SAHAND	IRAN
IRAN INDUSTRIAL PUMPS	IRAN
TOLID PUMPHAYE BOZORG & TURBINE ABI (PETCO)	IRAN
DICKOW	GERMANY
DMW CORP.	JAPAN
EBARA	JAPAN
ENSIVAL MORET GROUP	FRANCE / BELGIUM
ENVIROTECH	THE NETHERLANDS
FINDER POMPE S.P.A.	ITALY
FLOWSERVE CORPORATION (WORTHINGTON, INGERSOL / DRESSER PUMP)	USA / W. EUROPE / CANADA
K.S.B	GERMANY
MITSUBISHI HEAVY IND.LTD (MHI)	JAPAN
NIJHUIS	THE NETHERLANDS
ROODHART GROUP	THE NETHERLANDS
RUHR PUMPEN	GERMANY
SHIN NIPPON MACHINERY CO.LTD	JAPAN
STORK	THE NETHERLANDS
SULZER	USA / W. EUROPE / CANADA
SUNDSTRAND INTERNATIONAL S.A.	FRANCE
TORISHIMA PUMP	JAPAN
VOGEL	AUSTRIA
WEIR GROUP PLC ( GABBIONETA)	UK / ITALY

**1.1.1.3- SLURRY PUMP**

EGGER	SWITZERLAND
WEIR GROUP PLC	W. EUROPE



**COMPANY NAME**

**ORIGIN**

**1.1.1.4- VERTICAL PUMP**

**1.1.1.4.1- VERTICAL WATER PUMP**

PUMP PARS	IRAN
TOLID PUMPHAYE BOZORG & TURBINE ABI (PETCO)	IRAN
ALSTOM	FRANCE
DICKOW	GERMANY
DMW CORP.	JAPAN
EBARA	JAPAN
ENSIVAL MORET GROUP	FRANCE / BELGIUM
FLOWERVE CORPORATION	USA / W. EUROPE / CANADA
HITACHI	JAPAN
K.S.B	GERMANY
NIJHUIS	THE NETHERLANDS
NIKKISO (SUNDYNE)	JAPAN
RUHR PUMPEN	GERMANY
SHIN NIPPON MACHINERY CO.LTD	JAPAN
SPP	UK
STORK	THE NETHERLANDS
SULZER	USA / W. EUROPE / CANADA
TORISHIMA PUMP	JAPAN
VOGEL	AUSTRIA
WEIR GROUP PLC ( GABBIONETA)	UK / ITALY

**1.1.1.4.2- VERTICAL API TYPE PUMP**

DICKOW	GERMANY
DMW CORP.	JAPAN
EBARA	JAPAN
FLOWERVE CORPORATION (WORTHINGTON, INGERSOL / DRESSER PUMP)	USA / W. EUROPE / CANADA
IRAN INDUSTRIAL PUMPS	IRAN
K.S.B	GERMANY
MARUSHICHI	JAPAN
NIKKISO (SUNDYNE)	JAPAN
RUHR PUMPEN	GERMANY
SHIN NIPPON MACHINERY CO.LTD	JAPAN
STORK	THE NETHERLANDS
SULZER	USA / W. EUROPE / CANADA
TOLID PUMPHAYE BOZORG & TURBINE ABI (PETCO)	IRAN
TORISHIMA PUMP	JAPAN
VOGEL	AUSTRIA
WEIR GROUP PLC ( GABBIONETA)	UK / W. EUROPE

**1.1.1.5- DOSING PUMP**

MACHIN SAZI NEEV	IRAN
PUMP VIJEH (GESSCO)	IRAN (GERMANY)
BRAUN & LUEBBE	GERMANY / FRANCE
D.K.M CLEXTRAL	FRANCE
DOSAPRO MILTON ROY	FRANCE / UK / GERMANY
LEWA	GERMANY
NIKKISO	JAPAN
O.M.GALLARATESI	ITALY
PERONIPOMPE	ITALY
PROMINENT	GERMANY
SEKO	ITALY

**COMPANY NAME**

**ORIGIN**

**1.1.1.6- CENTRIFUGAL HIGH SPEED PUMP (INTEGRAL GEAR)**

EBARA	JAPAN
FLOWERVE CORPORATION	USA / W. EUROPE / CANADA
K.S.B	GERMANY
KAVOSH SANAT TOOS	IRAN
NIKKISO	JAPAN
ROODHART GROUP	THE NETHERLANDS
STORK	THE NETHERLANDS
SUNDYNE / INTERPEC	FRANCE / W. EUROPE
WEIR GROUP PLC ( GABBIONETA)	UK / W. EUROPE

**1.1.1.7- SCREW PUMP**

KALAYE PUMP (ALBANY)	IRAN (UK)
ALLWEILLER AG	GERMANY
BÖRGER GmbH (BORGER)	GERMANY
FLOWERVE CORPORATION	USA / W. EUROPE / CANADA
ALSTOM (SCAM IMO)	FRANCE
KAWASAKI	JAPAN
MAAG PUMP SYSTEMS TEXTRON AG	SWITZERLAND
PLENTY MIRLESS	UK
SEEPEX	GERMANY
SHIN NIPPON MACHINERY CO.LTD	JAPAN

**1.1.1.8- GEAR PUMP**

FLOWERVE CORPORATION	USA / W. EUROPE / CANADA
MAAG	SWITZERLAND
MICRO PUMP	USA / UK
OSAKA	JAPAN

**1.1.1.9- CRYOGENIC SUBMERGED PUMP**

EBARA INTERNATIONAL CORP.	JAPAN
FLOWERVE CORPORATION	USA / W. EUROPE / CANADA
IRAN INDUSTRIAL PUMPS	IRAN
NIKKISO	JAPAN
STERLING FLUID SYSTEM	UK

**1.1.1.10- LIQUID RING VACUUM PUMP**

ELMO	GERMANY
VACUUM PARS INDUSTRIES	IRAN
DE LAVAL INTERNATIONAL AB	SWEDEN
FLOWERVE CORPORATION	USA / W. EUROPE / CANADA
ENSIVAL	UK / FRANCE

**1.1.1.11- SEAL LESS PUMP**

DICKOW	GERMANY
EBARA FLUID HANDLING	JAPAN
ELMO	GERMANY
HIBON	FRANCE
KLAUS UNION (MAGNETIC DRIVEN)	GERMANY
KSB	GERMANY
LEDERLE-THERMETIC PUMPEN GMBH	THE NETHERLANDS
NIKKISO	JAPAN
SUNDYNE HMD	UK

**COMPANY NAME**

**ORIGIN**

**1.1.1.12- JET PUMP**

KAMAT	GERMANY
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**1.1.2- COMPRESSOR**

**1.1.2.1- CENTRIFUGAL / AXIAL COMPRESSOR**

ATLAS-COPCO	GERMANY
DRESSER RAND	FRANCE
ELLIOT / EBARA	JAPAN
HAVAYAR	IRAN
HITACHI	JAPAN
INGERSOL RAND	GERMANY
KAWASAKI HEAVY INDUSTRY	JAPAN
KOBELCO	JAPAN
MAN DIESEL & TURBO SE	GERMANY
mitsubishi heavy industries	JAPAN
OIL TURBO COMPRESSOR CO. (OTC)	IRAN
SIEMENS	GERMANY / THE NETHERLANDS
MAPNA TURBINE ENGINEERING AND MANUFACTURING COMPANY (TUGA)	IRAN

**1.1.2.2- RECIPROCATING COMPRESSOR**

BURCKHARDT	SWITZERLAND
BURTON CORBLIN	FRANCE
HITACHI	JAPAN
HOWDEN THOMASSEN COMPRESSORS	THE NETHERLANDS
INGERSOL RAND	GERMANY
JSW (JAPAN STEEL WORK)	JAPAN
KOBELCO	JAPAN
LEOBERSDORFER MASCHINENFABRIK (LMF)	AUSTRIA
MAN DIESEL & TURBO SE	GERMANY
NEUMAN & ESSER	GERMANY
SIAD MACCHINE IMPIANTI	ITALY
SIEMENS	GERMANY

**1.1.2.3- SCREW COMPRESSOR**

HAVAYAR	IRAN
ALSTOM (GEC-ALSTOM)	FRANCE
ATLAS COPCO	GERMANY / SWITZERLAND
COMP AIR	UK
DRESSER-RAND	FRANCE / W. EUROPE
GHH	GERMANY
KOBELCO	JAPAN
MAN DIESEL & TURBO SE	GERMANY
MYCOM	JAPAN

**1.1.2.4- LIQUID RING TYPE COMPRESSOR**

PARS VACUUM	IRAN
HIBON	FRANCE
ELMO	GERMANY
SHIN NIPPON MACHINERY CO.LTD	JAPAN

**1.1.2.5- LOBE COMPRESSOR**

HIBON	FRANCE
REIMELT	GERMANY

**COMPANY NAME**

**ORIGIN**

**1.1.2.6- CENTRIFUGAL HIGH SPEED COMPRESSOR**

KAVOSH SANAT TOOS	IRAN
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**1.1.3- TURBINE**

**1.1.3.1- STEAM TURBINE**

HANEEF AEEN (UP TO 2 MW)	IRAN
DRESSER RAND	ITALY / FRANCE
ELLIOT / EBARA CORPORATION	UK / JAPAN
FINCANTIERI ( UP TO 4 MW)	ITALY
FRANCO TOSSI	ITALY
HITACHI	JAPAN
K.K & K	GERMANY
MAN DIESEL & TURBO SE	GERMANY
mitsubishi heavy industries	JAPAN
SHIN NIPPON MACHINERY CO.LTD	JAPAN
SHINIKO	JAPAN
SIEMENS	GERMANY

**1.1.3.2- GAS COMBUSTION TURBINE**

ABB-ALSTOM (SULZER TURBO / ESCHER WYSS)	GERMANY / FRANCE
HITACHI	JAPAN
KAWASAKI HEAVY INDUSTRY	JAPAN
MAN DIESEL & TURBO SE	GERMANY / SWITZERLAND
mitsubishi heavy industries	JAPAN
OIL TURBO COMPRESSOR CO. (OTC)	IRAN
ROLLS ROYCE ALLISON	UK
MAPNA TURBINE ENGINEERING AND MANUFACTURING COMPANY (TUGA)	IRAN
SIEMENS-WESTINGHOUSE	GERMANY

**1.1.3.3- TURBO EXPANDER**

AIR LIQUIDE	FRANCE
ATLAS COPCO GAS & PROCESS DIVISION	SWEDEN / GERMANY
CRYOSTAR	FRANCE
ELLIOT / EBARA	UK / JAPAN
MAFI-TRENCH	UK
MAN DIESEL & TURBO SE	GERMANY / SWITZERLAND

**1.1.3.4- TURBINE AUXILIARIES**

TURBINHAYE SANATI GHADIR YAZD	IRAN
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**1.1.4- MIXER & AGITATOR**

ANTICO	ITALY
EKATO	GERMANY
LIGHTNIN MIXER	UK
NIPPON GEAR CO. LTD.	JAPAN
PLENTY	UK
R.V.T.	GERMANY
ROBBIN	FRANCE

**1.1.5- MECHANICAL SEAL**

JARF SANAT KHAVARMYANEH	IRAN
SEALTEK	ITALY
NAHADIN ARMAN	IRAN
BURGMANN PARS	IRAN / GERMANY

<i>COMPANY NAME</i>	<i>ORIGIN</i>
KAVAND POOYA SAKHT / JOHN CRANE	IRAN / UK
PILARY GOSTAR / FLOWSERVE	IRAN / GERMANY
EAGLE	JAPAN
NIPPON PILLAR	JAPAN

#### **1.1.6- FAN & BLOWER**

AEROMECCANICA STRANICH	ITALY
AERZENER	GERMANY
BOLDROCHI	ITALY
GRUBER	SPAIN
HIBON	FRANCE
HOWDEN	UK / FRANCE
INDUSTRIE CBI	ITALY
KOBE STEEL	JAPAN
MACHIN SAZI MANGAN (ONLY FAN)	IRAN
MAN DIESEL & TURBO SE	GERMANY
ROBUSCHI & C S.P.A.	ITALY
SAMWON E&B (For Boiler Package)	S. KOREA
SANAYE VACUUM PARS / ROBUSKI	IRAN / ITALY
SIEMENS	GERMANY
STORK	THE NETHERLANDS

#### **1.1.7- GEAR UNIT**

BHS CINCINNATI GETRIEBETECHNIK	GERMANY
FELENDER	GERMANY
HANSEN	BELGIUM
LUFKIN	FRANCE
MAAG	SWITZERLAND
NIPPON GEAR	JAPAN
RENK TACKE GMBH	GERMANY

#### **1.1.8- EXTRUDER**

COPERION (WERNER)	GERMANY
JSW	JAPAN
KOBELCO	JAPAN

#### **1.1.9- COUPLING**

WILL BE ADVISED LATER	
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### **1.2- FIXED EQUIPMENT**

#### **1.2.1- DRUM & COLUMN**

ABAN AIR COOLER	IRAN
ADM	FRANCE
AGUILAR Y SALAS	SPAIN
ALBORZ NOVIN SHIRAZ	IRAN
ARTASH	IRAN
ASAS SANAT PARS	IRAN
ATB RIVA CALZONI	ITALY
AZARAB	IRAN
B.S.L. INDUSTRIES	FRANCE
BELLELI ENERGY CPE S.P.A	ITALY
C.M.P	FRANCE
COEK ENGINEERING	BELGIUM
DELATTRE BEZONS	FRANCE
DELAUNAY	FRANCE
DISAL	IRAN

<i>COMPANY NAME</i>	<i>ORIGIN</i>
FATEH SANAT KIMIA	IRAN
FBM HUDSON ITALIANA S.P.A.	ITALY
G & G GELDOLF	BELGIUM
GARMA GOSTAR	IRAN
GHATAT VA MACHINALAT SANAYE PETROCHIMI (TOOS)	IRAN
HYOSUNG CORPORATION	S. KOREA
JAHANKAR ESFAHAN	IRAN
KAVEH MOBADDEL	IRAN
MACHIN DAROU	IRAN
MACHIN SAZI ARAK	IRAN
MACHIN SAZI ESFAHAN	IRAN
MAHDIN	IRAN
MAPNA BOILER & EQUIPMENT ENGINEERING & MANUFACTURING CO.	IRAN
MASNOUAT FELEZI SANGIN	IRAN
NEYR PERSE	IRAN
OFFICINE COSTRUZIONI SPECIALI (O.C.S)	ITALY
PARGASIRAN	IRAN
PARS TECHNIC	IRAN
PAYSAZ	IRAN
PETRO AVAN	IRAN
PETRO SAKHT CHEHELSETOUN	IRAN
POOLAD SAZAN FARAYAND	IRAN
REACTOR SAZ	IRAN
SADID JAHAN SANAT	IRAN
SANATI AHANSAI	IRAN
SANAYE PARSIAN SAZEH SEPAHAN (SHAHID AMANI)	IRAN
SAZEHAYEH FELEZI SHAHRYAR ( ONLY FOR DRUM UP TO 30MM THK)	IRAN
SIMAN SAZAN	IRAN
SUPERACTIVE	IRAN
SYSTEMHAYE SANATI TAKESTAN	IRAN
TAGHTIRAN	IRAN
TAJHIZ FARAYAND ABANGAN	IRAN
TASHA	IRAN
TOLID TAJHIZAT SANGIN (HEPCO)	IRAN
GARDINAL	BELGIUM
HANS LEFFER	GERMANY
HITACHI KASADO JYUKOYOCC	JAPAN
LODEWIJCK	BELGIUM
OFFICINE LUGI RESTA	ITALY
OLMI	ITALY
ROLLE	ITALY
SIMIC S.P.A	ITALY
SNIG	FRANCE
WALTER TOSTO	ITALY

#### **1.2.2- H.P. STEAM DRUM**

ATB RIVA CALZONI	ITALY
BELLELI ENERGY CPE S.P.A	ITALY
BORSIG GMBH	GERMANY
DEUTSCHE BABCOCK-BALCKE & DURRE AG	JAPAN / GERMANY
FBM HUDSON ITALIANA S.P.A.	ITALY
FOSTER WHEELER ENERGY	UK
HITACHI KASADO	JAPAN
HITACHI ZOSEN	JAPAN
KAWASAKI HEAVY INDUSTRIES	JAPAN

<i>COMPANY NAME</i>	<i>ORIGIN</i>
MANGIAROTTI S.P.A.	ITALY
MITSUBISHI HEAVY INDUSTRIES	JAPAN
OFFICINE LUGI RESTA S.P.A.	ITALY
OLMI	ITALY
ROLLE	ITALY
STEINMULLER GMBH	GERMANY

### 1.2.3- ATMOSPHERIC STORAGE TANK

ALBORZ NOVIN SHIRAZ	IRAN
ASAS SANAT PARS	IRAN
AZARAB	IRAN
GHATAT VA MACHINALAT SANAYE PETROCHIMI (TOOS)	IRAN
MACHIN SAZI ARAK	IRAN
MACHIN SAZI ESFAHAN	IRAN
MACHIN SAZI PARS	IRAN
MAHDIN	IRAN
MASNOOAT FLEZI SANGIN	IRAN
NEYR PERSE	IRAN
PARGASIRAN	IRAN
PAYSAZ	IRAN
PETRO AVAN	IRAN
POULAD SAZAN FARAYAND	IRAN
REACTOR SAZ	IRAN
SADID JAHAN SANAT	IRAN
SANATI AHANSAI	IRAN
SANAYE PARSIAN SAZEH SEPAHAN (SHAHID AMANI)	IRAN
SAZEHAYEH FELEZI SHAHRYAR	IRAN
SIMAN SAZAN	IRAN
SUPERACTIVE	IRAN
TASHA	IRAN
TOLID TAJHIZAT SANGIN (HEPCO)	IRAN

#### 1.2.3.1- TANK ACCESSORIES

PETRO ENERGY KHALIG FARS (GPE)	IRAN
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### 1.2.4- SPHERICAL TANK

MACHIN SAZI ARAK	IRAN
POLAD SAZAN FARAYAND	IRAN
SANAYE PARSIAN SAZEH SEPAHAN (SHAHID AMANI)	IRAN
PETRO SAZEH BEINOLMELAL ARAM	IRAN
BELLELI ENERGY CPE S.P.A	ITALY
CMP ALIES	FRANCE
G & G GELDOP	BELGIUM
MARALDI	ITALY
SPG STEINER GMBH (ADAPT)	GERMANY
T.K.K.	JAPAN
WHESSOE	UK

### 1.2.5- CRYOGENIC TANK

HAMPA ENERGY ENGINEERING & DESIGN CO. (HEDCO)	IRAN
CHIGAGO BRIDGE	UK
FOSTER WHEELER ENERGY	UK
KAWASAKI HEAVY INDUSTRIES	JAPAN
MARALDI	ITALY
MITSUBISHI HEAVY INDUSTRIES	JAPAN
MOTHERWELL BRIDGE	UK
SPG STEINER GMBH (ADAPT)	GERMANY

<i>COMPANY NAME</i>	<i>ORIGIN</i>
TASHA / MARALDI	IRAN / ITALY
T.K.K	JAPAN
WHESSOE	UK

#### 1.2.6- SILO / HOPPER

MOPHID SEPAHAN	IRAN
ELIMETAL NV	BELGIUM
JANSENS & DIEPERINK B.V.	THE NETHERLANDS

#### 1.2.7- HEAT EXCHANGER

##### 1.2.7.1- SHELL & TUBE HEAT EXCHANGER

ABAN AIR COOLER	IRAN
AGUILAR Y SALAS	SPAIN
ASAS SANAT PARS	IRAN
AZARAB	IRAN
DISAL	IRAN
ETTORE ZANON	ITALY
FATEH SANAT KIMIA	IRAN
GARMA GOSTAR	IRAN
GHATAT VA MACHINALAT SANAYE PETROCHIMI (TOOS)	IRAN
HYOSUNG CORPORATION	S. KOREA
OFFICINE COSTRUZIONI SPECIALI (O.C.S)	ITALY
KAVEH MOBADDEL	IRAN
MACHIN DAROU	IRAN
MACHIN SAZI ARAK	IRAN
MAHDIN	IRAN
MASNOUAT FELEZI SANGIN	IRAN
PARGASIRAN	IRAN
PETRO SAKHT CHEHELSETOUN	IRAN
SANAYE HARARATI IRAN	IRAN
SUPER ACTIVE	IRAN
TASHA	IRAN
TEHRAN MOBADEL	IRAN
BELLELI ENERGY CPE S.P.A	ITALY
BOLDROCCHI ECO LOGIA S.R.L.	ITALY
BORSIG GMBH	GERMANY
COEK ENGINEERING	BELGIUM
DELAUNAY	FRANCE
F.B.M HUDSON	ITALY
FOURE LAGADEC	FRANCE
G & G INTERNATIONAL NV	BELGIUM
G.E.A WIEGAND	GERMANY
GARGANO	ITALY
HANS LEFFER	GERMANY
HITACHI	JAPAN
LODEWIJCK	BELGIUM
OFFICINE LUIGI RESTA S.P.A.	ITALY
MANGIAROTTI S.P.A.	ITALY
MITSUBISHI HEAVY INDUSTRIES	JAPAN
OLMI	ITALY
OMSA	ITALY
PETOR CARBON DEVELOPMENT	UK
ROLLE S.P.A.	ITALY



<i>COMPANY NAME</i>	<i>ORIGIN</i>
SIMIC S.P.A	ITALY
VRV	ITALY
WALTER TOSTO	ITALY

#### **1.2.7.2- H.T. SHELL & TUBE HEAT EXCHANGER**

BORSIG AG	GERMANY
COEK ENGINEERING	BELGIUM
DELAUNAY	FRANCE
FBM HUDSON ITALIANA S.P.A.	ITALY
FISHER LORRANIE	FRANCE
FOURE LAGADEC	FRANCE
HITACHI ZOSEN	JAPAN
KOBE STEEL	JAPAN
LODEWIJCK	BELGIUM
OFFICINE LUGI RESTA S.P.A.	ITALY
MANGIAROTTI S.P.A.	ITALY
OLMI	ITALY
RIBATTI	FRANCE
SCHMIDTSCH HISSDAMPF GMBH	GERMANY
STEINMULLER GMBH	GERMANY / SPAIN

#### **1.2.7.3- PLATE HEAT EXCHANGER**

TAHA GHALEB TOOS	IRAN
ALFA LAVAL S.P.A.	ITALY / JAPAN
APV	UK
GEA WIEGAND	GERMANY
KOCH	ITALY
LINDE AG	GERMANY
NEXSON GROUP SAS	FRANCE
NI SAKA SEISAKUSHO	JAPAN
NORTON GMBH	GERMANY
S.R.D	GERMANY
SECATHEN (FOR WELDED PLATE)	FRANCE
SONDEX	DENMARK
VICARB BENELUX	ITALY / BELGIUM

#### **1.2.7.4- DOUBLE PIPE HEAT EXCHANGER**

AZARAB	IRAN
DISAL	IRAN
MACHIN SAZI ARAK	IRAN
ASET	FRANCE
BROWN FINTUBE (KOCH )	FRANCE
GARGANO	ITALY
SIIRTEC	ITALY
SUITOMO HEAVY IND.	JAPAN

#### **1.2.7.5- AIR COOLED EXCHANGER**

ABAN AIR COOLER	IRAN
ALBORZ NOVIN SHIRAZ	IRAN
ASAS SANAT PARS	IRAN
BALCKE & DURRE	GERMANY
DAMAFIN	IRAN
FATEH SANAT KIMIYA	IRAN
KAVEH MOBADDEL	IRAN
MACHIN SAZI ARAK	IRAN

COMPANY NAME	ORIGIN
PETRO SAKHT CHEHELSETOUN	IRAN
TASHA	IRAN
BOLDROCCHI SRL	ITALY
BTT / GEA	FRANCE / GERMANY / ITALY
FBM HUDSON	ITALY
GEA LUFTKERHLER	GERMANY
GRAHAM	UK
HAMON INDUSTRIES THERMIQUE	BELGIUM
KAWASAKI HEAVY INDUSTRIES	JAPAN
OLMI	ITALY

#### 1.2.7.6- SPIRAL HEAT EXCHANGER

LINDE AG	GERMANY
NEXSON GROUP SAS	FRANCE

#### 1.2.8- EJECTOR

FAN NIROU	IRAN
KARA TAHVIEH / KARA SANAT TADBIR PAYA	IRAN
ANA GMBH	GERMANY
BERTIN TECHNOLOGIES SA	FRANCE
BOC EDWARDS	UK
BUSCH	UK
DELAS / WEIR	FRANCE
DEN HOLDER	THE NETHERLANDS
EQUIREPSA	SPAIN
FACET	FRANCE
FLO - DYNE	UK
JAPAN EJECTOR ENGINEERING	JAPAN
NOVATEC	FRANCE
GEA JET PUMP	GERMANY
GEA WIEGAND	GERMANY
GEVEKE	THE NETHERLANDS
GRAHAM	UK
HICK HARGREAVES	UK
KIEKENS	THE NETHERLANDS
KORTING (SPIRAX SARCO)	GERMANY / FRANCE
OSAKA VACUUM	JAPAN

#### 1.2.9- REACTOR

ATB RIVA CALZONI	ITALY
AZARAB	IRAN
BELLELI ENERGY CPE S.P.A	ITALY
C.M.P	FRANCE
CIVIDAC	ITALY
COEK ENGINEERING	BELGIUM
DISAL	IRAN
DWE (MAN DWE GMBH)	GERMANY
FBM HUDSON	ITALY
FELGUERA CALDERERA	SPAIN
G & G GELDOLF	BELGIUM
HANS LEFFER	GERMANY
HITACHI SHIP BUILDING & ENGINEERING	JAPAN
HYOSUNG CORPORATION	S. KOREA
KOBE STEEL	JAPAN
MACHIN SAZI ARAK	IRAN

<i>COMPANY NAME</i>	<i>ORIGIN</i>
MAHDIN	IRAN
MANGIAROTTI S.P.A.	ITALY
MITSUBISHI NAGASAKI MACHINE	JAPAN
MUNCH	FRANCE
OFFICINE LUIGI RESTA S.P.A.	ITALY
PARGASIRAN	IRAN
PAYSAZ	IRAN
POULAD SAZAN FARAYAND	IRAN
REACTORSAZ	IRAN
ROLLE	ITALY
S.B.N	AUSTRIA
SIMIC S.P.A	ITALY
UBE INDUSTRIES LTD	JAPAN
V.R.V	ITALY
ETTORE ZANON	ITALY

### 1.2.10- INTERNAL PARTS

#### 1.2.10.1- TRAY

AZAR ENERGY	IRAN
BARETTI	ITALY
BAYER	GERMANY
CECA	FRANCE
COSTA CURTA	ITALY
DAMAVAND FELEZ / MONTZ	IRAN / GERMANY
ETA	UK
EUROSLLOT	FRANCE
EUROSLLOT PARS	IRAN
FOULAD PRESS	IRAN
HANBAL MASSTECH LTD. (HMT)	S. KOREA
KOCH-GLITSCH S.P.A	ITALY / FRANCE
NORTON GMBH	GERMANY
PARGASIRAN	IRAN
PETROHAM PROCESS	IRAN
SANAYE PANTANE SHIMI	IRAN
SULZER CHEMTECH / METAWA	SWITZERLAND / W. EUROPE

#### 1.2.10.2- CYCLONE

PARGASIRAN	IRAN
ALPINE	GERMANY
EMTROL	UK
LUFTECHNIK	GERMANY
VAN TONGEREN	UK

#### 1.2.10.3- SCRUBBER PACKAGE / FLUE GAS FILTER

PARGASIRAN	IRAN
ABB FLAXT	FRANCE / GERMANY
AIR CURE INC	GERMANY
BEKAERT ADVANCED	BELGIUM
JOHNSON FILTRATION SYSTEM	FRANCE
LAB SA	FRANCE
SERVITHEN	FRANCE
SOCREMATIC	FRANCE

**COMPANY NAME**

**ORIGIN**

**1.2.10.4- PACKING**

HANBAL MASSTECH LTD. (HMT)	S. KOREA
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**1.2.11- FIRED HEATER**

ABB LUMMUS	THE NETHERLANDS
BABCOCK WANSON	UK
BIH	UK
FOSTER WHEELER	FRANCE
HEURTEY PETROCHEN	FRANCE
IHI	JAPAN
IRCAST / SCHAWENBERG	IRAN / GERMANY
ITT SPA	ITALY
K.T.I	ITALY
KIRCHNER	ITALY
KOBE STEEL	JAPAN
NOVARGI INDUSTRIES	SPAIN
SELAS LINDE	GERMANY

**1.2.12- AIR PREHEATER / START UP HEATER**

AIR OIL FLARE GAS SA	UK
AST (BERTRAMS)	SWITZERLAND
BALKE DURRE	GERMANY
EET	FRANCE
GEA LUFTKUEHLER GMBH	GERMANY
HEURTEY PETROCHEN	BELGIUM / FRANCE
HITACHI ZOSEN	JAPAN
ITT SPA	ITALY
NOVARGI INDUSTRIES	SPAIN
S.C.R.D.	SWITZERLAND

**1.2.13- SILENCER**

AZARAB	IRAN
FAN AZMAYAN POYANDEH	IRAN
KAVEH MOBADDEL	IRAN
KARA TAHVIEH / KARA SANAT TADBIR PAYA	IRAN
MACHIN SAZI ARAK	IRAN
SUPER ACTIVE	IRAN
TASHA	IRAN
BOET	FRANCE
BURGESS MANNING	UK / FRANCE / GERMANY
FORAIN	ITALY
GERBER	GERMANY
MULLER BBM	GERMANY
QUIETFLO	THE NETHERLANDS
SAI	FRANCE
TIO	THE NETHERLANDS

**1.2.14- STATIC MIXER**

KOCH	ITALY
LIGHTING MIXER	UK
NIPPON GEAR CO.LTD	JAPAN
PITALUGA	FRANCE / ITALY
PLENTY	UK
PREMATECHNIK	GERMANY

<i>COMPANY NAME</i>	<i>ORIGIN</i>
PRIMIX	THE NETHERLANDS
SIDAC	FRANCE
STIBBE	THE NETHERLANDS
SULZER	SWITZERLAND
VEOLIA ENVIRONMENTAL SERVICES	UK
WELDER B.V	THE NETHERLANDS

#### 1.2.15- DESUPERHEATER

SIMIC S.P.A	ITALY
BTG	SWEDEN
EMERSON	FRANCE / GERMANY
FAUDI	GERMANY
GEA LUFTKUHER GMBH	GERMANY
GESTRA AG	GERMANY
GRAHAM	UK
KENT PROCESS CONT	UK
KEYSTONE	UK
KIEKENS	THE NETHERLANDS
SAMSON A.G	FRANCE / GERMANY
WIEGAND	GERMANY

#### 1.2.16- SEPARATOR & FILTER SYSTEM

ABB FLAXT	GERMANY / FRANCE
AIR CURE INC	GERMANY
ALFA LAVAL	ITALY
AMAFILTER SARL	FRANCE
ANDRITZ SEPARATION GMBLT	GERMANY
ATB RIVA CALZONI	ITALY
BEA FILTER	ITALY
BELLELI ENERGY CPE S.P.A	ITALY
BERGUM IMPIANTI	ITALY
DAHLMAN	THE NETHERLANDS
ENSEPATEC	GERMANY
EUROFIL TEC	UK
EUROSLOT	FRANCE
FAUDI FILTER SYSTEMS GMBH	GERMANY
FILTERS S.R.L.	ITALY
FLUIDEL	ITALY
FORAIN	ITALY
FUJI FILTER	JAPAN
G.SARTORI	ITALY
JFC	S. KOREA
JOHNSON FILTRATION SYSTEM	FRANCE
KASRAVAND	IRAN
LAB SA	FRANCE
LFC LOCHEM B.V.	THE NETHERLANDS
MASNOAT FELEZI SANGIN	IRAN
PARGASIRAN	IRAN
PARS REGULATOR (FILTER ELEMENT)	IRAN
PETROHAM PROCESS	IRAN
PLENTY FILTER	UK
SE CHANG	S. KOREA
SERVITHEN	FRANCE
SIIRTEC NIGI	ITALY

<i>COMPANY NAME</i>	<i>ORIGIN</i>
SIMIC S.P.A	ITALY
SOCREMATIC	FRANCE
SYSTEMHAYE SANATI TAKESTAN	IRAN
WELDERS FILTRATION TECHNOLOGY	BELGIUM

#### 1.2.17- CENTRICAST TUBE & OUTLET MANIFOLD

BORSIG GMBH	GERMANY
CENTROMENT WRAZA	BELGIUM
DANACASTER	UK
FOSTER WHEELER	FRANCE
HEURTEY PETROCHEM	FRANCE
IHI	JAPAN
KOBE STEEL	JAPAN
KTI	ITALY
KUBOTA	JAPAN
MANOIR INDUSTRIES	FRANCE
PARALLOY BIDDING CLEVELAND	UK
SCHMIDT & CLEMENS	GERMANY / SPAIN
SEL AS KIRCHNER	GERMANY

#### 1.2.18- CONVECTION COIL / RADIATION TUBE

CARNOY	BELGIUM
CORROTHERM	UK
DAIDO STEEL	JAPAN
DEUTSCHE BABCOCK + BALCKE & DURRE	GERMANY
KTI	BELGIUM
KUBOTA	JAPAN
LMI	ITALY
SCHMIDT & CLEMENS	GERMANY
SCOMARK ENGINEERING	UK
SIRZ	ITALY
STEINMULLER	GERMANY

#### 1.2.19- BURNER

AIROIL GMBH	GERMANY
BCE S.R.L	ITALY
DURIKER COMBUSTION ENG. B.V.	THE NETHERLANDS
GRAHAM	UK
HAMWORTHY	UK
ITAS	ITALY
JOHN ZINK GMBH	LUXEMBOURG
PARS MASHAL (SAKI)	IRAN (UK)
PREMATECHNIK	GERMANY
SANAYE SHAHID BAGHERI	IRAN
SULZER ESHER WYE	SWITZERLAND
THE BURNERS	ITALY
ZEECO	USA / UK

#### 1.2.20- REFRACTORY

AMOL CARBORANDOM	IRAN
CERAMIC TEHRAN	IRAN
CERAMICHAYE SANATI ARDAKAN	IRAN
DIRGODAZ AMOL	IRAN

COMPANY NAME	ORIGIN
FARAVARDEH NASOOZ AZAR ESFAHAN	IRAN
FARAVARDEH NASOOZ TABRIZ	IRAN
FARAVARDEHAYE KANI GHEIRE FELEZI	IRAN
FARAVARDEHAYE NASOOZ IRAN	IRAN
FARAVARDEHAYE NASOOZ NIROU	IRAN
GAHAR CERAM	IRAN
FARANASOUZ YAZD	IRAN
BECKMANN	GERMANY
CIRIA	ITALY
DIDIER WERKE	GERMANY
JUNER AND GRATHER	GERMANY
KARRENA	GERMANY
PLIBRICO	UK / THE NETHERLANDS
THERMAL CERAMICS	UK

#### 1.2.21- DEAERATOR

AZARAB	IRAN
GARMA GOSTAR	IRAN
MACHIN SAZI ARAK	IRAN
MAPNA BOILER & EQUIPMENT ENGINEERING & MANUFACTURING CO.	IRAN
MASNOAT FELEZI SANGIN	IRAN
BABCOCK / HITACHI	JAPAN
STORK THERMEQ	THE NETHERLANDS

### 1.3- PIPING

#### 1.3.1- PIPE

ARCELORMITTAL STAAHL HANDEL	THE NETHERLANDS / GERMANY
AVESTA SANDVIK TUBE AB	SWEDEN
BHDT GMBH	AUSTRIA
BUTTING	GERMANY
CORUS	UK
DUFERCO	BELGIUM / SWITZERLAND
ECONOSTO	THE NETHERLANDS
EEW (ERNDTEBRÜCKER EISENWERK)	GERMANY
EISENBAU KRAEMER	GERMANY
EURO PIPE	GERMANY
FERROSTAAL	THE NETHERLANDS
INOXTECH	ITALY
INTERMETAL2000	UK
IPS	THE NETHERLANDS
IRAN SPIRAL	IRAN
KOBE STEEL	JAPAN
KURVERS	FRANCE / GERMANY
LOOLEH GOSTAR ESFARAYEN	IRAN
LOOLEH SAZI AHWAZ	IRAN
LOOLEH SAZI KHOOZESTAN	IRAN
LOOLEH SAZI MAHSHAHR	IRAN
LOOLEH SAZI SANIG JAM	IRAN
LOOLEH VA PROFILE SAVEH	IRAN
LOOLEH VA TAJHIZAT SADID	IRAN
MANNESMAN HANDEL	GERMANY
MARDALE	UK
MARUBENI-ITUCHO STEEL INC.	JAPAN

COMPANY NAME	ORIGIN
MERRYFIELD	UK
MID STEEL PIPELINE LIMITED	UK
NAVARD VA LOOLEH AHWAZ	IRAN
NAVARD VA LOOLEH SAFA	IRAN
NIRO-TECHNIK	GERMANY
PHOCEENNE	FRANCE / BELGIUM
PIPE LINE TUBE & CASING	UK
SANDVIK (Pipe & Tube )	SWEDEN
SCHULTZ	GERMANY
SeAH Steel	S. KOREA
SIDECO	ITALY
SOSTA BV	THE NETHERLANDS
NIPPON STEEL & SUMITOMO METAL CORPORATION (NSSMC)	JAPAN
TENARIS (EUROTUBE)	UK
THYSSEN	GERMANY
TPS	GERMANY
TUBACEX GROUP	SPAIN
VAN LEEUWEN BUIZEN	THE NETHERLANDS / BELGIUM

### 1.3.2- FITTING

BASSI LUIGI	ITALY
CORUS	UK
FAD	ITALY
FOOLAD ASA	IRAN
GELD BACH	GERMANY
I.M.L	ITALY
INTERMETAL2000	UK
KURVERS	FRANCE / GERMANY
MID STEEL PIPELINE LIMITED	UK
NIROTEC (SPECIAL ITEMS)	GERMANY
NIRO-TECHNIK	GERMANY
OMR	ITALY
PARS REGULATOR (FORGED UP TO 4")	IRAN
PHOCEENNE	FRANCE / BELGIUM
PIPE LINE TUBE & CASING	UK
SANDVIK	SWEDEN
SCHULTZ	GERMANY
SCOMARK ENG.	UK
STEEL ASA	IRAN
TECTUBI RACCORDI	ITALY
TOOS PEYVAND	IRAN
TPS	GERMANY
VAN LEEUWEN BUIZEN	THE NETHERLANDS / BELGIUM

### 1.3.3- FLANGE

CORUS	UK
FAD	ITALY
GALPERTI IRAN	IRAN
GELD BACH	GERMANY
GHARB FLANGE	IRAN
I.M.L	ITALY
INTERMETAL2000	UK
KURVERS	FRANCE / GERMANY
MACHIN SAZI ARAK	IRAN
MARO SANAT	IRAN



COMPANY NAME	ORIGIN
MID STEEL PIPELINE LIMITED	UK
MOJTAMA SANATI ES FARAYEN	IRAN
MOJTAMA SHAHABADI	IRAN
NIROTEC ( SPECIAL ITEMS)	GERMANY
NIRO-TECHNIK	GERMANY
OFFICINE SANTAFEDE	ITALY
PETRO KOUSHESH JAM	IRAN
PHOCENNE	FRANCE
SANAYE PARSIAN SAZEH SEPAHAN (SHAHID AMANI)	IRAN
TECTUBI RACCORDI	ITALY
TPS	GERMANY
VAN LEEUWEN BUIZEN	THE NETHERLANDS

#### 1.3.4- BOLT & NUT

BASTARVAN	IRAN
FARASAZAN PITCH GOSTAR PARS	IRAN
GOROOH TOLIDI VA SANATI PICH ESHPII IRAN	IRAN
IRAN PITCH	IRAN
IRAN TOHID	IRAN
KIAN PITCH	IRAN
OME	ITALY
PARS PITCH	IRAN
PART SAZI MASHHAD	IRAN
PETRO NIROOYE IRANIAN TAVANA (PETRONUT)	IRAN
PHOCENNE	FRANCE
PICH ETESAL PARS	IRAN
PITCH MOHREH SAZANE SANATI	IRAN
PITCH VA MOHREHAYE SANATI IRAN	IRAN
POOLAD PITCH KAR	IRAN
PRESSBOLT	ITALY
SAHAND POULAD	IRAN
TADAROKATE SANATI SEPAHAN	IRAN

#### 1.3.5- GASKET

ATBIN ISTA	IRAN
BURGMANN PARS	IRAN
ECONOSTO	W. EUROPE
ERTEASH GHOSTAR PAYMAN	IRAN
FLEXITALIC	UK
FMA	ITALY
GHATAT VA MACHINALAT SANAYE PETROCHIMI (TOOS)	IRAN
JAMES WALKER	UK
KIAN VASHER SHARGH	IRAN
KIMIA FARAVAR SANAT	IRAN
KLINGIRAN	IRAN
PETRO IDEH KOUSHESH	IRAN
SANAYE VASHER SAZI BEHTA	IRAN
TC KLINGER	GERMANY
TECNO TREX	ITALY

#### 1.3.6- STEAM TRAP

ARMSTRONG	UK
BEKO TECHNOLOGIES GMBH	GERMANY
DOUGLAS CHERO	ITALY
ECONOSTO	THE NETHERLANDS
EYVAZ TECHNIC	IRAN

<i>COMPANY NAME</i>	<i>ORIGIN</i>
FLOWERVE CORPORATION	BELGIUM / FRANCE
GESTRA	GERMANY / FRANCE
JUCKER	ITALY
KAR AVARANE BOKHAR	IRAN
PARS REGULATOR	IRAN
PLENTY	UK
SANAYE BOKHAR ESFAHAN	IRAN
SANAYE HAFTOME TIR ESFAHAN	IRAN
SPIRAX SARCO	FRANCE
T.L.V (Trouble Less Valve)	JAPAN
TALEH BOKHAR	IRAN
YAMANTO KOUKI	JAPAN

### 1.3.7- STRAINER

AEVAZ TECHNIC	IRAN
ARMSTRONG	UK
BEKO	GERMANY
DAMAVAND FELEZ	IRAN
EBUTECH	THE NETHERLANDS
FARAKARAN TOLID KAHANGAN	IRAN
INTERMETAL2000	UK
JFC	S. KOREA
KARAVARAN BOKHAR	IRAN
NAGHSH JAHAN PALAYEH	IRAN
PARS REGULATOR	IRAN
PLENTY	UK
SANAYE HAFTOME TIR ESFAHAN	IRAN
SE CHANG	S. KOREA
SPIRAX SARCO	FRANCE
YAZD FILTER	IRAN

### 1.3.8- FLEXIBLE / EXPANSION JOINT

EN ETAF SANE	IRAN
ERTEASH GOSTAR PEYMAN	IRAN
ERTEASHAT LASTIC IRAN	IRAN
ERTEASHAT SANATI IRAN	IRAN
FELEXOR PARS	IRAN
KAROON SAR	IRAN
LASTIC SAHAND	IRAN
ELAFLEX	FRANCE / BELGIUM
FLEXIDER	ITALY
KEMPCHEM	GERMANY

### 1.3.9- VALVE

ADAMS	GERMANY
ADVANCED TECHNOLOGY VALVE (ATV)	ITALY
ALCO VALVES LTD	UK
ANDERSON	FRANCE / GERMANY
APPARECCHI DI SICUREZZA EDI TENUTA S.P.A	ITALY
ARFLU S.A.	SPAIN
ASAL ARA	IRAN
BAC VALVES	SPAIN
BAF VALVES B.V	THE NETHERLANDS
BESTOBELL VALVES LTD	UK

COMPANY NAME	ORIGIN
BOHMER (FULLY WELDED BALL VALVE)	GERMANY
BONNEY FORGE	ITALY
BRAY CONTROLS	UK
CAPITAL VALVE	UK
DANIEL INDUSTRIES	UK
DELLA FUGLI	ITALY
DELTA PACIFIC VALVE DPV	UK
DURIRON	CANADA
ECONOSTO	THE NETHERLANDS
EMERSON	THE NETHERLANDS
FASANI S.P.A.	ITALY
FEMA	ITALY
FLOW TECH	UK
FLOWSERVE CORPORATION	BELGIUM / GERMANY
GEMELS (ONLY BALL VALVE)	ITALY
GEMU	GERMANY
GESTRA	GERMANY / SPAIN
GOROOH FAJR MARKAZI	IRAN
GOROOH SANATI GODAKHTAR	IRAN
GROVE DRESSER	ITALY
HARTMANN VALVES (SPECIAL VALVE)	GERMANY
IBOR VALVES (BALL, GATE, BUTTERFLY, GLOBE, CHECK UP TO 24")	SPAIN
IPS	THE NETHERLANDS
KITZ CORPORATION	JAPAN
KURVERS	GERMANY / FRANCE
KVC	JAPAN
LAZARO ITUARTE INTERNATIONAL, S.A.	SPAIN
LVF	ITALY
MARO SANAT	IRAN
MIRAB (BUTTERFLY, GATE, GLOBE)	IRAN
MULTI-VALVE TECHNOLOGY	UK
OMS SALERI (BUTTERFLY)	ITALY
ORBIT	UK
PARS PANGAN	IRAN
PARS REGULATOR (UP TO 4")	IRAN
PERRIN (BALL, UP TO 24")	GERMANY
PETRO VALVS	ITALY
PHOCEENNE	FRANCE / BELGIUM
PIBIVIESSE	ITALY
PIETRO FIORTINI	ITALY
PK VALVE	S. KOREA
POUYA SANAT SEPEHR ARMAN (Ball, Gate, Globe, Check, UP To 36")	IRAN
RAIMONDI	ITALY
RASTA GOROOH GHESHM	IRAN
RBR VALVOLE SPA	ITALY
RINGO VALVULAS	SPAIN
ROBERT CORT	UK
SANAYE GOSTARESH SHIRSAZI	IRAN
SANDRERES	UK
SE CHANG (CHECK, GLOBE, GATE)	S. KOREA
SERCK AUDCO VALVE	UK
SHIPAM VALVES	UK
SHIRAKAWA	JAPAN
SHIRHAYE MAKHROOTIE KHAVARMIANEH (PLUG ONLY)	IRAN

<i>COMPANY NAME</i>	<i>ORIGIN</i>
SHIRHAYE SANATI ARDABIL	IRAN
SHUCTK	GERMANY
STOCKHAM VALVE	UK
SUD ROBINETTERIE INDUSTRIES	FRANCE
TAI MILANO S.P.A.	ITALY
TAKVIN SANAT AFRA	IRAN
TARAHAN TAJHIZAT SANATI PISHGAM	IRAN
TECHNO FRANCE	FRANCE / ITALY
TEHRAN SOFA	IRAN
THYSSEN	GERMANY
TOLID TAJHIZAT SANGIN (HEPCO)	IRAN
VALVOSIDER	ITALY
VELAN	GERMANY
VITAS	ITALY
WEIR VALVE & CONTROL	UK
ZA.VE.RO.INDUSTRIAL VALVES	ITALY

#### **1.3.10- SPRING SUPPORT AND HANGER**

BHP SYSTEMS DESIGN	USA / W. EUROPE
FELEXIDER	ITALY
LISEGA	GERMANY
NIROO VA TAVAN	IRAN
PIPING TECHNOLOGY & PRODUCT	USA / W. EUROPE
UEC INDUSTRIES	UK
WALRABEN	GERMANY

#### **1.3.11- RUPTURE DISK**

REMBE Gmbh SAFETY+CONTROL	GERMANY
BS & B	UK
ELFAB HUGHES	UK
FIKE	THE NETHERLANDS
LAMOT	W. EUROPE

#### **1.3.12- BREATHER VALVE**

CHYODA	JAPAN
FLAME & FILTER	GERMANY
KOPECS	S. KOREA
MARVAI	W. EUROPE
PETRO ENERGY KHALIG FARS (GPE)	IRAN
PROTEGO	GERMANY
UNIT INTERNATIONAL	UK
WEHSSOE VAREC	UK

### **1.4- PACKAGE UNIT**

#### **1.4.1- UTILITY PACKAGE**

##### **1.4.1.1- POWER GENERATION**

ABB	GERMANY
ALSTOM	FRANCE
GE	W. EUROPE
HITACHI	JAPAN
KAWASAKI	JAPAN
ROLLS ROYCE ALLISON	UK
SIEMENS	GERMANY

COMPANY NAME

ORIGIN

1.4.1.2- BOILER (WATER/FIRE TUBE)

1.4.1.2.1- WATER TUBE BOILER

AZARAB	IRAN
BAMIN TECH	IRAN
GARMA GOSTAR	IRAN
MAPNA BOILER & EQUIPMENT ENGINEERING & MANUFACTURING CO.	IRAN
OSVEH IRAN INDUSTRIAL GROUP	IRAN
BABCOCK / HITACHI	JAPAN
BALCKE DURR	GERMANY
DEUTSCHE BABCOCK AG	GERMANY
FOSTER WHELLER	UK / GERMANY
MACCHI S.P.A.	ITALY
SIMIC S.P.A	ITALY
STEINMULLER	GERMANY

1.4.1.2.2- FIRE TUBE BOILER

GARMA GOSTAR	IRAN
MACHIN SAZI ARAK	IRAN
PAKMAN	IRAN
SIMIC S.P.A	ITALY

1.4.1.3- HEAT RECOVERY STEAM GENERATION

AZARAB	IRAN
MAPNA BOILER & EQUIPMENT ENGINEERING & MANUFACTURING CO.	IRAN
MASHIN SAZI ARAK	IRAN
THERMO DESIGN INC./ OSVEH INDUSTRIAL GROUP *	CANADA / IRAN
ALSTOM	FRANCE
FOSTER WHEELER	FRANCE
NC-CCT	ITALY
NECHNIK-KTI	ITALY
NEM BV	THE NETHERLANDS
UMAG TECHNOLOGIE GMBH	GERMANY

\* THERMO DESIGN INC./ OSVEH INDUSTRIAL GROUP IS ACCEPTABLE FOR HRSG IF AND ONLY IF ENGINEERING AND PERFORMANCE GUARANTEE OF THE PACKAGE IS PROVIDED BY THERMO DESIGN

1.4.1.4- N2 / O2 UNIT

HAVAYAR	IRAN
CRYOTEC AN LAGENBAU	GERMANY
AIR LIQUIDE	FRANCE
AIR PRODUCT	FRANCE
LINDE AG	GERMANY
NIHON SANSO	JAPAN
POLARIS	ITALY
SIAD MACCHINE IMPIANTI	ITALY

1.4.1.5- COOLING TOWER

FARABARD	IRAN
TAVAN AFZAR	IRAN
BALCKE DURE / MARELLY	GERMANY / W. EUROPE
ECODYNE	CANADA
GEA	GERMANY
HAMON INDUSTRIES THERMIQUE	BELGIUM
SPX COOLING TECHNOLOGIES	GERMANY

	<i>COMPANY NAME</i>	<i>ORIGIN</i>
<b>1.4.1.6- WASTE WATER TREATMENT</b>		
	ABNIC	IRAN
	ABSUN ZOLAL KHAVARMYANEH	IRAN
	ARON AB	IRAN
	DEGREMONT/FARASSAN	FRANCE
	FALAT SANAT IDEH	IRAN
	IDRECO	ITALY
	KHERAD ENERGY & ENVIRONMENT	IRAN
	MACHINE SAZI VIJEH (MSV)	IRAN
	NOVIEN ZOLAL	IRAN
	PENDER	IRAN
	ZOLALE IRAN	IRAN
<b>1.4.1.7- WATER TREATMENT</b>		
	ABSUN ZOLAL KHAVARMYANEH	IRAN
	CECA SA	FRANCE
	DEGREMONT/FARASSAN	FRANCE
	FALAT SANAT IDEH	IRAN
	IDRECO	ITALY
	MACHINE SAZI VIJEH (MSV)	IRAN
	MAPNA BOILER & EQUIPMENT ENGINEERING & MANUFACTURING CO.	IRAN
	METITO	UK
	PENDER	IRAN
	SHAHRAB SHARGH TEHRAN	IRAN
	ZOLAL IRAN	IRAN
<b>1.4.1.8- DESALINATION UNIT</b>		
	FAN NIRO	IRAN
	PENDER	IRAN
	VA-THE-VAG	IRAN
	ALFA LAVAL	ITALY
	AXIOM	AUSTRIA
	DEGREMONT	FRANCE
	SIDEM	FRANCE
<b>1.4.1.9- PLANT / INSTRUMENT AIR PACKAGE</b>		
	HAVA ABZAR TEHRAN	IRAN
	HAVAKARAN SANAT	IRAN
	HAVAYAR	IRAN
	ATLAS COPCO	GERMANY / SWITZERLAND
	KK & K	GERMANY
	SIAD MACCHINE IMPIANTI	ITALY
<b>1.4.1.10- INCINERATOR PACKAGE</b>		
	DEGREMONT	FRANCE
	GBA	ITALY
	ITAS	ITALY
	JOHN ZINK	UK
	ZEECO	USA / UK
<b>1.4.1.11- COOLING WATER REFRIGERATION PACKAGE</b>		
	ABAN AIR COOLER	IRAN
<b>1.4.1.12- POLISHING UNIT</b>		
	PENDER	IRAN
	ZOLAL	IRAN

**COMPANY NAME**

**ORIGIN**

**1.4.2- PROCESS PACKAGE**

**1.4.2.1- REFRIGERATION PACKAGE**

AIR LIQUIDE	FRANCE
AXIMA & GRENCOBL	FRANCE
CARRIER FRANCE SA	FRANCE / BELGIUM
CASTAIN	UK
CCM SULZER	SWITZERLAND
EBARA	JAPAN
LINDE AG	GERMANY
MASIR SABZ DELTA	IRAN
QUIRT	FRANCE
SAFE GAS	ITALY
TRANE	FRANCE / BELGIUM
YORK	FRANCE

**1.4.2.2- DRYER PACKAGE**

HAVAYAR	IRAN
SHID GHESHM	IRAN
SUPER ACTIVE	IRAN
CMI INDUSTRIAL HRSG NV	BELGIUM
COEK ENGINEERING	BELGIUM
COHIN	W. EUROPE
ELLMETAL	BELGIUM
FISCHER	FRANCE
G & G INTERNATIONAL NV	BELGIUM
GALA	GERMANY
NAT	FRANCE
NATOO	FRANCE
SNIG	FRANCE
TSUKISHIMA KIKAI (TSK)	JAPAN

**1.4.2.3- CHEMICAL INJECTION**

ATELIER-DE-FOS	ITALY
AVE	IRAN
DKM POMPES SA	FRANCE
DOSARPO MILTON	FRANCE
HOODGVELD PROCESS EQUIPMENT	THE NETHERLANDS
KARDANAN SHARGH Co.	IRAN
LEWA	GERMANY
MACHIN SAZI NEEV	IRAN
MASIR SABZ DELTA	IRAN
MILTON ROY EUROPE	FRANCE
MOHANDESI VA SAKHT CHAMAN	IRAN
OMG OFFICINE MECANICHE GALLARATESI SPA	ITALY
PERONIPOMPE	ITALY
PROMINENT	GERMANY
RASTA GOROORH GHESHM	IRAN
SALINE WATER SPECIALISTS (SWS)	ITALY
SEKO	ITALY

**1.4.2.4- HYDROGEN PACKAGE**

LINDE AG	GERMANY
MAHLER.AGS	GERMANY

**COMPANY NAME**

**ORIGIN**

**1.4.2.5- PSA**

CRYOTEC AN LAGENBAU	GERMANY
HAVA ABZAR TEHRAN	IRAN
HAVAYAR	IRAN
MAHLER AGS	GERMANY

**1.4.2.6- HRU**

WILL BE ADVISED LATER	
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**1.4.2.7- COLD BOX**

HAVAYAR	IRAN
AIR LIQUID	FRANCE
AIR PRODUCT	FRANCE
CASTAIN	UK
KOBELCO	JAPAN
LINDE AG	GERMANY
POLARIS	ITALY
SIAD MACCHINE IMPIANTI	ITALY

**1.4.2.8- CATALYST PNEUMATIC TRANSPORT**

BONYAN EMAN	IRAN
DISAL	IRAN
IRAN OIL	IRAN
PARK TECHNIC	IRAN
SYSTEMHAYE SANATI TAKESTAN	IRAN
TAMKAR	IRAN
BUHLER MIAG	FRANCE
NEU	BELGIUM / FRANCE
SANTENS ENG. SERNIVICES	BELGIUM

**1.4.2.9- CENTRIFUGAL PACKAGE**

THOMAS BROADBENT & SONS	UK
TSUKISHIMA KIKAI (TSK)	JAPAN

**1.4.2.10- FILTRATION PACKAGE**

BHS SONTHOFFEN	GERMANY
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**1.4.3- SPECIAL PACKAGE**

**1.4.3.1- HVAC SYSTEM**

**1.4.3.1.1- COMPRESSION CHILLING**

ABGARDAN	IRAN
ATMOSPHERE	IRAN
CENTIGRAD	IRAN
GHESTM TAHVIEH	IRAN
GROOOH SANATI IRANIAN	IRAN
HAVA SAZ	IRAN
KARA TAHVIEH / KARA SANAT TADBIR PAYA	IRAN
MEHR ASL	IRAN
NASEEM GOSTAR	IRAN
OMRAN TAHVIEH	IRAN
RADIRAN	IRAN
ROSENBERG	GERMANY
SABA AFARIN	IRAN
SABALAN GOSTAR TAHVIEH	IRAN
SAFIYAD	IRAN



<i>COMPANY NAME</i>	<i>ORIGIN</i>
SANAYEH SARMA AFARIN	IRAN
SARAN	IRAN
SARAVAN	IRAN
SARAVEL	IRAN
SARMA AFARIN	IRAN
SHAYA DAMA	IRAN
TAHVIEH	IRAN
TEHRAN TAHVIE GHESHM	IRAN
YORK IRAN	IRAN
ZAHESH	IRAN

#### **1.4.3.1.2- ABSORPTION CHILLING**

SARI POUYA	IRAN
YORK IRAN	IRAN
ZAHESH	IRAN
EBARA	JAPAN

#### **1.4.3.2- FLARE SYSTEM**

MASNOUAT FELEZI SANGIN	IRAN
MASHIN FOULAD JONOUB	IRAN
SYSTEMHAYE SANATI TAKESTAN / THERMO ENGINEERING	IRAN / ITALY
TASHA / HAMWORTHY	IRAN / THE NETHERLANDS
TEHRAN JAVAN	IRAN
AIR OIL FLARE GAS	UK / FRANCE
BIRWEL	UK
ESCHER	THE NETHERLANDS
GBA	UK
HOOGVELD	THE NETHERLANDS
ITAS IMPIANTI THERMOTECHNICS	ITALY
JOHN ZINK	JAPAN / UK / LUXEMBOURG
KALDAIR	UK
NIPPON NATIONAL AIR OIL BURNER	JAPAN
PREMATECHNIK	GERMANY
SAMIA S.R.L.	ITALY
STIBBE	THE NETHERLANDS
ZEECO	UK

#### **1.4.3.3- BAGGING / PALLETIZING / SHRINKING SYSTEM**

GOROOH SANATI FARINEH / HAVER & BOECKER	IRAN / GERMANY
MAH MACHIN	IRAN
PALAS / BAGLINE	IRAN / ITALY
PEIKAREH / WINDMOLLER & HOLSCHER	IRAN / GERMANY
BEUMER MASCHINEN FABRIK GMBH	GERMANY
STATEC BINDER	AUSTRIA
ZEPHLIN	GERMANY

#### **1.4.3.3.1- PALLET**

SANEYE CHOBI VA TABDILI AZIMIKHAH	IRAN
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#### **1.4.3.4- BIG BAG SYSTEM**

FARINEH MASHIN	IRAN
MAH MACHIN	IRAN
KRONOS RICHARSON	ITALY

	<i>COMPANY NAME</i>	<i>ORIGIN</i>
<b>1.4.3.5- DRUM FILLING PACKAGE</b>		
	FEIGE GMBH	GERMANY
	LOG DOS	GERMANY
	SIG COMA CO	ITALY
<b>1.4.3.6- CONVEYING SYSTEM</b>		
	TEIF SEPAHAN	IRAN
	SIMAN SAZAN	IRAN
	AUMUND FORDERTECHNIK Gmbh	GERMANY
	FAM FORDERANLAGEN MAGDEBURG GMBH	GERMANY
	HIRATA INDUSTRIAL MACHINERY	JAPAN
	HOFFMEISTER-LEUCHTEN GMBH	GERMANY
	KRUPP	GERMANY
	P.H.B	GERMANY
	TECHINT TECHNOLOGIES	ITALY
<b>1.4.3.7- BUCKET ELEVATOR</b>		
	ADVAN CORPORATION	JAPAN
	DOUBRAVA GMBH & CO. KG	AUSTRIA
	EMDE INDUSTRIE-TECHNIK GMBH	GERMANY
<b>1.4.3.8- CRUSHER</b>		
	BAUERMISTER	GERMANY
	P.H.B	GERMANY
<b>1.4.3.9- RECLAIMER</b>		
	P.H.B	GERMANY
<b>1.4.3.10- LOADING &amp; UNLOADING ARM</b>		
	BAHRAM BAZOO	IRAN
	FMC EUROPE SA ENERGY SYSTEMS DIV.	FRANCE
	SVT	GERMANY
	WOODFIELD SYSTEMS LTD	UK
<b>1.4.3.11- ELEVATOR / LIFT (EX)</b>		
	COUPL ASANSOR	IRAN
	SAHAND	IRAN
	OTIS	GERMANY
	SCHINDLER	GERMANY
<b>1.4.3.12- PIG LAUNCHER &amp; RECEIVER</b>		
<b>1.4.3.12.1- PIG CUP &amp; SPHERE</b>		
	MAHDIN	IRAN
	SANAYE POLYURTAN SAVAY	IRAN
	ZAFER	IRAN
	KLIEISS & CO BV.	UK / THE NETHERLANDS
	PIPELINE ENG.(PE)	UK
	TD WILLIAMSON	UK
<b>1.4.3.12.2- LAUNCHER &amp; RECEIVER</b>		
	JAHED SANAT	IRAN
	KASRAVAND	IRAN
	PARGASIRAN	IRAN
	RMA	GERMANY
	SIMIC S.P.A	ITALY
	TECTUBI	ITALY

COMPANY NAME

ORIGIN

1.5- GENERAL ITEMS

1.5.1- INSULATION

AYEGH PARDIS SAEI	IRAN
BAB	IRAN
BEHSAZAN TOSEE ARMAN (BETA Co.)	IRAN
GILAN MICA	IRAN
IDEH SAZAN	IRAN
JAHAN AYEGH PARS	IRAN
KDONE	S. KOREA
PASHM & SHISHEH IRAN / THERMO TANK	IRAN
PASHM CERAMIC IRAN	IRAN
PASHM SANG ARIA	IRAN
PASHM SANG IRAN	IRAN
PASHM SANG VILA	IRAN
PASHM SARBAREH ASIA	IRAN
PASHM SARBAREH IRAN	IRAN
SANAYE AYEGH SEPAHAN	IRAN
TARABGIN	IRAN
TARADIS	IRAN

1.5.2- PAINT

AHWAZ RANG (AFTAB)	IRAN
ARANG SHIMI	IRAN
BAJAK	IRAN
GITI ASA	IRAN
GOROOH RANG PEDRAM	IRAN
KHODRANG CHEMICAL INDUSTRIES	IRAN
MAHLA	IRAN
NEGIN ZEREH	IRAN
PARS OCEAN	IRAN
PARS PAMCHAL	IRAN
RANA KIMYA	IRAN
RANG ALVAN	IRAN
RANG FIROUZEH SHIRAZ	IRAN
RANG KANSAI IRANIAN	IRAN
RANG SAZI IRAN	IRAN
RANG SAZI TEHRAN ORANUS	IRAN
RANG SOORMEH	IRAN
RANG VA RESIN AMITIS	IRAN
RANG VA RESIN YASHM	IRAN
RANGDANEH KALA	IRAN
RANGHAYE SANATI IRAN	IRAN
RANGIN	IRAN
RANGIN ZEREH	IRAN
RONASS	IRAN
SABA SHIMI ARYA	IRAN
SANAYE CHEMIYAE BUSHEHR	IRAN
SANYE RANG KROMAT	IRAN
SARV RANG	IRAN
TAKRANG KAR	IRAN
TIF IRAN	IRAN
TOLIDI VA SANATI RANGANFAR	IRAN

**COMPANY NAME**

**ORIGIN**

**1.5.3- FLEXIBLE METAL HOSE**

BOOSHIRAN	IRAN
BURGMANN PARS	IRAN
GEORGE BOYD	UK
JOHN MORRIS SIEBE	UK
TURBINHAYE SANATI GHADIR YAZD	IRAN
WILLCOX FLUID HANDLING	UK
ZADA	IRAN

**1.5.4- COATING & WRAPPING**

BAJAC	IRAN
ISO SEAL	IRAN
NIASHIMI	IRAN
TOORSEAL	IRAN
VARZIRAN	IRAN
ALTA	ITALY
LONG PRODUCT	UK
POLYAIM	UK
SAROOJ BON PEY	IRAN
SERVIWRAP	CANADA / UK

**1.5.5- ELECTRODE & FILLER**

AMA	IRAN
ELECTROD YAZD	IRAN
JOSHE & OXYGEN IRAN	IRAN
SANAYE GEOOSH VA ELECTROD	IRAN
BOHLER	GERMANY
ESAB	SWEDEN
LINCOLN/METRODE	UK
OERLIKON	FRANCE
WELDING ALLOY	UK

**1.5.6- NON-METALIC EQUIPMENT/BULK MATERIAL**

**1.5.6.1- DRUM**

FARAPOX SHIRAZ	IRAN
FRICOMATEC (GRAPHITE TYPE HEAT EXCHANGER)	GERMANY

**1.5.6.2- PIPE**

AB HAYATE KERMAN (POLYMER)	IRAN
ARIAN SADEH (HB COMPOSITE)	IRAN
BASPAR SANAT PAZHOOH ( BSP)	IRAN
FARASSAN (GRP / FRP)	IRAN
GAS LOOLEH (POLYMER)	IRAN
MASHHAD SADRA (GRP / FRP)	IRAN
MOEIN KHORAMSHAHR	IRAN
PARS ETHYLENE KISH (PE TYPE)	IRAN
SANAYE POLYMER KERMAN (POLYMER)	IRAN
SUPER PIPE (POLYMER)	IRAN
GOSTARESH PELASTIK (PE TYPE)	IRAN

**1.5.6.3- FITTING**

AB HAYATE KERMAN (POLYMER)	IRAN
ARIAN SADEH (HB COMPOSITE)	IRAN
BASPAR SANAT PAZHOOH ( BSP)	IRAN

<i>COMPANY NAME</i>	<i>ORIGIN</i>
FARAPOX SHIRAZ	IRAN
GAS LOOLEH (POLYMER)	IRAN
MASHHAD SADRA (GRP / FRP)	IRAN
MOEIN KHORAMSHAHR	IRAN
PARS ETHYLENE KISH	IRAN
SANAYE POLYMER KERMAN (POLYMER)	IRAN
SUPER PIPE (POLYMER)	IRAN

#### *1.5.6.4- VALVE*

WILL BE ADVISED LATER	
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#### *1.5.7- PLATE*

ARCELOR MITTAL (INDUSTELL)	BELGIUM
FOLAD OXIN KHOUZESTAN	IRAN
FOOLAD MOBARAKEH	IRAN
NAVARD ALUMINUM MFG. GROUP (Aluminium Plate)	IRAN
VOESTALPINE	AUSTRIA

#### *1.5.8- TUBE FOR HEAT EXCHANGER*

LOOLEHAYE DAGHIGH KAVEH	IRAN
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#### *1.5.9- HEAD OF VESSEL*

PARS TECHNIC	IRAN
POULAD SAZAN FARAYAND CO.	IRAN

#### *1.5.10- RUBBER PARTS*

BASHIR COMPLEX (SA IRAN)	IRAN
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**ELECTRICAL**

## **2. ELECTRICAL**

### **2.ELECTRICAL**

#### **2.1- POWER TRANSFORMER**

#### **2.2- STATIC CONVERTOR**

##### **2.2.1- AC UPS**

##### **2.2.2- DC UPS (BATTERY CHARGER)**

##### **2.2.3- FREQUENCY CONVERTOR**

#### **2.3- BATTERY**

##### **2.3.1- LEAD ACID BATTERY**

##### **2.3.2- NICKEL CADMIUM BATTERY**

#### **2.4- SWITCH GEAR**

##### **2.4.1- L.V. SWITCH GEAR / MCC**

##### **2.4.2- M.V. SWITCH GEAR (GIS)**

##### **2.4.3- M.V. SWITCH GEAR (AIS + VCB)**

##### **2.4.4- H.V. SWITCH GEAR (GIS)**

##### **2.4.5- LOCAL DISTRIBUTION PANEL (INDUSTRIAL)**

##### **2.4.6- LOCAL DISTRIBUTION PANEL (EXPLOSION PROOF)**

##### **2.4.7- CAPACITOR BANK PANEL**

##### **2.4.8- PROTECTION & CONTROL PANEL**

#### **2.5- LIGHTING**

##### **2.5.1- INDUSTRIAL LIGHTING**

##### **2.5.2- EXPLOSION PROOF LIGHTING**

##### **2.5.3- STREET LIGHTING**

##### **2.5.4- LIGHTING POLE / ARM**

##### **2.5.5- AIRCRAFT WARNING LIGHT**

#### **2.6 - LOCAL CONTROL STATION**

##### **2.6.1- INDUSTRIAL CONTROL STATION**

##### **2.6.2- EXPLOSION PROOF CONTROL STATION**

#### **2.7- CABLE TRAY / LADDER & ACCESSORIES**

##### **2.7.1- METAL CABLE TRAY / CABLE LADDER & ACCESSORIES**

##### **2.7.2- GRP CABLE TRAY / CABLE LADDER & ACCESSORIES**

#### **2.8- INSTALLATION MATERIAL**

##### **2.8.1- CABLE GLAND**

##### **2.8.2- CONDUIT & FITTING**

##### **2.8.3- PLUG & SOCKET (IND. / EXP. PROOF)**

##### **2.8.4- INDUSTRIAL JUNCTION & TERMINAL BOX**

##### **2.8.5- EXPLOSION PROOF J&T BOX**

**2.9- CABLE**

**2.9.1- LOW VOLTAGE / CONTROL CABLE**

**2.9.2- MEDIUM VOLTAGE CABLE**

**2.9.3- HIGH VOLTAGE CABLE**

**2.9.4- CABLE TERMINATION**

**2.9.5- CABLE JOINT**

**2.9.6- CABLE SHOE**

**2.9.7- CABLE CLAMP**

**2.10- CONTROL & INDICATION SYSTEM**

**2.10.1- ANNUNCIATION PANEL**

**2.10.2- INTERPOSING RELAY PANEL**

**2.10.3- POWER DISTRIBUTED CONTROL SYSTEM (PDCS) / POWER MANAGEMENT SYSTEM (PMS)**

**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**

**2.12.1- LV BUSDUCT**

**2.12.2- MV BUSDUCT**

**2.13- FIRE ALARM SYSTEM**

**2.14- ELECTRICAL HEAT TRACING**

**2.15- CATHODIC PROTECTION**

**2.15.1- CATHODIC PROTECTION SYSTEM**

**2.15.2- CATHODIC PROTECTION COMPONENT**

**2.15.2.1- TRANSFORMER-RECTIFIER**

**2.15.2.2- (IMPRESSED CURRENT ANODE (MMO/SILICON**

**2.15.2.3- SACRIFICIAL ANODE**

**2.15.2.4- REFERENCE ELECTRODE**

**2.15.2.5- SPARK GAP**

**2.15.2.6- CADWELD POWDER**

**2.15.2.7- HANDY CAP**

**2.15.2.8- CATHODIC PROTECTION REMOTE MONITORING & CONTROL SYSTEM**

**2.15.2.9- FLANGE INSULATION KIT**

**2.15.2.10- BOND BOX**

**2.15.2.11- PERMANENT & PORTABLE HALF CELL**

**2.15.2.12- COKE BREEZE**

**2.16- EARTHING & LIGHTNING**

**2.17- NEUTRAL GROUNDING RESISTOR**

**2.18- AC GENERATOR**

**2.18.1- TURBO GENERATOR**



**2.18.2- EMERGENCY GENERATOR**

**2.18.3- EMERGENCY DIESEL GENERATOR**

**2.19- MOBILE SUBSTATION**

**2.20- COMPONENTS**

**2.20.1- PROTECTION RELAY**

**2.20.2- AUXILIARY RELAY**

**2.20.3- CONTACTORS**

**2.20.4- AUXILIARY CONTACTOR**

**2.20.5- FUSE**

**2.20.6- SIGNAL LIGHT**

**2.20.7- CONTROL SWITCH**

**2.20.8- METERS**

**2.20.9- CIRCUIT BREAKER**

**2.20.9.1- LV CIRCUIT BREAKER**

**2.20.9.1.1- MIIATURE 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**

**2.20.9.2.2- SF6**

**2.20.10- TRANSDUCER**

**2.20.11- CT'S & PT'S**

**2.20.12- TERMINALS**

**2.20.13- SPACE HEATER**

**2.20.14- THERMOSTAT**

**2.20.15- LIGHTING LAMPS**

**2.20.15.1- INCANDESCENT LAMP**

**2.20.15.2- MERCURY VAPOR LAMP**

**2.20.15.3- SODIUM VAPOR LAMP**

**2.20.15.4- FLOURESCENT LAMP**

**2.20.16- TIMER**

**2.20.17- CAPACITORS**

**2.20.18- FAULT / EVENT RECORDER**

**2.21- ELECTRICAL HEATER FOR PROCESS EQUIPMENT**

**2.22- MEASUREMENT CENTER**

**COMPANY NAME**

**ORIGIN**

**2.1- POWER TRANSFORMER**

ARYA TRANSFO	IRAN
IRAN TRANSFO	IRAN
ABB TRANSFO	FINLAND / GERMANY
BRUSH TRANSFORMER	UK
FORTUNE ELECTRIC	TAIWAN
FUJI ELECTRIC CO	JAPAN
IEO TRANSFORMATOREN (UP TO 10 KVA)	THE NETHERLANDS
PAUWELS TRAF0	BELGIUM
SCHNEIDER GROUP	FRANCE
SIEMENS	GERMANY
TOSHIBA CORPORATION	JAPAN
VA TECH ELIN	AUSTRIA

**2.2- STATIC CONVERTOR**

**2.2.1- AC UPS**

AMAK-KOSHA	IRAN
BORRI	ITALY
ARA TAJHIZ SYSTEM	IRAN
BENNING	GERMANY
BORNA ELECTRONIC	IRAN
CEG ELETTRONICA INDUSTRIALE	ITALY
CHLORIDE INDUSTRIAL	FRANCE
GUTOR ELECTRONIC LTD	SWITZERLAND
JAHAD DANESHGAHI ELM VA SANAT	IRAN
PARS ELTEK ENERGY	IRAN
PARS KAVIR ARVAND	IRAN
PORSOO ELECTRONIC (UP TO 20 KVA)	IRAN
POYEH ELECTRONIC (UP TO 5 KVA)	IRAN
SAFT POWER SYSTEM	FRANCE
SCHNEIDER GROUP	FRANCE
SIEMENS	GERMANY
SOCOMEK	FRANCE
TAVAN POYESH (UP TO 20 KVA)	IRAN
TRADIS (UP TO 5 KVA)	IRAN

**2.2.2- DC UPS (BATTERY CHARGER)**

ALCAD	SWEDEN
AMAK-KOSHA	IRAN
ARA TAJHIZ SYSTEM	IRAN
BENNING	GERMANY
BORNA ELECTRONIC	IRAN
BORRI	ITALY
CEG ELETTRONICA INDUSTRIALE	ITALY
CHLORIDE INDUSTRIAL	FRANCE
GUTOR ELECTRONIC LTD	SWITZERLAND
JAHAD DANESHGAHI ELM VA SANAT	IRAN
PARS KAVIR ARVAND	IRAN

<i>COMPANY NAME</i>	<i>ORIGIN</i>
SAFT POWER SYSTEM	FRANCE
TALIRAN	IRAN
TAVAN POYESH	IRAN
SCHNEIDER GROUP	FRANCE
SIEMENS	GERMANY
SOCOMEK	FRANCE
TOSHIBA CORPORATION	JAPAN

### 2.2.3- FREQUENCY CONVERTOR

BORNA ELECTRONIC	IRAN
MICROCONTROL	IRAN
ABB GROUP	GERMANY
ANSALDO SISTEMI INDUSTRIALI	ITALY
ELETTRONICA SANTERNO	ITALY
HYUNDAI ELECTRIC & ENERGY SYSTEMS CO.	S. KOREA
LENZE	GERMANY
mitsubishi	JAPAN
OMRON	JAPAN
SCHNEIDER GROUP	FRANCE
SIEMENS	GERMANY
VACON	FINLAND

## 2.3- BATTERY

### 2.3.1- LEAD ACID BATTERY

NIRO	IRAN
PLATIN IRAN (NIL)	IRAN
ALCAD	SWEDEN
HOPPECKE	GERMANY
SAFT	FRANCE/ SWEDEN
VARTA	GERMANY / FRANCE
YUASA	JAPAN

### 2.3.2- NICKEL CADMIUM BATTERY

ALCAD	SWEDEN
GAZ	GERMANY
HOPPECKE	GERMANY
SAFT	SWEDEN
VARTA	GERMANY / FRANCE

## 2.4- SWITCH GEAR

### 2.4.1- L.V. SWITCH GEAR / MCC

ADAK BEHIN NIROO	IRAN
ARUN ENERGY	IRAN
ARYA SANAT ERAM	IRAN
ELECTRO KAVIR	IRAN
FARINE SANAT	IRAN
IRAN SEABOK	IRAN
IRAN SWITCH	IRAN

<i>COMPANY NAME</i>	<i>ORIGIN</i>
IRAN TABLOUE	IRAN
JABON	IRAN
KERMAN TABLOUE	IRAN
NEKA NOVIN	IRAN
PARS TABLOUE	IRAN
PARS SANAT PARAND	IRAN
RASEL TABLO	IRAN
SATHA	IRAN
TAKSAZ TABLO	IRAN
TALIRAN	IRAN
TAMIN TABLOUE	IRAN
TOLIDE MALZOOMATE BARGH (TMB)	IRAN

**2.4.2- M.V. SWITCH GEAR (GIS)**

ABB GROUP	GERMANY
GE	W. EUROPE
HOLEC	W. EUROPE
SCHNEIDER GROUP	FRANCE
SIEMENS	GERMANY
VA TECH ELIN	THE NETHERLANDS

**2.4.3- M.V. SWITCH GEAR (AIS + VCB)**

ARYA SANAT ERAM	IRAN
ARUN ENERGY	IRAN
AZAR FONON TABLOUE	IRAN
ELECTRO KAVIR	IRAN
IRAN SEABOK	IRAN
IRAN SWITCH	IRAN
IRAN TABLOUE	IRAN
JABON	IRAN
KERMAN TABLOUE	IRAN
MAZHAR NOOR	IRAN
NEKA NOVIN	IRAN
PARS SANAT PARAND	IRAN
PARS TABLOUE	IRAN
RASEL TABLO	IRAN
SANE SHARGH	IRAN
TAKSAZ TABLO	IRAN
TALIRAN	IRAN
TAMIN TABLOUE	IRAN
TOLIDE MALZOOMATE BARGH (TMB)	IRAN
YAM	IRAN

**2.4.4- H.V. SWITCH GEAR (GIS)**

ELECTROKAVIR / SIEMENS	IRAN / GERMANY
ABB GROUP	GERMANY
AREVA	FRANCE
HITACHI	JAPAN
MITSUBISHI	JAPAN

<i>COMPANY NAME</i>	<i>ORIGIN</i>
SCHNEIDER GROUP	FRANCE
SIEMENS	GERMANY
VA TECH ELIN	THE NETHERLANDS

#### 2.4.5- LOCAL DISTRIBUTION PANEL (INDUSTRIAL)

ADAK BEHIN NIROO	IRAN
ARUN ENERGY	IRAN
ARYA SANAT ERAM	IRAN
ASHTIAN TABLO	IRAN
AZAR FONON TABLOUE	IRAN
ELECTRO KAVIR / LENA YAZD	IRAN
FARAMIN TABLOUE	IRAN
IRAN SEABOK	IRAN
IRAN SWITCH	IRAN
IRAN TABLOUE	IRAN
JABON	IRAN
KERMAN TABLOUE	IRAN
NEKA NOVIN	IRAN
PANJTASH	IRAN
PARS TABLOUE	IRAN
PARS SANAT PARAND	IRAN
RASAN	IRAN
SANE SHARGH	IRAN
SATHA	IRAN
TAKSAZ TABLO	IRAN
TALIRAN	IRAN
TAMIN TABLOUE	IRAN
TOLIDE MALZOOMAT BARGH (TMB)	IRAN
YAM	IRAN
ROSE SYSTEMTECHNIK GmbH	GERMANY

#### 2.4.6- LOCAL DISTRIBUTION PANEL (EXPLOSION PROOF)

COELBO	ITALY
CORTEM	ITALY
DARIAN ELECTRIC & UTILITIES CO.	IRAN
FEAM	ITALY
LEGRAND	FRANCE
MACHIN SAZI SHOMAL (PIROOZ)	IRAN
NOOR MEHVAR FARIS	IRAN
ROSE SYSTEMTECHNIK GmbH	GERMANY
SCHUCH	GERMANY
STAHL	GERMANY
WALSALL	UK

#### 2.4.7- CAPACITOR BANK PANEL

ARUN ENERGY	IRAN
MAZHAR NOOR	IRAN
PALAYESH NIROO	IRAN
SANE SHARGH	IRAN

<i>COMPANY NAME</i>	<i>ORIGIN</i>
TAJHIZAT BARGH FARAKOH YAZD (FARAKOH)	IRAN
TAKSAZ TABLO	IRAN
TOLIDE MALZOOMAT BARGH (TMB)	IRAN
<i>* ALSO SEE 2.4.1 VENDORS</i>	

#### 2.4.8- PROTECTION & CONTROL PANEL

TO BE ADVISED LATER.
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#### 2.5- LIGHTING

##### 2.5.1- INDUSTRIAL LIGHTING

DARIAN ELECTRIC & UTILITIES CO.	IRAN
JAHAN NOOR	IRAN
JAR	IRAN
MAZI NOOR	IRAN
NOORSA GOSTAR NOVIN	IRAN
GOLNOOR	IRAN
SANYE ROSHANAEE ARM	IRAN
WALSALL	UK

##### 2.5.2- EXPLOSION PROOF LIGHTING

COELBO	ITALY
CORTEM	ITALY
DARIAN ELECTRIC & UTILITIES CO.	IRAN
FEAM	ITALY
GLAMOX	NORWAY
IRANIAN WAROM GROUP	IRAN
MACHIN SAZI SHOMAL (PIROOZ)	IRAN
MAZI NOOR (SCHUCH)	IRAN (GERMANY)
NOOR MEHVAR FARS	IRAN
NUOVA ASP s.r.l	ITALY
STAHL	GERMANY
THORN LIGHTING	W. EUROPE

##### 2.5.3- STREET LIGHTING

GOLNOOR	IRAN
JAHAN NOOR	IRAN
JAR	IRAN
MAZINOOR	IRAN
NOORSA GOSTAR NOVIN	IRAN
SANYE ROSHANAEE ARM	IRAN

##### 2.5.4- LIGHTING POLE / ARM

AHWAZ FANOUS	IRAN
EHDAS GOSTER NIROOYE PARS	IRAN
GOLNOOR	IRAN
JAR	IRAN
MACHIN SAZI SHOMAL (PIROOZ) (ONLY LIGHTING ARM)	IRAN
MAZINOOR	IRAN

<i>COMPANY NAME</i>	<i>ORIGIN</i>
NOORSA GOSTAR NOVIN	IRAN
PARS AKHGAR	IRAN
SANYE ROSHANAEE ARM	IRAN
TOLIDE MALZOOMAT BARGH	IRAN
<b>2.5.5- AIRCRAFT WARNING LIGHT</b>	
MACHIN SAZI SHOMAL (PIROOZ)	IRAN
NUOVA ASP s.r.l	ITALY
ORGA B.V.	THE NETHERLANDS
<b>2.6 - LOCAL CONTROL STATION</b>	
<b>2.6.1- INDUSTRIAL CONTROL STATION</b>	
CORTEM	ITALY
DARIAN ELECTRIC & UTILITIES CO.	IRAN
FEAM	ITALY
LEGRAND	FRANCE
MACHIN SAZI SHOMAL (PIROOZ)	IRAN
NOOR MEHVAR FARS	IRAN
ROSE SYSTEMTECHNIK GmbH	GERMANY
SCAME PARRE	ITALY
STAHL	GERMANY
<b>2.6.2- EXPLOSION PROOF CONTROL STATION</b>	
COELBO	ITALY
CORTEM	ITALY
DARIAN ELECTRIC & UTILITIES CO.	IRAN
FEAM	ITALY
LEGRAND	FRANCE
MACHIN SAZI SHOMAL (PIROOZ)	IRAN
NOOR MEHVAR FARS	IRAN
PEPPERL+FUCHS	GERMANY
ROSE SYSTEMTECHNIK GmbH	GERMANY
SCAME PARRE	ITALY
STAHL	GERMANY
<b>2.7- CABLE TRAY /LADDER &amp; ACCESSORIES</b>	
<b>2.7.1- METAL CABLE TRAY/CABLE LADDER &amp; ACCESSORIES</b>	
AHWAZ FANOUS	IRAN
AJINEH	IRAN
ALAM AFROOZ	IRAN
ARAN SHAHAB	IRAN
MACHIN SAZI SHOMAL (PIROOZ)	IRAN
MAZHAR NOOR	IRAN
NEKA NOVIN	IRAN
PAJOHAN SANAT PARS	IRAN
PANJTASH	IRAN
PARS AKHGAR	IRAN

<i>COMPANY NAME</i>	<i>ORIGIN</i>
POUSHESH MONAVAR GOSTAR	IRAN
SATHA	IRAN
TALIRAN	IRAN
TAVAN AFROOZ VINEH ENG.CO.	IRAN
TOSEH SANAYE PETRO FOOLADE GHARB	IRAN
VANASHID	IRAN

#### 2.7.2- GRP CABLE TRAY/CABLE LADDER & ACCESSORIES

COMPOSITE ASIA	IRAN
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#### 2.8- INSTALLATION MATERIAL

##### 2.8.1- CABLE GALND

IRANIAN WAROM GROUP	IRAN
MACHIN SAZI SHOMAL (PIROOZ)	IRAN
NOOR MEHVAR FARS	IRAN
COELBO	ITALY
COPER CROUSE-HINDS (CEAG)	GERMANY
CORTEM	ITALY
HAWKE INTERNATIONAL	UK
PEPPERL+FUCHS	GERMANY
NUOVA ASP s.r.l	ITALY
STAHL	GERMANY

##### 2.8.2- CONDUIT & FITTING

LOOLEHAYE DAGHIGH KAVEH	IRAN
MACHIN SAZI SHOMAL (PIROOZ) (ONLY FITTING)	IRAN
NOOR MEHVAR FARS	IRAN
PARS AKHGAR	IRAN
PMA	SWITZERLAND
TOSEH SANAYE PETRO FOOLADE GHARB	IRAN

##### 2.8.3- PLUG & SOCKET (IND. / EXP. PROOF)

CORTEM	ITALY
IRANIAN WAROM GROUP	IRAN
LEGRAND	FRANCE
MACHIN SAZI SHOMAL (PIROOZ)	IRAN
NOOR MEHVAR FARS (ONLY INDUSTRIALPLUG & SOCKET)	IRAN
NUOVA ASP s.r.l	ITALY
PEPPERL+FUCHS	GERMANY
SCAME PARRE	ITALY
SCHUCH	GERMANY
STAHL	GERMANY

##### 2.8.4- INDUSTRIAL JUNCTION & TERMINAL BOX

CORTEM	ITALY
ITALSMEA	ITALY
LEGRAND	FRANCE
MACHIN SAZI SHOMAL (PIROOZ)	IRAN
NOOR MEHVAR FARS	IRAN
PEPPERL+FUCHS	GERMANY
ROSE SYSTEMTECHNIK GmbH	GERMANY
SCAME PARRE	ITALY
STAHL	GERMANY



<i>COMPANY NAME</i>	<i>ORIGIN</i>
<b>2.8.5- EXPLOSION PROOF JUNCTION &amp; TERMINAL BOX</b>	
DARIAN ELECTRIC & UTILITIES CO.	IRAN
IRANIAN WAROM GROUP	IRAN
MACHIN SAZI SHOMAL (PIROOZ)	IRAN
NOOR MEHVAR FARS	IRAN
COELBO	ITALY
COPER CROUSE-HINDS (CEAG)	GERMANY
CORTEM	ITALY
FEAM	ITALY
TECHNOR ITALSMEA	ITALY
NUOVA ASP s.r.l	ITALY
PEPPERL+FUCHS	GERMANY
ROSE SYSTEMTECHNIK GmbH	GERMANY
STAHL	GERMANY

## 2.9- CABLE

### 2.9.1- LOW VOLTAGE / CONTROL CABLE

IRAN CABLE MANUFACTURING COMPANY	IRAN
KABL SAZI TAK	IRAN
KABLE ALBORZ	IRAN
KABLE BAKHTAR	IRAN
KABLE KERMAN & KAVIAN	IRAN
KABLE MESSIN	IRAN
KHORASAN ELECTRIC INDUSTRIES	IRAN
KABLE METAL	IRAN
KABLE SHAHIN	IRAN
OFOGHE ALBORZ	IRAN
SIM VA KABLE ABHAR	IRAN
SIM VA KABLE MOGHAN	IRAN
SIM VA KABLE YAZD	IRAN
SIMBAF	IRAN
SIMCO	IRAN
SINA CABLE	IRAN
ZAR CABLE KERMAN	IRAN
ZARSIM	IRAN

### 2.9.2- MEDIUM VOLTAGE CABLE

IRAN CABLE MANUFACTURING COMPANY	IRAN
KABLE ALBORZ	IRAN
KABLE KERMAN & KAVIAN	IRAN
KABLE SHAHIN	IRAN
OFOGHE ALBORZ	IRAN
SIM VA KABLE ABHAR	IRAN
SIM VA KABLE MOGHAN	IRAN
SIM VA KABLE YAZD	IRAN
SIMCO	IRAN
FUJI ELECTRIC	JAPAN
LEONI KERPEN	GERMANY
SIEMENS	GERMANY

**COMPANY NAME**

**ORIGIN**

**2.9.3- HIGH VOLTAGE CABLE**

IRAN CABLE MANUFACTURING COMPANY	IRAN
SIM VA KABLE ABHAR	IRAN
SIMCO	IRAN
FUJI ELECTRIC	JAPAN
LEONI KERPEN	GERMANY
PRYSMAIN CABLE & SYSTEM	ITALY
SUDKABEL	GERMANY
SIEMENS	GERMANY

**2.9.4- CABLE TERMINATION**

ELCON MEGARD / SHAHIN MAFSAL	IRAN
CTL	UK
NEXAN	FRANCE
PFISTERER	GERMANY
RAYCHEM	GERMANY
RXS	FRANCE
SIEMENS	GERMANY
SUDKABEL	GERMANY

**2.9.5- CABLE JOINT**

ELCON MEGARD / SHAHIN MAFSAL	IRAN
CTL	UK
NEXAN	FRANCE
PFISTERER	GERMANY
RAYCHEM	GERMANY
RXS	FRANCE
SIEMENS	GERMANY
SUDKABEL	GERMANY

**2.9.6- CABLE SHOE**

SHAHIN MAFSAL	IRAN
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**2.9.7- CABLE CLAMP**

SHAHIN MAFSAL	IRAN
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**2.10- CONTROL & INDICATION SYSTEM**

**2.10.1- ANNUNCIATION PANEL**

ELECTRO KAVIR	IRAN
JABON	IRAN
KERMAN TABLOUE	IRAN
NEKA NOVIN	IRAN
TAMIN TABLOUE	IRAN
ABB GROUP	GERMANY
SCHNEIDER GROUP	FRANCE
SIEMENS	GERMANY

**COMPANY NAME**

**ORIGIN**

**2.10.2- INTERPOSING RELAY PANEL**

AZAR FONON TABLOUE	IRAN
ELECTRO KAVIR	IRAN
IRAN SEABOK	IRAN
IRAN SWITCH	IRAN
IRAN TABLOUE	IRAN
JABON	IRAN
KERMAN TABLOUE	IRAN
PARS TABLOUE	IRAN
SATHA	IRAN
TAMIN TABLOUE	IRAN
TOLIDE MALZOOMATE BARGH	IRAN

**2.10.3- POWER DISTRIBUTED CONTROL SYSTEM (PDCS) / POWER MANAGEMENT SYSTEM (PMS)**

CONTRONIC	IRAN
ENERGY KAVIR PAYA	IRAN
GOROOH SANATI FARINEH	IRAN
KERMAN TABLOUE	IRAN
NOVIN DANESH AYANDEH	IRAN
TALIRAN	IRAN

**2.11- ELECTRICAL MOTOR**

**2.11.1- EXPLOSION PROOF L.V. ELECTRIC MOTOR**

ABB GROUP	GERMANY
ALSTOM	FRANCE
CEMP	ITALY
JEMCO	IRAN
LEROY SOMER	FRANCE
MARELLI	ITALY
SCHORCH	GERMANY
SIEMENS	GERMANY
TECO WESTINGHOUSE	USA / TAIWAN
TOSHIBA	JAPAN
VEM MOTOR GmbH.	GERMANY
WEG EQUIPAMENTOS ELETRICOS S.A.	BRAZIL

**2.11.2- INDUSTRIAL L.V. ELECTRIC MOTOR**

JEMCO	IRAN
MOTOGEN	IRAN
SHIRAZ SPECIAL ZONE ELECTRO MOTOR (VEM PARS)	IRAN
TURBO GENERATOR	IRAN
ABB GROUP	GERMANY
ALSTOM	FRANCE
BROOK CROMPTON	UK
CEMP	ITALY
FLENDER	GERMANY
LEROY SOMER	FRANCE
MARELLI	ITALY

<i>COMPANY NAME</i>	<i>ORIGIN</i>
SCHORCH	GERMANY
SIEMENS	GERMANY
TECO-WESTINGHOUSE	USA / TAIWAN
TOSHIBA	JAPAN
UMEB	ROMANIA
VEM MOTOR GmbH.	GERMANY
WEG EQUIPAMENTOS ELETRICOS S.A.	BRAZIL

### 2.11.3- EXPLOSION PROOF M.V. ELECTRIC MOTOR

ABB GROUP	GERMANY
ANSALDO SISTEMI INDUSTRIALI	ITALY
FUJI	JAPAN
JEMCO (LOHER)	IRAN (GERMANY)
JEUMONT ELECTRIC	FRANCE
SCHNEIDER GROUP	FRANCE
SCHORCH	GERMANY
SIEMENS	GERMANY
TECO WESTINGHOUSE	USA / TAIWAN
TOSHIBA	JAPAN
VEM MOTOR GmbH.	GERMANY
WEG EQUIPAMENTOS ELETRICOS S.A.	BRAZIL

### 2.11.4- INDUSTRIAL M.V. ELECTRIC MOTOR

ABB GROUP	GERMANY
ANSALDO SISTEMI INDUSTRIALI	ITALY
FUJI	JAPAN
JEMCO (LOHER)	IRAN (GERMANY)
JEUMONT ELECTRIC	FRANCE
SCHNEIDER GROUP	FRANCE
SCHORCH	GERMANY
TECO WESTINGHOUSE	USA / TAIWAN
TOSHIBA	JAPAN
VEM MOTOR GmbH.	GERMANY
WEG EQUIPAMENTOS ELETRICOS S.A.	BRAZIL

### 2.12- BUS DUCT

#### 2.12.1- LV BUS DUCT

BBI	ITALY
BKS STROMSCHIENEN AG	SWITZERLAND
EAE ELEKTRIK	TURKEY
GITAL	IRAN
GRAZIADIO & C	ITALY
HITACHI CABLE	JAPAN
LS CABLE & SYSTEM	S. KOREA
SCHNEIDER GROUP	FRANCE
SIMELECTRO	FRANCE
ZUCCHINI	ITALY

	<i>COMPANY NAME</i>	<i>ORIGIN</i>
<b>2.12.1- MV BUS DUCT</b>		
	BBI	ITALY
	BKS STROMSCHIENEN AG	SWITZERLAND
	GITAL	IRAN
	GRAZADIO & C	ITALY
	HITACHI CABLE	JAPAN
	LS CABLE & SYSTEM	S. KOREA
	SCHNEIDER GROUP	FRANCE
	SIMELECTRO	FRANCE
	ZUCCHINI	ITALY
<b>2.13- FIRE ALARM SYSTEM</b>		
	MAZDAK	IRAN
	ABB GROUP	GERMANY
	SIEMENS CERBERUS	SWITZERLAND
	DETECTOMAT	GERMANY
	SILVANI	ITALY
	GEC	UK
	HOCHIKI CORPORATION	JAPAN
	PHOTAIN CONTROL PLC	UK
	SIEMENS	GERMANY
	THORN SECURITY	UK
<b>2.14- ELECTRICAL HEAT TRACING</b>		
	BARTEC	GERMANY
	ELTHERM	GERMANY
	HEAT TRACE	UK
	KLÖPPER-THERM	GERMANY
	RAYCHEM	GERMANY
	SIGMA CONTROL	ITALY
	THERMON	UK
<b>2.15- CATHODIC PROTECTION</b>		
<b>2.15.1 CATHODIC PROTECTION SYSTEM</b>		
	ARMIN SANAT GOSTARAN	IRAN
	FARA SANAT BAN	IRAN
	JAHAD DANESHGAHI ELM VA SANAT	IRAN
	MOHANDESI MOSHAVER BINA	IRAN
	PAYESH SANAT NOVIN	IRAN
	REFERANCE IRAN	IRAN
	TECHINCO	IRAN
	ZANG SETIZANE SHARGH	IRAN
	CATHODIC PROTECTION CO (CPC)	UK
	CORROCELL CO	UK
	CORRPRO	UK
	CORR OCEAN	NORWAY
	ROSE CORROSION SERVICES	UK
	WILSON WALTON	UK

**COMPANY NAME**

**ORIGIN**

**2.15.2- CATHODIC PROTECTION COMPONENT**

**2.15.2.1- TRANSFORMER-RECTIFIER**

ARMIN SANAT GOSTARAN	IRAN
BORNA ELECTRONIC	IRAN
JAHAD DANESHGAHI ELM VA SANAT	IRAN
POOYESH NIROO	IRAN
REFERANCE IRAN	IRAN
BAC	UK
CORROCO	UK
CATHODIC PROTECTION CO (CPC)	UK
CATH-TECH	CANADA
HELLAS	THE NETHERLANDS
WILSON WALTON	UK

**2.15.2.2- IMPRESSED CURRENT ANODE(MMO/SILICON)**

REFERANCE IRAN	IRAN
BORNA GODAZ	IRAN
BAC GROUP	UK
CORROCO	UK
CORRPRO	UK
CATHODIC PROTECTION CO (CPC)	UK
CTS	UK
GCP	GERMANY
HITECH	UK
NMT ELECTRODES	SOUTH AFRICA
MAGNETO	THE NETHERLANDS
TELPRO	UK

**2.15.2.3- SACRIFICIAL ANODE (MG/AL/ZN)**

ARMIN SANAT GOSTARAN	IRAN
BORNA GODAZ	IRAN
REFERANCE IRAN	IRAN

**2.15.2.4- REFERENCE ELECTRODE**

ARMIN SANAT GOSTARAN	IRAN
BORNA GODAZ	IRAN
REFERANCE IRAN	IRAN
CORRPRO	UK

**2.15.2.5- SPARK GAP**

CORROCO	UK
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**2.15.2.6- CADWELD POWDER**

ERICO	THE NETHERLANDS
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**2.15.2.7- HANDY CAP**

CELLPACK	GERMANY
ERICO	THE NETHERLANDS
ROYSTON	USA

<i>COMPANY NAME</i>	<i>ORIGIN</i>
<b>2.15.2.8- CATHODIC PROTECTION REMOTE MONITORING AND CONTROL SYSTEM</b>	
REFERANCE IRAN	IRAN
GCP	GERMANY
IMP	UK
REMCO SYSTEM LTD	UK
<b>2.15.2.9- FLANGE INSULATION KIT</b>	
PARS PAJOHAN SANAT	IRAN
REFERANCE IRAN	IRAN
<b>2.15.2.10- BOND BOX</b>	
BORNA GODAZ	IRAN
<b>2.15.2.11- PERMANENT &amp; PORTABLE HALF CELL</b>	
BORNA GODAZ	IRAN
<b>2.15.2.12- COOK BREEZE</b>	
BORNA GODAZ	IRAN
<b>2.16- EARTHING &amp; LIGHTNING MATERIAL</b>	
AMAD SANAT PISHTAZ	IRAN
AMOUI FARAYAND	IRAN
ESPAK	IRAN
KAHANGAN MEHR	IRAN
KAR PIRA KAVIR	IRAN
NOVIN JOSH	IRAN
PAYA SYSTEM	IRAN
PARSIAN TARASH SANAT	IRAN
PETONIA	IRAN
TAJHZAT SYSTEM ZAMIN	IRAN
ABB GROUP	GERMANY
ALLTEC	USA
FURSE	UK
FRANCE PARATONNERRES	FRANCE
INDELEC	FRANCE
<b>2.17- NEUTRAL GROUNDING RESISTOR</b>	
BORNA ELECTRONIC	IRAN
MEHR TAVAN GOSIL	IRAN
ABB GROUP	GERMANY
ALSTOM	FRANCE
FUJI ELECTRIC	JAPAN
MITSUBISHI	JAPAN
SIEMENS	GERMANY
TOSHIBA	JAPAN
<b>2.18- AC GENERATOR</b>	
<b>2.18.1- TURBO GENERATOR</b>	
ALSTOM	FRANCE

<i>COMPANY NAME</i>	<i>ORIGIN</i>
ELIN	AUSTRIA
HITACHI	JAPAN
MITSUBISHI	JAPAN
SIEMENS	GERMANY
TOSHIBA	JAPAN
<b>2.18.2- EMERGENCY GENERATOR</b>	
ABB GROUP	FRANCE
ANSALDO SISTEMI INDUSTRIALI	ITALY
LEROY SOMER	FRANCE
SIEMENS	GERMANY
TOSHIBA	JAPAN
<b>2.18.3- EMERGENCY DIESEL GENERATOR</b>	
ARYA MACHINERY (CATERPILLAR)	IRAN
FARS DIESEL	IRAN
MAH NIROO	IRAN
MAN DIESEL & TURBO SE	GERMANY
MITSUBISHI HEAVY INDUSTRIES	JAPAN
MOHANDESIN RAAD	IRAN
MTU	GERMANY
MVM	GERMANY
PERKINS ENGINES COMPANY LTD	UK
SDMO	FRANCE
SIEMENS	GERMANY
VOLVO	SWEDEN
WARTSILA CORPORATION	FINLAND / THE NETHERLANDS
<b>2.19- MOBILE SUBSTATION</b>	
IRAN TRANSFO	IRAN
FULMEN	IRAN
KERMAN TABLOUE	IRAN
SANE SHARGH	IRAN
TRANS POST PARS	IRAN
ABB GROUP	GERMANY
SIEMENS	GERMANY
<b>2.20- COMPONENTS</b>	
<b>2.20.1- PROTECTION RELAY</b>	
ABB GROUP	GERMANY
ALSTOM	FRANCE
GE	USA / UK
ICE	FRANCE
OMRON	JAPAN
SCHNIEDER ELECTRIC	FRANCE
SIEMENS	GERMANY
SCHTUK ELEKTRONIK	GERMANY



**COMPANY NAME**

**ORIGIN**

**2.20.2- AUXILIARY RELAY**

AEG	GERMANY
FINDER	UK
GE	USA / UK
LEGRAND	FRANCE
OMRON	JAPAN
PHOENIX	GERMANY
SCHNIEDER ELECTRIC	FRANCE
SIEMENS	GERMANY
THYTRONIC	ITALY

**2.20.3- CONTACTORS**

ABB GROUP	GERMANY
AEG	GERMANY
FUJI	JAPAN
GE	USA / UK
HYUNDAI ELECTRIC & ENERGY SYSTEMS CO.	S. KOREA
MOELLER	GERMANY
SCHNIEDER ELECTRIC	FRANCE
SIEMENS	GERMANY

**2.20.4- AUXILIARY CONTACTORS**

AEG	GERMANY
FINDER	UK
GE	USA / UK
OMRON	JAPAN
PHOENIX	GERMANY
SCHNIEDER ELECTRIC	FRANCE
SIEMENS	GERMANY
THYTRONIC	ITALY

**2.20.5- FUSE**

ABB GROUP	GERMANY
AEG	GERMANY
ALSTOM	FRANCE
BUSSMAN	GERMANY
FERRAZ	FRANCE
GOLD	GERMANY
JUAN MOELLER	GERMANY
LEGRAND	FRANCE
SIBA	GERMANY
SIEMENS	GERMANY
SOCOMEK	FRANCE

**2.20.6- SIGNAL LIGHT**

ABB GROUP	GERMANY
ELFIN	ITALY
GE	USA / UK
SCHNIEDER ELECTRIC	FRANCE
SIEMENS	GERMANY

**COMPANY NAME**

**ORIGIN**

**2.20.7- CONTROL SWITCH**

ELECTRO KAVEH	IRAN
ROYAN	IRAN
CEAG	GERMANY
GE	USA / UK
K&N	ITALY
MOELLER	GERMANY
SCHNIEDER ELECTRIC	FRANCE
SIEMENS	GERMANY

**2.20.8- METERS**

FASE	ITALY
FERRER	ITALY
ISKAVA	JAPAN
IME	ITALY
mitsubishi	JAPAN
SIEMENS	GERMANY

**2.20.9- CIRCUIT BREAKER**

**2.20.9.1- LV CIRCUIT BREAKER**

**2.20.9.1.1- MINIATURE CB**

ABB GROUP	GERMANY
AEG	GERMANY
GE	UK
LEGRAND	FRANCE
MITSUBISHI	JAPAN
MOELLER	GERMANY
SCHNIEDER ELECTRIC	FRANCE
SIEMENS	GERMANY
UNELEC	FRANCE

**2.20.9.1.2- MCCB**

TEHRAN PADENA	IRAN
ABB GROUP	GERMANY
AEG	GERMANY
FUJI	JAPAN
GE	UK
HYUNDAI ELECTRIC & ENERGY SYSTEMS CO.	S. KOREA
MITSUBISHI	JAPAN
SCHNIEDER ELECTRIC	FRANCE
SIEMENS	GERMANY
UNELEC	FRANCE

**2.20.9.1.3- ACB**

TEHRAN PADENA	IRAN
ABB GROUP	GERMANY
AEG	GERMANY
FUJI	JAPAN
GE	UK

<i>COMPANY NAME</i>	<i>ORIGIN</i>
HYUNDAI ELECTRIC & ENERGY SYSTEMS CO.	S. KOREA
SCHNIEDER ELECTRIC	FRANCE
SIEMENS	GERMANY

**2.20.9.2- MV CIRCUIT BREAKER**

**2.20.9.2.1- VACUUM**

ABB GROUP	GERMANY
AEG	GERMANY
FUJI	JAPAN
GE	UK
HYUNDAI ELECTRIC & ENERGY SYSTEMS CO.	S. KOREA
SCHNIEDER ELECTRIC	FRANCE
SIEMENS	GERMANY

**2.20.9.2.2- SF6**

ABB GROUP	GERMANY
AEG	GERMANY
ALSTOM	FRANCE
GE	UK
SCHNIEDER ELECTRIC	FRANCE
SIEMENS	GERMANY

**2.20.10- TRANSDUCER**

FERRER	ITALY
IME	ITALY

**2.20.11- CT's & PT's**

ELECTRO PEJVAK	IRAN
MAG ELECTRIC	IRAN
ABB GROUP	GERMANY
FRER	ITALY
mitsubishi	JAPAN
SCHNIEDER ELECTRIC	FRANCE
SIEMENS	GERMANY
THYTRONIC	ITALY
WATTSUD	ITALY

**2.20.12- TERMINALS**

RAD IRAN	IRAN
CABUR	ITALY
MITSUBISHI	JAPAN
MOELLER	GERMANY
PHOENIX	GERMANY
SCHNIEDER ELECTRIC	FRANCE
SIEMENS	GERMANY

	<i>COMPANY NAME</i>	<i>ORIGIN</i>
<b>2.20.13- SPACE HEATER</b>		
	RITTAL	GERMANY
	SCHNIEDER ELECTRIC	FRANCE
	SIEMENS	GERMANY
	THYTRONIC	ITALY
<b>2.20.14- THERMOSTAT</b>		
	ATBIN	IRAN
	BARTEC	GERMANY
	KOBOLD	GERMANY
	RITTAL	GERMANY
	SIEMENS	GERMANY
<b>2.20.15- LIGHTING LAMPS</b>		
<b>2.20.15.1- INCANDESCENT LAMP</b>		
	PARS	IRAN
	GE	UK
	OSRAM	GERMANY
	PHILIPS	THE NETHERLANDS
	TUNGSRAM	HUNGARY
<b>2.20.15.2- MERCURY VAPOR LAMP</b>		
	SHAHAB TOUSHE	IRAN
	GE	UK
	OSRAM	GERMANY
	PHILIPS	THE NETHERLANDS
<b>2.20.15.3- SODIUM VAPOR LAMP</b>		
	SHAHAB TOUSHE	IRAN
	OSRAM	GERMANY
	PHILIPS	THE NETHERLANDS
<b>2.20.15.4- FLOURESCENT LAMP</b>		
	AFRA	IRAN
	PARS	IRAN
	SHAHAB TOUSHE	IRAN
	OSRAM	GERMANY
	PHILIPS	THE NETHERLANDS
<b>2.20.16- TIMER</b>		
	ABB GROUP	GERMANY
	AEG	GERMANY
	DOLD	GERMANY
	OMRON	JAPAN
	SCHNIEDER ELECTRIC	FRANCE
	SIEMENS	GERMANY
<b>2.20.17- CAPACITORS</b>		
	PALAAYESH NIROO	IRAN
	TAJHZAT BARGH FARAKOH YAZD (FARAKOH) ( <i>Only LV Capacitors</i> )	IRAN

	<i>COMPANY NAME</i>	<i>ORIGIN</i>
<b>2.20.18- FAULT / EVENT RECORDER</b>		
	PARDISSAN	IRAN
<b>2.21- ELECTRICAL HEATER FOR PROCESS EQUIPMENT</b>		
	DFI ENGINEERING PTE LTD	SINGAPORE
	KLÖPPER-THERM	GERMANY
	MABNA PISHEH	IRAN
	RESISTENCIAS TOPE	SPAIN
<b>2.22- MEASUREMENT CENTER</b>		
	BASET PAJOUH TEHRAN	IRAN

# **INSTRUMENTATION**

### 3.INSTRUMENTATION

#### 3.INSTRUMENTATION

##### 3.1- SYSTEM

- 3.1.1- DCS / FCS
- 3.1.2- DCS / FCS INTEGRATION
- 3.1.3- ADVANCED PROCESS CONTROL (APC)
- 3.1.4- OPERATOR TRAINING SIMULATE (OTS)
- 3.1.5- ESD SYSTEM
- 3.1.6- HIGH INTEGRATION PROTECTION SYSTEM (HIPS)
- 3.1.7- BMS
- 3.1.8- BMS / ESD SYSTEM INTEGRATION
- 3.1.9- PLC
- 3.1.10- PLC INTEGRATION
- 3.1.11- TANK GAUGING SYSTEM (TGS)
- 3.1.12- CONTROL PANEL
- 3.1.13- MIMIC PANEL
- 3.1.14- CONTROLLER
- 3.1.15- SCADA / DATA LOGGER
- 3.1.16- SCADA / DATA LOGGER INTEGRATION
- 3.1.17- TELEMETERING REMOTE TERMINAL UNIT (RTU)
- 3.1.18- TELEMETERING RADIO
- 3.1.19- INDICATOR
- 3.1.20- RECORDER
- 3.1.21- ANNUNCIATION PANEL
- 3.1.22- MARSHALLING AND BARRIER CABINET
- 3.1.23- ISOLATING / BARRIER / REPEATER / AMPLIFIER
- 3.1.24- PERSONAL COMPUTER
- 3.1.25- PRINTER
- 3.1.26- VIBRATION MONITORING SYSTEM
- 3.1.26.1- EX-JUNCTION BOX
- 3.1.27- CONDITION MONITORING SYSTEM
- 3.1.28- GOVERNOR / OVER SPEED PROTECTION
- 3.1.29- FLOW METERING STATION
- 3.1.30- FLOW METERING PROVER
- 3.1.31- LEAKAGE DETECTION SYSTEM
- 3.1.32- HUMAN MACHINE INTERFACE (HMI)

##### 3.2- ON - LINE ANALYZER

- 3.2.1- GAS CHROMATOGRAPH
- 3.2.2- INFRARED ANALYZER
- 3.2.3- RAMAN ANALYZER
- 3.2.4- OXYGEN ANALYZER
- 3.2.5- OXYGEN ANALYZER (IN LIQUID)
- 3.2.6- H<sub>2</sub> ANALYZER
- 3.2.7- MOISTURE ANALYZER (IN GAS)
- 3.2.8- MOISTURE ANALYZER (IN LIQUID)
- 3.2.9- SULPHUR ANALYZER (H<sub>2</sub>S, SO<sub>2</sub>, TAIL GAS)
- 3.2.10- CHLORINE ANALYZER
- 3.2.11- SILICA ANALYZER

- 3.2.12- AMMONIA ANALYZER (IN WATER)
- 3.2.13- PH METER
- 3.2.14- CONDUCTIVITY METER
- 3.2.15- TURBIDITY / COLOR METER
- 3.2.16- ANALYZER INTEGRATION
- 3.2.17- DENSITY METER
- 3.2.18- TOTAL HYDRO CARBON
- 3.2.19- CH4 ANALYZER
- 3.2.20- ALUMINUM ALKIL
- 3.2.21- SAMPLING SYSTEM

### 3.3- HSE EQUIPMENT

- 3.3.1- F & G SYSTEM
- 3.3.2- F & G SYSTEM INTEGRATION
- 3.3.3- GAS AND VAPOR DETECTOR
- 3.3.4- SMOKE DETECTOR
- 3.3.5- HEAT DETECTOR
- 3.3.6- FLAME DETECTOR
- 3.3.7- MANUAL CALL POINT
- 3.3.8- EMISSION MONITORING SYSTEM (EMS)
- 3.3.9- EMS INTEGRATION

### 3.4- FIELD DEVICE

- 3.4.1- DISPLACER TYPE LEVEL TRANSMITTER
- 3.4.2- CAPACITIVE TYPE LEVEL TRANSMITTER
- 3.4.3- RADIOACTIVE TYPE LEVEL TRANSMITTER
- 3.4.4- RADAR TYPE LEVEL TRANSMITTER
- 3.4.5- ULTRASONIC TYPE LEVEL TRANSMITTER
- 3.4.6- SERVO & FLOAT TYPE LEVEL TRANSMITTER
- 3.4.7- MAGNETIC LEVEL GAUGE
- 3.4.8- LEVEL GAUGE GLASS
- 3.4.9- LEVEL SWITCH (FLOAT & DISPLACER TYPE)
- 3.4.10- LEVEL SWITCH (TUNING FORK TYPE)
- 3.4.11- LEVEL SWITCH (CAPACITANCE TYPE)
- 3.4.12- LEVEL SWITCH (RADIOACTIVE TYPE)
- 3.4.13- CONTROL VALVE (GLOBE)
- 3.4.14- CONTROL VALVE (BALL)
- 3.4.15- CONTROL VALVE (BUTTERFLY)
- 3.4.16- CONTROL VALVE (ECCENTRIC PLUG)
- 3.4.17- CONTROL VALVE (ANGLE)
- 3.4.18- CONTROL VALVE (3 WAY)
- 3.4.19- CONTROL VALVE (NEEDLE VALVE)
- 3.4.20- DIAPHRAGM TYPE CONTROL VALVE
- 3.4.21- CONTROL VALVE POSITIONER
- 3.4.22- I/P , P/I & F/P CONVERTOR
- 3.4.23- MOTOR OPERATED VALVE
- 3.4.24- PRESSURE SELF REGULATING VALVE
- 3.4.25- TEMPERATURE SELF REGULATING VALVE
- 3.4.26- DESUPER HEATER
- 3.4.27- SAFETY VALVE



- 3.4.28- DELETED
- 3.4.29- DELETED
- 3.4.30- EMERGENCY VENT VALVE
- 3.4.31- DELUGE VALVE
- 3.4.32- ON / OFF VALVE (BALL)
- 3.4.33- ON / OFF VALVE (BUTTERFLY)
- 3.4.34- ON / OFF VALVE (ANGLE)
- 3.4.35- ON / OFF VALVE (GATE)
- 3.4.36- BOTTOM TANK VALVE
- 3.4.37- PISTON TYPE ACTUATOR
- 3.4.38- ELECTRICAL ACTUATOR
- 3.4.39- FILTER REGULATOR
- 3.4.40- SOLENOID VALVE
- 3.4.41- PROXIMITY SWITCH
- 3.4.42- PIG DETECTOR
- 3.4.43- VALVE LOCKING DEVICE
- 3.4.44- N<sub>2</sub> BLANKETING SYSTEM
- 3.4.45- MASS FLOWMETER (CORIOLIS TYPE)
- 3.4.46- MASS FLOWMETER (THERMAL TYPE)
- 3.4.47- ULTRASONIC FLOWMETER
- 3.4.47.1- ULTRASONIC FLOWMETER (LIQUID)
- 3.4.47.2- ULTRASONIC FLOWMETER (GAS)
- 3.4.47.3- FLOW COMPUTER
- 3.4.48- MAGNETIC FLOWMETER
- 3.4.49- VORTEX FLOWMETER
- 3.4.50- POSITIVE DISPLACEMENT METER
- 3.4.51- TURBINE METER
- 3.4.52- ROTAMETER
- 3.4.53- BULK FLOWMETER
- 3.4.54- FLOW SWITCH
- 3.4.55- ORIFICE PLATE
- 3.4.56- VENTURI TUBE AND NOZZLE
- 3.4.57- ANNUBAR
- 3.4.58- PRESSURE & TEMPERATURE GAUGE
- 3.4.59- PRESS. & TEMP. SWITCH
- 3.4.60- PRESS. & DIFFERENTIAL PRESS. TRANSMITTER
- 3.4.61- T/C , RTD & WELLS
- 3.4.62- TEMPERATURE TRANSMITTER
- 3.4.63- FIELD INDICATOR
- 3.4.64- JUNCTION BOX
- 3.4.64.1- EX-JUNCTION BOX
- 3.4.64.2- INDUSTRIAL – JUNCTION BOX
- 3.4.65- CABLE GLAND
- 3.4.66- INSTRUMENT CABLE
- 3.4.67- CABLE TRAY / LADDER
- 3.4.68- INSTRUMENT VALVE
- 3.4.69- INSTRUMENT PIPE & FITTING
- 3.4.70- INSTRUMENT TUBE & FITTING
- 3.4.71- SPECIAL VALVES
- 3.4.72- INSTRUMENT PROTECTION ENCLOSURE
- 3.4.73- DECOCK & CRACKED GAS VALVE

**COMPANY NAME**

**ORIGIN**

**3.1- SYSTEM**

**3.1.1- DCS / FCS**

ABB	GERMANY
AZBIL GROUP (YAMATAKE)	JAPAN / W. EUROPE
EATON MTL (MTL)	UK
EMERSON	UK / FRANCE
FARINEH FANAVAR	IRAN
HONEYWELL INTL	ITALY / FRANCE / BELGIUM
KERMAN TABLOUE	IRAN
MOHANDESI VA SAKHT BARGH VA CONTROL MAPNA (MECO)	IRAN
SIEMENS	GERMANY
SMAR	BRAZIL
YOKOGAWA	JAPAN / W. EUROPE

**3.1.2- DCS / FCS INTEGRATION**

ASIA CONTROL PEY	IRAN
ATRO FARAYAND IRANIAN	IRAN
AZAR DAGHIGH IRANIAN (ADICO)	IRAN
CONTROL POOYAN	IRAN
ENERGY SATRAP CAREN	IRAN
FARANEGAR SANAT	IRAN
IDEH GLOBAL	IRAN
KERMAN TABLOUE	IRAN
MOHANDESI BARGH CONTROL VA ABZAR DAGHIGH IDEH	IRAN
MOHANDESI VA SAKHT BARGH VA CONTROL MAPNA (MECO)	IRAN
NOVIN DANESH AYANDEH	IRAN
PARS HASSAS	IRAN
w	IRAN
SIGMA GOSTAR ARYA	IRAN

**3.1.3- ADVANCED PROCESS CONTROL (APC)**

ASPENTECH	W. EUROPE
AXENS	FRANCE
EMERSON	UK / FRANCE
HONEYWELL INTL	GERMANY
SHELL GLOBAL SOLUTION (SGS)	THE NETHERLANDS
YOKOGAWA	JAPAN / FRANCE

**3.1.4- OPERATOR TRAINING SIMULATOR (OTS)**

GOSTARESH FARAYANDE SHARIF	IRAN
ASPENTECH	W. EUROPE
AXENS	FRANCE

**3.1.5- ESD SYSTEM**

ABB	UK / GERMANY / W. EUROPE
EMERSON	UK / FRANCE
GEBHARDT AUTOMATION GMBH	GERMANY
HIMA	GERMANY
HONEYWELL FSC	BELGIUM
ROCKWELL AUTOMATION (ICS TRIPLEX)	UK
PILZ	GERMANY

<i>COMPANY NAME</i>	<i>ORIGIN</i>
ROTORK	UK
SIEMENS	GERMANY
YOKOGAWA	THE NETHERLANDS / JAPAN

### 3.1.6- HIGH INTEGRATION PROTECTION SYSTEM (HIPS)

HIMA	GERMANY
ROCKWELL AUTOMATION (ICS TRIPLEX)	UK
TRICONEX	UK
YOKOGAWA	JAPAN

### 3.1.7- BMS

ROCKWELL AUTOMATION (ALLEN BRADLEY)	BELGIUM / W. EUROPE
EMERSON	UK / FRANCE
SCHNEIDER GROUP	GERMANY / FRANCE
HIMA	GERMANY
HONEYWELL	GERMANY
JOHN ZINK	USA / W. EUROPE
OMRON	JAPAN
PILZ	GERMANY
ROCKWELL AUTOMATION (ICS TRIPLEX)	UK
SIEMENS	GERMANY

### 3.1.8- BMS / ESD SYSTEM INTEGRATION

ASIA CONTROL PEY	IRAN
ATRO FARAYAND IRANIAN	IRAN
AZAR DAGHIGH IRANIAN (ADICO)	IRAN
CONTROL POOYAN	IRAN
ENERGY SATRAP CAREN	IRAN
HANIF	IRAN
IDEH GLOBAL	IRAN
KERMAN TABLOUE	IRAN
MOHANDESI BARGH CONTROL VA ABZAR DAGHIGH IDEH	IRAN
NOVIN DANESH AYANDEH	IRAN
PETRO FANAVAR NIROOYE IRANIAN	IRAN
SIGMA GOSTAR ARYA	IRAN
TIMA KALA TEHRAN ENGINEERING	IRAN

### 3.1.9- PLC

CONTRONIC	IRAN
ROCKWELL AUTOMATION (ALLEN BRADLEY)	BELGIUM / W. EUROPE
FANUC	W. EUROPE
SCHNEIDER GROUP	GERMANY
HIMA	GERMANY
HONEYWELL	GERMANY
mitsubishi electric	JAPAN / UK
OMRON	JAPAN
PILZ	GERMANY
SIEMENS	GERMANY
TOSHIBA	JAPAN / USA

<i>COMPANY NAME</i>	<i>ORIGIN</i>
ASIA CONTROL PEY	IRAN
AZAR DAGHIGH IRANIAN (ADICO)	IRAN
CONTRONIC	IRAN
ENERGY KAVIR PAYA	IRAN
ENERGY SATRAP CAREN	IRAN
FANAVARAN KEYHAN AZARAKHSH	IRAN
FARAYAND PARDAZ	IRAN
FARS SCOUT	IRAN
FIMCO	IRAN
GOROOH SANATI FARINEH	IRAN
GOROOH SANATI PATSA	IRAN
HANIF	IRAN
KERMAN TABLO	IRAN
MANABEH ENSANI VA MOHANDESI IRAS TARH	IRAN
MOHANDESI VA ABZAR DAGHIGH IDEH	IRAN
NOVIN DANESH AYANDEH	IRAN
PAYKAR BONYAN	IRAN
KHADAMAT MOHANDESI SIMAN FARS VA KHUZESTAN	IRAN
SIGMA GOSTAR ARYA	IRAN
TALIRAN	IRAN
TAM IRAN KHODRO	IRAN
TAVAN AZMAYAN	IRAN
TEHRAN TAMAM	IRAN

### 3.1.11- TANK GAUGING SYSTEM (TGS)

ENDRESS+HAUSER	GERMANY / W. EUROPE
HONEYWELL ENRAF	THE NETHERLANDS / W. EUROPE
KROHNE MESSTECHNIK GmbH (KROHNE)	GERMANY
MOTHERWELL CONTROL SYSTEM	UK
SAAB ROSEMONT	SWEDEN / W. EUROPE
SAKURA ENDRESS	JAPAN / W. EUROPE
WHESSOE VAREC	UK / W. EUROPE

### 3.1.12- CONTROL PANEL

ABB	GERMANY
AST	ITALY
AZBIL GROUP (YAMATAKE)	JAPAN
CONTRONIC	IRAN
FARANEGAR SANAT	IRAN
FARS SCOUT	IRAN
FIMCO	IRAN
GOROOH SANATI FARINEH	IRAN
GOROOH SANATI PATSA	IRAN
HANIF	IRAN
KERMAN TABLO	IRAN
MANABEH ENSANI VA MOHANDESI IRAS TARH	IRAN
MOHANDESI VA ABZAR DAGHIGH IDEH	IRAN
NOVIN DANESH AYANDEH	IRAN
PARS HASSAS	IRAN
SIEMENS	GERMANY

<i>COMPANY NAME</i>	<i>ORIGIN</i>
TABLO FAZ	IRAN
TALIRAN	IRAN
TEHRAN TAMAM	IRAN
TOLIDE MALZOOMATE BARGH	IRAN
YOKOGAWA	JAPAN / W. EUROPE

### 3.1.13- MIMIC PANEL

KERMAN TABLO	IRAN
NOVIN DANESH AYANDEH	IRAN
PARS HASSAS	IRAN
RAHPOUYAN ANDISHEH DENA	IRAN
RONAN ENGINEERING COMPANY	UK
TALIRAN	IRAN

### 3.1.14- CONTROLLER

ATBIN	IRAN
ABB	GERMANY
AZBIL GROUP (YAMATAKE)	JAPAN
EMERSON	UK / FRANCE
EUROTHERM	UK
FLUIDWELL BV	THE NETHERLANDS
FUJI	JAPAN
HONEYWELL	W. EUROPE
YOKOGAWA	JAPAN / W. EUROPE

### 3.1.15- SCADA / DATA LOGGER

FARINEH FANAVAR	IRAN
ABB	GERMANY
EMERSON	UK / FRANCE
FLUIDWELL BV	THE NETHERLANDS
FUJI	JAPAN
HITACHI	JAPAN
IDS	GERMANY
HONEYWELL	GERMANY
YOKOGAWA	JAPAN / W. EUROPE

### 3.1.16- SCADA / DATA LOGGER INTEGRATION

CONTRONIC	IRAN
ENERGY KAVIR PAYA	IRAN
ENERGY SATRAP CAREN	IRAN
GOROOH SANATI PATSA	IRAN
ITA	IRAN
KERMAN TABLO	IRAN
MICRO MOJ	IRAN
PARVARESH DADEHHA	IRAN
TALIRAN	IRAN
TAM IRAN KHODRO	IRAN
TAVAN AZMAYAN	IRAN

**COMPANY NAME**

**ORIGIN**

**3.1.17- TELEMETERING REMOTE TERMINAL UNIT ( RTU )**

ABB	W. EUROPE
CONTROL MICRO SYSTEM	CANADA
EMERSON	W. EUROPE
FUJI	JAPAN
HITACHI	JAPAN
HONEYWELL / ELSTER	GERMANY
IDS	GERMANY
IRAN MADAR	IRAN
KERMAN TABLO	IRAN
MICRO ELECTRONIC	IRAN
TALIRAN	IRAN
YOKOGAWA	JAPAN / W. EUROPE

**3.1.18- TELEMETERING RADIO**

MIKRO ELECTRONIC	IRAN
ABB	GERMANY
CONTROL MICRO SYSTEM	GERMANY
FUJI	JAPAN
HITACHI	JAPAN
SIAE	ITALY
TRIO	AUSTRALIA

**3.1.19- INDICATOR**

ABB	GERMANY
ATBIN	IRAN
AZBIL GROUP (YAMATAKE)	JAPAN
EMERSON	UK / FRANCE
EUROTHERM	UK
FLUIDWELL BV	THE NETHERLANDS
FUJI	JAPAN
HONEYWELL	W. EUROPE
IRAN MADAR	IRAN
KERMAN TABLO	IRAN
KROHNE MESSSTECHNIK GmbH (KROHNE)	GERMANY
PARS HASSAS	IRAN
SA IRAN	IRAN
SANAYE ELECTRONIC SHIRAZ	IRAN
TEHRAN TAMAM	IRAN
YOKOGAWA	JAPAN / W. EUROPE

**3.1.20- RECORDER**

ABB	GERMANY
AZBIL GROUP (YAMATAKE)	JAPAN
BARTON	UK
CHESSELL	GERMANY
EMERSON	UK / FRANCE
EUROTHERM	UK
FUJI	JAPAN
HONEYWELL	W. EUROPE
METROWATT	GERMANY
PARS JAHD	IRAN
YOKOGAWA	JAPAN / W. EUROPE

*COMPANY NAME* *ORIGIN*

**3.1.21- ANNUNCIATION PANEL**

AST	ITALY
HIMA	GERMANY
IDEC ( IZUMI )	JAPAN
KERMAN TABLO	IRAN
KIMDEN	JAPAN
MAZDAK	IRAN
OMRON	JAPAN
PANALARM	W. EUROPE
PARDISSAN	IRAN
PARS HASSAS	IRAN
ROCHESTER	W. EUROPE
RONAN ENGINEERING COMPANY	UK
TALIRAN	IRAN
TRADIS	IRAN
YOKOGAWA	JAPAN / W. EUROPE

**3.1.22- MARSHALLING AND BARRIER CABINET**

ABB	GERMANY
AST	ITALY
CONTRONIC	IRAN
FARANEGAR SANAT	IRAN
FARS SCOUT	IRAN
GHESHM VOLTAGE	IRAN
GOROOH SANATI FARINEH	IRAN
NOVIN DANESH AYANDEH	IRAN
GOROOH SANATI PATSA	IRAN
HANIF	IRAN
INDUSTRONIC	GERMANY
KERMAN TABLO	IRAN
MANABEH ENSANI VA MOHANDESI IRAS TARH	IRAN
MITSUBISHI ELECTRIC	JAPAN / UK
MOHANDESI VA ABZAR DAGHIGH IDEH	IRAN
PAYKAR BONYAN	IRAN
RICHARDSON	UK
SIEMENS	GERMANY
STAHL	GERMANY
TABLO FAZ	IRAN
TALIRAN	IRAN
TAVAN AZMAYAN	IRAN
TEHRAN TAMAM	IRAN

**3.1.23- ISOLATING / BARRIER / REPEATER / AMPLIFIER**

BARTECH	W. EUROPE
EATON MTL (MTL)	UK
GM INTERNATIONAL	ITALY
HAWKE	UK
PEPPERL+FUCHS	GERMANY
PR ELECTRONIC	DENMARK

<i>COMPANY NAME</i>	<i>ORIGIN</i>
REGULATEURS GEORGIN (GEORGIN)	FRANCE
STAHL	GERMANY
TURCK	UK

### 3.1.24- PERSONAL COMPUTER

GOROOH SANATI PATSA / ADAVANTECH	IRAN / UK
COMPAQ	USA / W. EUROPE
DELL	UK
FUJITSU SIEMENS	JAPAN / GERMANY
HIGH SCREEN	GERMANY
HP	W. EUROPE
KONTRON	GERMANY
MICRO SYSTEM	UK
PANASONIC	JAPAN
PHILIPS	THE NETHERLANDS
SHARP	JAPAN
SONY	JAPAN
TOSHIBA	JAPAN / USA

### 3.1.25- PRINTER

EPSON	GERMANY / UK
HP	W. EUROPE
KODAK	JAPAN
LG	S. KOREA
SAMSUNG	S. KOREA
SHARP	JAPAN

### 3.1.26- VIBRATION MONITORING SYSTEM

BEHINEH PARDAZESH ARMAN	IRAN
BENTLY NEVADA	W. EUROPE
BRUEL & KJAER	GERMANY
EPRO	GERMANY
PROGNOST SYSTEMS	GERMANY
SCHENCK	GERMANY
SHINKAWA	JAPAN
VIBROMETER	SWITZERLAND

#### 3.1.26.1- EX-JUNCTION BOX

SINA PARDAZ APADANA (SIPNACO)	IRAN
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### 3.1.27- CONDITION MONITORING SYSTEM

BENTLY NEVADA	W. EUROPE
BRUEL & KJAER	GERMANY
EPRO	GERMANY
PROGNOST SYSTEMS	GERMANY
RONAN ENGINEERING COMPANY	UK
SCHENCK	GERMANY
SHINKAWA	JAPAN
VIBROMETER	SWITZERLAND



COMPANY NAME	ORIGIN
<b>3.1.28- GOVERNOR / OVER SPEED PROTECTION</b>	
SIEMENS	GERMANY
WOODWARD	UK

<b>3.1.29- FLOW METERING STATION</b>	
ALDERLEY	UK
AO SMITH	USA / W. EUROPE
ASIA ABZAR DAGHIGH	IRAN
BOPP & REUTHER	GERMANY
EMERSON	UK
INSTROMET	THE NETHERLANDS
INT S.R.L	ITALY
KROHNE MESSTECHNIK GmbH (KROHNE)	GERMANY
OVAL	JAPAN
PETROL SRL	ITALY
PETROMAX	UK
PROGETTI	ITALY
REZVAN GOSTARE TEHRAN	IRAN
SOCRATE	ITALY
SMS	UK
VENTECH	GERMANY
WHITELY ENG.	UK

\* For custody transfer applications and the same by Iranian Vendors, Refer to "Office of Supervision on Oil Exports" List. ([www.mop.ir](http://www.mop.ir))

<b>3.1.30- FLOW METERING PROVER</b>	
ASIA ABZAR DAGHIGH	IRAN
REZVAN GOSTARE TEHRAN	IRAN
ALDERLEY	UK
INSTROMET	THE NETHERLANDS
KROHNE MESSTECHNIK GmbH (KROHNE)	GERMANY
OVAL	JAPAN
PETROL SRL	ITALY

<b>3.1.31- LEAKAGE DETECTION SYSTEM</b>	
ABB	GERMANY
ATMOSI	UK
KROHNE OIL & GAS	THE NETHERLANDS
SEIC	ITALY

<b>3.1.32- HUMAN MACHINE INTERFACE (HMI)</b>	
FARINEH FANAVAR	IRAN
KERMAN TABLOUE	IRAN

<b>3.1.33- WIRELESS INSTRUMENT</b>	
EMERSON	W. EUROPE

<b>3.2- ON - LINE ANALYZER</b>	
<b>3.2.1- GAS CHROMATOGRAPH</b>	
ABB	UK / GERMANY
SICK	GERMANY
SIEMENS	GERMANY
YOKOGAWA	JAPAN

*COMPANY NAME* *ORIGIN*

**3.2.2- INFRARED ANALYZER**

ABB	UK / GERMANY
EMERSON	UK / FRANCE
SERVOMEX	UK
SICK	GERMANY
SIEMENS	GERMANY
YOKOGAWA	JAPAN

**3.2.3- RAMAN ANALYZER**

EMERSON	UK / FRANCE
HORIBA (JOBIN VYON)	FRANCE

**3.2.4- OXYGEN ANALYZER**

ABB	UK / GERMANY
EMERSON	UK
ENDRESS+HAUSER	GERMANY
ENOTEC	GERMANY
FUJI	JAPAN
MSA	THE NETHERLANDS
OXITECH	W. EUROPE
PANAMETRICS	W. EUROPE
SERVOMEX	UK
SICK	GERMANY
SIEMENS	GERMANY
SYSTEC	W. EUROPE
YOKOGAWA	JAPAN

**3.2.5- OXYGEN ANALYZER ( IN LIQUID )**

ABB	UK / GERMANY
ATI	UK
Dr. THEIDIG	GERMANY
EMERSON	UK / FRANCE
ENDRESS+HAUSER	GERMANY
KROHNE MESSTECHNIK GmbH (KROHNE)	GERMANY
POLY METRON	FRANCE
YOKOGAWA	JAPAN

**3.2.6- H2 ANALYZER**

ABB	UK / GERMANY
EMERSON	UK / FRANCE
SERVOMEX	UK
SIEMENS	GERMANY
YOKOGAWA	JAPAN

**3.2.7- MOISTURE ANALYZER ( IN GAS )**

BARTEC	GERMANY
BERTHOLD TECHNOLOGIES	GERMANY
EMERSON	UK / FRANCE
IMA	UK
PANAMETRICS	UK

<i>COMPANY NAME</i>	<i>ORIGIN</i>
ROTRONIK	JAPAN
SHIRAKAWA	JAPAN
SHAW	UK
SICK	GERMANY
SIEMENS	GERMANY
YOKOGAWA	JAPAN

### 3.2.8- MOISTURE ANALYZER ( IN LIQUID )

ABB	UK / GERMANY
BERTHOLD TECHNOLOGIES	GERMANY
KROHNE MESSTECHNIK GmbH (KROHNE)	GERMANY
PANAMETRICS	UK
SERVOMEX	UK
SIEMENS	GERMANY
YOKOGAWA	JAPAN

### 3.2.9- SULPHUR ANALYZER (H<sub>2</sub>S / SOX / TAIL GAS)

ABB	UK / GERMANY
AMETEC	GERMANY
DELMAR	FRANCE
EMERSON	UK
GALVANIC APPLIED SCIENCES	CANADA
MAIHAK	W. EUROPE
NOVACHEM	W. EUROPE
ONYX TRACKER	UK
SERVOMEX	UK
SICK	GERMANY
SIEMENS	GERMANY
YOKOGAWA	JAPAN

### 3.2.10- CHLORINE ANALYZER

ATI	UK
EMERSON	UK / FRANCE
ENDRESS+HAUSER	GERMANY
JESCO	GERMANY
KROHNE MESSTECHNIK GmbH (KROHNE)	GERMANY
POLY METRON	FRANCE
YOKOGAWA	JAPAN

### 3.2.11- SILICA ANALYZER

ENDRESS+HAUSER	GERMANY
POLY METRON	FRANCE
SWAN	SWITZERLAND

### 3.2.12- AMMONIA ANALYZER ( IN WATER )

ABB	GERMANY / UK
Dr. LANGE	GERMANY

*COMPANY NAME* *ORIGIN*

**3.2.13- PH METER**

ABB	UK / GERMANY
ATI	UK
DKK	JAPAN
EMERSON	UK / FRANCE
ENDRESS+HAUSER	GERMANY
HORIBA	JAPAN
IC CONTROLS	CANADA
KROHNE MESSTECHNIK GmbH (KROHNE)	GERMANY
LISLEMETRIK	GERMANY
METTLER TOLEDO	SWITZERLAND
POLY METRON	FRANCE
SERVOMEX	UK
SIEMENS	GERMANY
SWAN	SWITZERLAND
YOKOGAWA	JAPAN

**3.2.14- CONDUCTIVITY METER**

ABB	UK / GERMANY
ATI	UK
BOPP & REUTHER	GERMANY
DKK	JAPAN
EMERSON	UK / FRANCE
ENDRESS+HAUSER	GERMANY
HORIBA	JAPAN
IC CONTROLS	CANADA
IGEMA	GERMANY
KROHNE MESSTECHNIK GmbH (KROHNE)	GERMANY
LISLEMETRIK	GERMANY
METTLER TOLEDO	SWITZERLAND
PEEK MEASUREMENT	UK
POLY METRON	FRANCE
SERVOMEX	UK
SIEMENS	GERMANY
SWAN	SWITZERLAND
THEIS	THE NETHERLANDS
YOKOGAWA	JAPAN

**3.2.15- TURBIDITY / COLOR METER**

ATI	UK
EMERSON	UK / FRANCE
KROHNE MESSTECHNIK GmbH (KROHNE)	GERMANY
LISLEMETRIK	GERMANY
NOVATECH CONTROLS	AUSTRALIA

**3.2.16- ANALYZER INTEGRATION**

ABB	W. EUROPE
ARTIN TAK	IRAN
AUGUSTA SYSTEM INTEGRATION	ITALY
CEGELEC	FRANCE

<i>COMPANY NAME</i>	<i>ORIGIN</i>
CONTROL POOYAN	IRAN
FONOONE BARTARE TAV	IRAN
HOBRE	THE NETHERLANDS
KROHNE MESSTECHNIK GmbH (KROHNE)	GERMANY
MEHR KANAZ	IRAN
PIRAMOON SYSTEM QESHM	IRAN
RAHBORDHAYE HOOSHMAND	IRAN
SANDROOS SANAT	IRAN
SIMA MEHR	IRAN
ZIST ANDISH PISHGAM	IRAN

### 3.2.17- DENSITY METER

BERTHOLD TECHNOLOGIES	GERMANY
EMERSON	UK / FRANCE
ENDRESS+HAUSER	GERMANY
KROHNE MESSTECHNIK GmbH (KROHNE)	GERMANY
LEMIS BALTIC	LATVIA

### 3.2.18- TOTAL HYDROCARBON ANALYZER

KROHNE MESSTECHNIK GmbH (KROHNE)	GERMANY
SICK	GERMANY
SIEMENS	GERMANY

### 3.2.19- CH4 ANALYZER

EMERSON	UK / FRANCE
SICK	GERMANY

### 3.2.20- ALUMINIUM ALKYL ANALYZER

JESCO	GERMANY
SIEMENS	GERMANY

### 3.2.21- SAMPLING SYSTEM

DOEDIJNS	THE NETHERLANDS
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## 3.3- HSE EQUIPMENT

### 3.3.1- F & G SYSTEM

ANSUL	UK
APOLLO	UK / W. EUROPE
ATRONICA	NORWAY
BLACK FIRE	CANADA
CHUBB FIRE	UK / W. EUROPE
CROWCON	UK / W. EUROPE
DETECTOMAT	W. EUROPE
DRAEGER	GERMANY / W. EUROPE
SANCO S.P.A	ITALY
G.F.G	GERMANY
GEBHARDT AUTOMATION GMBH	GERMANY
GENERAL MONITOR	UK / W. EUROPE
KIDDE	ITALY / W. EUROPE
HOCKE	JAPAN

<i>COMPANY NAME</i>	<i>ORIGIN</i>
MINIMAX	UK / W. EUROPE
PREUSSAG	UK / W. EUROPE
SES ENSER	ITALY / W. EUROPE
SIEMENS	GERMANY / W. EUROPE
SILVANI	ITALY / W. EUROPE
TOTAL WALTHER	GERMANY

### 3.3.2- F & G SYSTEM INTEGRATION

ASIA CONTROL PEY	IRAN
ATRIN RAD MEHR	IRAN
ATRO FARAYAND IRANIAN	IRAN
AZAR DAGHIGH IRANIAN (ADICO)	IRAN
CONTROL POOYAN	IRAN
ENERGY SATRAP CAREN	IRAN
FONOON BARTAR TAV	IRAN
IDEH GLOBAL	IRAN
KERMAN TABLOUE	IRAN
MOHANDESI BARGH CONTROL VA ABZAR DAGHIGH IDEH	IRAN
NARFOAMKAR	IRAN
NOVIN DANESH AYANDEH	IRAN
PETRO FANAVAR NIROOYE IRANIAN	IRAN
SARIAK	IRAN
SIGMA GOSTAR ARYA	IRAN
SPIN ELECTRIC	IRAN
TIMA KALA TEHRAN ENGINEERING	IRAN

### 3.3.3- GAS AND VAPOR DETECTOR

COMPUTER MONITOR	GERMANY
CROWCON	UK / W. EUROPE
DRAEGER	GERMANY / W. EUROPE
FENWAL	UK / W. EUROPE
GASTEC	JAPAN
GENERAL MONITOR	UK / W. EUROPE
GFG	GERMANY / W. EUROPE
MSA	USA
OLDHAM	W. EUROPE
PHOTAIN	UK / W. EUROPE
PREUSSAG	UK / W. EUROPE
SES ENSER	ITALY / W. EUROPE
SILVANI	FRANCE / W. EUROPE
SIMTRONICS	NORWAY
SKC	USA
ZELLWEGER	GERMANY / W. EUROPE

### 3.3.4- SMOKE DETECTOR

APOLLO	UK / W. EUROPE
CHUBB	UK / W. EUROPE
CROWCON	UK / W. EUROPE
DETECTOMAT	GERMANY / W. EUROPE
FIGGIE	ITALY / W. EUROPE

<i>COMPANY NAME</i>	<i>ORIGIN</i>
GENERAL MONITOR	UK / W. EUROPE
MINIMAX	UK / W. EUROPE
PHOTAIN	UK / W. EUROPE
PREUSSAG	UK / W. EUROPE
THORN	UK / W. EUROPE

### 3.3.5- HEAT DETECTOR

APOLLO	UK / W. EUROPE
CHUBB	UK / W. EUROPE
CROWCON	UK / W. EUROPE
DETECTOMAT	GERMANY / W. EUROPE
FIGGIE	ITALY / W. EUROPE
GENERAL MONITOR	UK / W. EUROPE
MINIMAX	UK / W. EUROPE
PHOTAIN	UK / W. EUROPE
PREUSSAG	UK / W. EUROPE
THORN	UK / W. EUROPE

### 3.3.6- FLAME DETECTOR

APOLLO	UK / W. EUROPE
CROWCON	UK / W. EUROPE
DETECTOMAT	GERMANY / W. EUROPE
GENERAL MONITOR	UK / W. EUROPE
MINIMAX	UK / W. EUROPE
PHOTAIN	UK / W. EUROPE
PREUSSAG	UK / W. EUROPE
RAMZY	ITALY

### 3.3.7- MANUAL CALL POINT

BARTEC	FRANCE / GERMANY
STAHL	GERMANY
THORN	UK

### 3.3.8- EMISSION MONITORING SYSTEM ( EMS )

CROWCON	UK / W. EUROPE
DURAG	GERMANY
ENVIRONMENTS A	FRANCE

### 3.3.9- EMS INTEGRATION

ZIST ANDISH PISHGAM	IRAN
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## 3.4- FIELD DEVICE

### 3.4.1- DISPLACER TYPE LEVEL TRANSMITTER

AZBIL GROUP (YAMATAKE)	JAPAN
DRESSER ( MASONEILAN )	W. EUROPE
EMERSON	W. EUROPE
FOX BORO	USA / W. EUROPE
KROHNE MESSSTECHNIK GmbH (KROHNE)	GERMANY
LEAM S.R.L	ITALY

<i>COMPANY NAME</i>	<i>ORIGIN</i>
MAGNETROL	USA / W. EUROPE
MORITAN	JAPAN
PARS JAHN	IRAN
SPRIANO	ITALY
TAKROL	UK
TOKYO KEISO	JAPAN

#### 3.4.2- CAPACITIVE TYPE LEVEL TRANSMITTER

ENDRESS+HAUSER	GERMANY / W. EUROPE
IGEMA	GERMANY
KROHNE MESSTECHNIK GmbH (KROHNE)	GERMANY
TOKYO KEISO	JAPAN
VEGA	GERMANY / W. EUROPE

#### 3.4.3- RADIOACTIVE TYPE LEVEL TRANSMITTER

BERTHOLD TECHNOLOGIES	GERMANY
ENDRESS+HAUSER	GERMANY / W. EUROPE
MOTOYAMA	JAPAN / W. EUROPE
OHMART	JAPAN / W. EUROPE
PANAMETRIC	JAPAN / W. EUROPE
RONAN ENGINEERING COMPANY	UK

#### 3.4.4- RADAR TYPE LEVEL TRANSMITTER

ENDRESS+HAUSER	GERMANY / W. EUROPE
FLUIDWELL BV	THE NETHERLANDS
HONEYWELL ENRAF	THE NETHERLANDS / W. EUROPE
KROHNE MESSTECHNIK GmbH (KROHNE)	GERMANY
SAAB ROSEMONT	SWEDEN / W. EUROPE
SAKURA ENDRESS	JAPAN / W. EUROPE
VEGA	GERMANY / W. EUROPE
WHESSOE VAREC	UK / W. EUROPE

#### 3.4.5- ULTRASONIC TYPE LEVEL TRANSMITTER

ENDRESS+HAUSER	GERMANY / W. EUROPE
KDG MOBREY	UK
KROHNE MESSTECHNIK GmbH (KROHNE)	GERMANY
MAGNETROL	USA / W. EUROPE
MILTRONIC	GERMANY / W. EUROPE
VEGA	GERMANY / W. EUROPE

#### 3.4.6- SERVO & FLOAT TYPE LEVEL TRANSMITTER

ENDRESS+HAUSER	GERMANY
HONEYWELL ENRAF	THE NETHERLANDS / W. EUROPE
TOKYO KEISO	JAPAN
VEGA	GERMANY / W. EUROPE
WHESSOE VAREC	UK

#### 3.4.7- MAGNETIC LEVEL GAUGE

BONETTI	ITALY / W. EUROPE
ESHT'E'AL ARAK	IRAN
EYVAZ TECHNIC	IRAN



<i>COMPANY NAME</i>	<i>ORIGIN</i>
IGEMA	GERMANY
KROHNE MESSSTECHNIK GmbH (KROHNE)	GERMANY
MAGNETROL	USA / W. EUROPE
OFFICINE OROBICHE	ITALY
PARS JAHD	IRAN
PHONIX	GERMANY / W. EUROPE
SANAYE CONTROLLI HASSAS	IRAN
SPRIANO	ITALY
TC KLINGER	UK / W. EUROPE
TEHRAN DELIK	IRAN
WEKA INSTRUMENT	GERMANY / W. EUROPE

#### 3.4.8- LEVEL GAUGE GLASS

SANAYE CONTROLLI HASSAS	IRAN
BONETTI	ITALY / W. EUROPE
MAGNETROL	USA / W. EUROPE
NIHON	JAPAN
PARS JAHD	IRAN
PHONIX	GERMANY / W. EUROPE
TC KLINGER	UK / W. EUROPE
TOKYO KEISO	JAPAN

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

ANALYTIC	GERMANY / W. EUROPE
BESTA	SWITZERLAND
DELTA CONTROLS	UK
ENDRESS+HAUSER	GERMANY / W. EUROPE
ESHTE'AL ARAK	IRAN
EYVAZ TECHNIC	IRAN
IGEMA	GERMANY
JUCKER	UK / W. EUROPE
KOBOLD	W. EUROPE
KROHNE MESSSTECHNIK GmbH (KROHNE)	GERMANY
LABKOTEC	FINLAND
MAGNETROL	USA / W. EUROPE
OFFICINE OROBICHE	ITALY
PHONIX	GERMANY / W. EUROPE
TEHRAN DELIK	IRAN
TOKYO KEISO	JAPAN

#### 3.4.10- LEVEL SWITCH ( TUNING FORK TYPE )

ENDRESS+HAUSER	GERMANY / W. EUROPE
KROHNE MESSSTECHNIK GmbH (KROHNE)	GERMANY
VEGA	GERMANY / W. EUROPE

#### 3.4.11- LEVEL SWITCH ( CAPACITANCE TYPE )

IGEMA	GERMANY
ARYAN PEJOUHESH	IRAN
ENDRESS+HAUSER	GERMANY / W. EUROPE
TOKYO KEISO	JAPAN
VEGA	GERMANY / W. EUROPE

**COMPANY NAME**

**ORIGIN**

**3.4.12- LEVEL SWITCH ( RADIOACTIVE TYPE )**

BERTHOLD TECHNOLOGIES	GERMANY
ENDRESS+HAUSER	GERMANY / W. EUROPE
OHMART	JAPAN / W. EUROPE
PANAMETRICS	JAPAN / W. EUROPE

**3.4.13- CONTROL VALVE ( GLOBE )**

ABB	GERMANY
ARCA REGLER	GERMANY
ARI-ARMATUREN ALBERT RICHTER GmbH & Co. KG	GERMANY
ASAHI	JAPAN
ATRONIC KISH	IRAN
BELLINO S.R.L	ITALY
BFS INCORPORATION	S. KOREA
BORNA SANAT TOOS	IRAN
BURKERT	GERMANY
CCI	SWITZERLAND
DRESSER	GERMANY / W. EUROPE
NIHON KOSO CO.	JAPAN
EMERSON	ITALY
FORBES MARSHALL PVT	INDIA
FLowsERVE CORPORATION	W. EUROPE
GREEN CONTROL	ITALY
KOMOTO	S. KOREA
KOPECS	S. KOREA
KSB	GERMANY
MANKENBERG	GERMANY
MASCOT VALVES PVT LTD	AUSTRALIA
MOTOYAMA	JAPAN
RASTA GROUP INDUSTRIAL VALVE Mfg & Dev.	IRAN
S&S VALVE	S. KOREA
SAMSON	GERMANY
SCHUF ARMATUREN & APPARATEBAU GmbH	GERMANY
SEVERN GLOCON/RASTA GROUP QESHM	UK / IRAN
SMART VALVES (Overseas Engineering AM Sàrl.)	SWITZERLAND
UNICON SYSTEM Co. LTD	S. KOREA
VECTOR & WELLHEADS ENGINEERING (VECTOR VALVES)	SPAIN
WEIR VALVE & CONTROL	UK
XOMOX	GERMANY / W. EUROPE
AZBIL GROUP (YAMATAKE)	JAPAN

**3.4.14- CONTROL VALVE ( BALL )**

ABB	GERMANY
ATRONIC KISH	IRAN
CCI	SWITZERLAND
DRESSER	W. EUROPE
EMERSON	UK / W. EUROPE
EUROMATIC	ITALY
FORBES MARSHALL PVT	INDIA
FLowsERVE CORPORATION	W. EUROPE

<i>COMPANY NAME</i>	<i>ORIGIN</i>
KITZ	GERMANY
KOMOTO	S. KOREA
KOPECS	S. KOREA
KTM ( KITAMUR )	JAPAN
METSO	FINLAND
NIHON KOSO CO.	JAPAN
NIHONDA	JAPAN
RASTA GROUP INDUSTRIAL VALVE Mfg & Dev.	IRAN
S&S VALVE	S. KOREA
SAMSON	GERMANY
VALTEK	UK / W. EUROPE
VECTOR & WELLHEADS ENGINEERING (VECTOR VALVES)	SPAIN
WEIR VALVE & CONTROL	UK

#### 3.4.15- CONTROL VALVE ( BUTTERFLY )

ABB	GERMANY
AZBIL GROUP (YAMATAKE)	JAPAN
EMERSON	UK / W. EUROPE
FORBES MARSHALL PVT	INDIA
GOLD	GERMANY
KITZ	GERMANY
KOMOTO	S. KOREA
METSO	FINLAND
MIRAB	IRAN
NIHON KOSO CO.	JAPAN
RASTA GROUP INDUSTRIAL VALVE Mfg & Dev.	IRAN
SAMSON	GERMANY
STRAHMAN VALVES FRANCE	FRANCE
SUNG DO VALVE	S. KOREA
TYCO	JAPAN / W. EUROPE
UNICON SYSTEM Co. LTD	S. KOREA
VECTOR & WELLHEADS ENGINEERING (VECTOR VALVES)	SPAIN
WEIR VALVE & CONTROL	UK
XOMOX	GERMANY / W. EUROPE

#### 3.4.16- CONTROL VALVE ( ECCENTRIC PLUG )

AZBIL GROUP (YAMATAKE)	JAPAN
DRESSER	UK / W. EUROPE
EMERSON	UK / W. EUROPE
FORBES MARSHALL PVT	INDIA
KOPECS	S. KOREA
METSO	FINLAND
NIHON KOSO CO.	JAPAN
S&S VALVE	S. KOREA
SAMSON	GERMANY
SCHUF ARMATUREN & APPARATEBAU GmbH	GERMANY
VECTOR & WELLHEADS ENGINEERING (VECTOR VALVES)	SPAIN
WEIR VALVE & CONTROL	UK

<i>COMPANY NAME</i>	<i>ORIGIN</i>
<b>3.4.17- CONTROL VALVE (ANGLE)</b>	
ARCA REGLER	GERMANY
BFS INCORPORATION	S. KOREA
BURKERT	GERMANY
CCI	SWITZERLAND
FLOWSERVE CORPORATION	W. EUROPE
FORBES MARSHALL PVT	INDIA
KOMOTO	S. KOREA
KOPECS	S. KOREA
NIHON KOSO CO.	JAPAN
RASTA GROUP INDUSTRIAL VALVE Mfg & Dev.	IRAN
S&S VALVE	S. KOREA
SCHUF ARMATUREN & APPARATEBAU GmbH	GERMANY
SMART VALVES (Overseas Engineering AM Sàrl.)	SWITZERLAND
VECTOR & WELLHEADS ENGINEERING (VECTOR VALVES)	SPAIN

<b>3.4.18- CONTROL VALVE (3 WAY)</b>	
ARCA REGLER	GERMANY
ARI-ARMATUREN ALBERT RICHTER GmbH & Co. KG	GERMANY
BFS INCORPORATION	S. KOREA
CCI	SWITZERLAND
EMERSON	UK / W. EUROPE
FORBES MARSHALL PVT	INDIA
KOMOTO	S. KOREA
KOPECS	S. KOREA
KTM	JAPAN
NIHON KOSO CO.	JAPAN
RASTA GROUP INDUSTRIAL VALVE Mfg & Dev.	IRAN
S&S VALVE	S. KOREA
SAMSON	GERMANY
SCHUF ARMATUREN & APPARATEBAU GmbH	GERMANY
SMART VALVES (Overseas Engineering AM Sàrl.)	SWITZERLAND
UNICON SYSTEM Co. LTD	S. KOREA
VECTOR & WELLHEADS ENGINEERING (VECTOR VALVES)	SPAIN
WEIR VALVE & CONTROL	UK

<b>3.4.19- CONTROL VALVE (NEEDLE VALVE)</b>	
AZBIL GROUP (YAMATAKE)	JAPAN
DRESSER	UK / W. EUROPE
EMERSON	UK / W. EUROPE
FORBES MARSHALL PVT	INDIA
KOMOTO	S. KOREA
NIHON KOSO CO.	JAPAN
RASTA GROUP INDUSTRIAL VALVE Mfg & Dev.	IRAN
VECTOR & WELLHEADS ENGINEERING (VECTOR VALVES)	SPAIN
WEIR VALVE & CONTROL	UK

<i>COMPANY NAME</i>	<i>ORIGIN</i>
<b>3.4.20- DIAPHRAGM TYPE CONTROL VALVE</b>	
ASAHI	JAPAN
KITAMURA	JAPAN
NDV	JAPAN
NIHON KOSO CO.	JAPAN
NIPPON DAIYA	JAPAN
RASTA GROUP INDUSTRIAL VALVE Mfg & Dev.	IRAN
SAUNDRES	UK / W. EUROPE
VECTOR & WELLHEADS ENGINEERING (VECTOR VALVES)	SPAIN
WEIR VALVE & CONTROL	UK

<b>3.4.21- CONTROL VALVE POSITIONER</b>	
ABB	GERMANY
ARCA REGLER	GERMANY
AZBIL GROUP (YAMATAKE)	JAPAN / W. EUROPE
BURKERT	GERMANY
CCI	SWITZERLAND
EMERSON	JAPAN / W. EUROPE
HONEYWELL	GERMANY
METSO	FINLAND
NIHON KOSO CO.	JAPAN
RASTA GROUP INDUSTRIAL VALVE Mfg & Dev.	IRAN
SAMSON	GERMANY
SMAR	BRAZIL
YOKOGAWA	JAPAN / W. EUROPE

<b>3.4.22- I/P, P/I &amp; F/P CONVERTOR</b>	
ARCA REGLER	GERMANY
ABB	GERMANY
EMERSON	UK / FRANCE
FOXBORO	USA / W. EUROPE
HONEYWELL	GERMANY
KROHNE MESSTECHNIK GmbH (KROHNE)	GERMANY
NIHON KOSO CO.	JAPAN
SMAR	BRAZIL

<b>3.4.23- MOTOR OPERATED VALVE</b>	
AMPO S.COOP. (POYAM VALVES)	SPAIN
ARI-ARMATUREN ALBERT RICHTER GmbH & Co. KG	GERMANY
BRAY CONTROLS	UK
FORBES MARSHALL PVT	INDIA
L.BERNARD	FRANCE
LIMITORQUE	UK
MALBRANQUE (VALCO GROUP)	FRANCE
NIHON KOSO CO.	JAPAN
ROTORK	UK
S&S VALVE	S. KOREA
SCHUF ARMATUREN & APPARATEBAU GmbH	GERMANY
SHIMADZU SEIASKUSHO	JAPAN
TARAHANE TAJHIZAT SANATI PISHGAM	IRAN

<i>COMPANY NAME</i>	<i>ORIGIN</i>
<b>3.4.24- PRESSURE SELF REGULATING VALVE</b>	
ARI-ARMATUREN ALBERT RICHTER GmbH & Co. KG	GERMANY
BEHBOOD FARAYAND RADMAN	IRAN
EMERSON	W. EUROPE
EYVAZ TECHNIC	IRAN
FORBES MARSHALL PVT	INDIA
KOPECS	S. KOREA
MANKENBERG	GERMANY
PRESSURE TECH LTD	UK
RASTA GROUP INDUSTRIAL VALVE Mfg & Dev.	IRAN
SAMSON	GERMANY
UNICON SYSTEM Co. LTD	S. KOREA

<b>3.4.25- TEMPERATURE SELF REGULATING VALVE</b>	
ARI-ARMATUREN ALBERT RICHTER GmbH & Co. KG	GERMANY
DUNFOSS	DENMARK
EYVAZ TECHNIC	IRAN
FORBES MARSHALL PVT	INDIA
SAMSON	GERMANY

<b>3.4.26- DESUPER HEATER</b>	
ARCA REGLER	GERMANY
BFS INCORPORATION	S. KOREA
CCI / BTG	SWITZERLAND
COPECS VULCAN	UK
FORBES MARSHALL PVT	INDIA
GADELIUS	JAPAN
GREEN CONTROL	ITALY
HOPKINSON	UK
KIEKENS	THE NETHERLANDS
KOMOTO	S. KOREA
KOPECS	S. KOREA
NIHON KOSO CO.	JAPAN
S&S VALVE	S. KOREA
SMART VALVES (Overseas Engineering AM Sàrl.)	SWITZERLAND
TEC ARTEC GMBH	GERMANY
UNICON SYSTEM Co. LTD	S. KOREA
YAR WAY	JAPAN

<b>3.4.27- SAFETY VALVE</b>	
ARI-ARMATUREN ALBERT RICHTER GmbH & Co. KG	GERMANY
FARAVAR AZIN FELEZ	IRAN
AST	ITALY
BOPP & REUTHER	GERMANY
BEHBOOD FARAYAND RADMAN	IRAN
CROSBY	UK
DRESSER	GERMANY
FARRIS	UK
FUKUI	JAPAN
LESER	GERMANY
S&S VALVE	S. KOREA
SAPAG	FRANCE
SEREG	FRANCE
TAI MILANO	ITALY

**COMPANY NAME** **ORIGIN**

**3.4.28- DELETED**

**3.4.29- DELETED**

**3.4.30- EMERGENCY VENT VALVE**

BS & B	UK
ELFAB HUGHES	UK
FIKE	THE NETHERLANDS
FUKADA	JAPAN
HITACHI	JAPAN
LAMOT	W. EUROPE
SIEMENS	GERMANY

**3.4.31- DELUGE VALVE**

CHUB	UK
PREUSSAG	GERMANY
SILVANI	ITALY

**3.4.32- ON / OFF VALVE ( BALL )**

ACT	FRANCE
AMPO S.COOP. (POYAM VALVES)	SPAIN
ATRONIC KISH	IRAN
BFS INCORPORATION	S. KOREA
DE - YONG KOHEN	FRANCE
FORBES MARSHALL PVT	INDIA
FLOW CONTROL TECHNOLOGY	FRANCE
FLowsERVE ARGUS	GERMANY
GRINELL	W. EUROPE
KITZ	GERMANY
KOMOTO	S. KOREA
KOPECS	S. KOREA
KSB	GERMANY
KTM	JAPAN
METSO	FINLAND
NIHON KOSO CO.	JAPAN
NIPPON	JAPAN
PEKOS VALVE	SPAIN
RASTA GROUP INDUSTRIAL VALVE Mfg & Dev.	IRAN
S&S VALVE	S. KOREA
SALARI	FRANCE
SCHUF ARMATUREN & APPARATEBAU GmbH	GERMANY
TARAHANE TAJHIZAT SANATI PISHGAM	IRAN
TYCO	JAPAN
WEIR VALVE & CONTROL	UK

**3.4.33- ON / OFF VALVE ( BUTTERFLY )**

AMPO S.COOP. (POYAM VALVES)	SPAIN
BFS INCORPORATION	S. KOREA
DRESSER	UK / W. EUROPE
ERBO	IRAN
FORBES MARSHALL PVT	INDIA

<i>COMPANY NAME</i>	<i>ORIGIN</i>
GOLD	GERMANY
KOMOTO	S. KOREA
METSO	FINLAND
MIRAB	IRAN
MOTOYAMA	JAPAN
NIHON KOSO CO.	JAPAN
RASTA GROUP INDUSTRIAL VALVE Mfg & Dev.	IRAN
SAMSON	GERMANY
STRAHMAN VALVES FRANCE	FRANCE
SUNG DO VALVE	S. KOREA
TOMOE VALVE	JAPAN
TYCO	JAPAN
UNICON SYSTEM Co. LTD	S. KOREA
WEIR VALVE & CONTROL	UK

#### 3.4.34- ON / OFF VALVE ( ANGLE )

ABB	W. EUROPE
AMPO S.COOP. (POYAM VALVES)	SPAIN
DRESSER	UK / W. EUROPE
EMERSON	UK / W. EUROPE
FORBES MARSHALL PVT	INDIA
GREEN CONTROL	ITALY
KTM	JAPAN
MALBRANQUE (VALCO GROUP)	FRANCE
METSO	FINLAND
NIHON KOSO CO.	JAPAN
S&S VALVE	S. KOREA
SAMSON	GERMANY
TYCO	JAPAN
WEIR VALVE & CONTROL	UK
AZBIL GROUP (YAMATAKE)	JAPAN

#### 3.4.35- ON / OFF VALVE ( GATE )

AMPO S.COOP. (POYAM VALVES)	SPAIN
ASAHI	JAPAN
FORBES MARSHALL PVT	INDIA
GREEN CONTROL	ITALY
KOPECS	S. KOREA
MALBRANQUE (VALCO GROUP)	FRANCE
MIRAB	IRAN
MOTOYAMA	JAPAN
NIHON KOSO CO.	JAPAN
S&S VALVE	S. KOREA
TASISAT BOKHARE ESFAHAN	IRAN
WEIR VALVE & CONTROL	UK



**COMPANY NAME**

**ORIGIN**

**3.4.36- BOTTOM TANK VALVE**

GUICHON (VALCO GROUP)	FRANCE
KOMOTO	S. KOREA
RITAGE	GERMANY
SCHUF ARMATUREN & APPARATEBAU GmbH	GERMANY
STRAHMAN VALVES FRANCE	FRANCE

**3.4.37- PISTON TYPE ACTUATOR**

ABB	W. EUROPE
ARCA REGLER	GERMANY
BETTIS	CANADA
BFS INCORPORATION	S. KOREA
BIFFI	W. EUROPE
BORNA SANAT TOOS	IRAN
BRAY CONTROLS	UK
DVG AUTOMATION S.P.A	ITALY
EL-O-MATIC	UK
FASEK	GERMANY
FORBES MARSHALL PVT	INDIA
GUICHON (VALCO GROUP)	FRANCE
KOMOTO	S. KOREA
KOPECS	S. KOREA
LIMITORQUE	UK / W. EUROPE
MALBRANQUE (VALCO GROUP)	FRANCE
METSO	FINLAND
NIHON KOSO CO.	JAPAN
RASTA GROUP INDUSTRIAL VALVE Mfg & Dev.	IRAN
ROTORK	UK
S&S VALVE	S. KOREA
SERVOVALVE	ITALY
SMART VALVES (Overseas Engineering AM Sàrl.)	SWITZERLAND
STRAHMAN VALVES FRANCE	FRANCE
SUNG DO VALVE	S. KOREA
TYCO	JAPAN
UNICON SYSTEM Co. LTD	S. KOREA
VECTOR & WELLHEADS ENGINEERING (VECTOR VALVES)	SPAIN

**3.4.38- ELECTRICAL ACTUATOR**

ARI-ARMATUREN ALBERT RICHTER GmbH & Co. KG	GERMANY
AUMA	GERMANY
BRAY CONTROLS	UK
DVG AUTOMATION S.P.A	ITALY
FASEK	GERMANY
L.BERNARD	FRANCE
NIHON KOSO CO.	JAPAN

<i>COMPANY NAME</i>	<i>ORIGIN</i>
<b>3.4.39- FILTER REGULATOR</b>	
ARCA REGLER	GERMANY
AZBIL GROUP (YAMATAKE)	JAPAN
DRESSER	UK / W. EUROPE
DRUVA	GERMANY
EMERSON	UK / W. EUROPE
NIHON KOSO CO.	JAPAN
PARKER	UK
PARS REGULATOR	IRAN
PETROVALVE	ITALY
RASTA GROUP INDUSTRIAL VALVE Mfg & Dev.	IRAN
SAMSON	GERMANY
SANAYE HAVAYE FESHORDEH	IRAN
SHOKETSU	JAPAN
TYCO	JAPAN
<b>3.4.40- SOLENOID VALVE</b>	
ALPHA	ITALY
ASCO / JOUCOMATIC	GERMANY / W. EUROPE
BINDURGE	ITALY
BOSCH	GERMANY
BURKERT	GERMANY
FESTO	GERMANY
HERION	GERMANY
PARKER	UK / JAPAN
REX - ROTH	GERMANY
THOMPSON VALVE	UK
<b>3.4.41- PROXIMITY SWITCH</b>	
TABRIZ PEJOUH	IRAN
ASCO	GERMANY
AUTONIC	S. KOREA
FESTO	GERMANY
HONEY WELL	BELGIUM
IFM ELECTRONICS	GERMANY
OMRON	JAPAN
PEPPERL+ FUCHS	GERMANY
<b>3.4.42- PIG DETECTOR</b>	
SAVAY	IRAN
EMERSON	W. EUROPE
CLAMP ON	NORWAY
<b>3.4.43- VALVE LOCKING DEVICE</b>	
CAMERON FRANCE SA	FRANCE
FLOWSERVE AHAUS GMBH	GERMANY
VOMOX INTL GMBH	GERMANY
SMITH FLOW CONTROL	UK
WEIR VALVES & CONTROLS	UK

<i>COMPANY NAME</i>	<i>ORIGIN</i>
<b>3.4.44- N2 BLANKETING SYSTEM</b>	
EMERSON	UK / FRANCE
MANKENBERG	GERMANY
PREUSSAG	GERMANY
SAVAL	THE NETHERLANDS
<b>3.4.45- MASS FLOWMETER ( CORIOLIS TYPE )</b>	
BOPP & REUTHER	GERMANY
EMERSON	UK
ENDRESS+HAUSER	GERMANY
HONEYWELL	W. EUROPE
KROHNE MESSSTECHNIK GmbH (KROHNE)	GERMANY
KOBOLD	W. EUROPE
OVAL	JAPAN
YOKOGAWA	JAPAN
<b>3.4.46- MASS FLOWMETER ( THERMAL TYPE )</b>	
BAILEY	UK
EMERSON	JAPAN / THE NETHERLANDS
ENDRESS+HAUSER	GERMANY
KOBOLD	W. EUROPE
<b>3.4.47- ULTRASONIC FLOWMETER</b>	
<b>3.4.47.1- ULTRASONIC FLOWMETER (LIQUID)</b>	
FAURE HERMAN	FRANCE
EMERSON	W. EUROPE
ENDRESS+HAUSER	GERMANY
FUJI	JAPAN
KROHNE MESSSTECHNIK GmbH (KROHNE)	GERMANY
VEGA	GERMANY
YOKOGAWA	JAPAN / W. EUROPE
<b>3.4.47.2- ULTRASONIC FLOWMETER (GAS)</b>	
EMERSON	W. EUROPE
ENDRESS+HAUSER	GERMANY
FUJI	JAPAN
INSTRUMENT	THE NETHERLANDS
SICK	GERMANY
KROHNE MESSSTECHNIK GmbH (KROHNE)	GERMANY
VEGA	GERMANY
YOKOGAWA	JAPAN / W. EUROPE
<b>3.4.47.3- FLOW COMPUTER</b>	
EMERSON	UK
ENDRESS+HAUSER	GERMANY
FLUIDWELL BV	THE NETHERLANDS
HONEYWELL / ELSTER	GERMANY
KROHNE MESSSTECHNIK GmbH (KROHNE)	GERMANY
OVAL	JAPAN
YOKOGAWA	JAPAN
SPRIT IT	THE NETHERLANDS

<i>COMPANY NAME</i>	<i>ORIGIN</i>
<b>3.4.48- MAGNETIC FLOWMETER</b>	
AZBIL GROUP (YAMATAKE)	JAPAN
BOPP & REUTHER	GERMANY
EMERSON	UK / FRANCE
ENDRESS-HAUSER	GERMANY
FUJI	JAPAN / FRANCE
KROHNE MESSTECHNIK GmbH (KROHNE)	GERMANY
KOBOLD	W. EUROPE
SIEMENS	GERMANY
YOKOGAWA	JAPAN
<b>3.4.49- VORTEX FLOWMETER</b>	
BOPP & REUTHER	GERMANY
DELTA CONTROLS	UK
EMERSON	UK / FRANCE
HONTZSCH	GERMANY
KROHNE MESSTECHNIK GmbH (KROHNE)	GERMANY
OVAL	JAPAN
YOKOGAWA	JAPAN
<b>3.4.50- POSITIVE DISPLACEMENT METER</b>	
AUSTRIA	ITALY
AZBIL GROUP (YAMATAKE)	JAPAN
BOPP & REUTHER	GERMANY
EMERSON	UK / FRANCE
OVAL	JAPAN
SIEMENS	GERMANY
SMITH	UK
<b>3.4.51- TURBINE METER</b>	
ABFAR ( For Water )	IRAN
AUSTRIA	ITALY
BOPP & REUTHER	GERMANY
EMERSON	UK / FRANCE
FAURE HERMAN	FRANCE
OVAL	JAPAN
SCHLUMBERGER	FRANCE
SMITH	UK
<b>3.4.52- ROTAMETER</b>	
AZMOON MOTAMAM	IRAN
BOPP & REUTHER	GERMANY
DOHKITA	JAPAN
EMERSON	UK / FRANCE
KOBOLD	W. EUROPE
KROHNE MESSTECHNIK GmbH (KROHNE)	GERMANY
TOKYO KEIYISO	JAPAN
RYUKAI	JAPAN
OFFICINE OROBICHE	ITALY
YOKOGAWA	JAPAN

**COMPANY NAME** **ORIGIN**

**3.4.53- BULK FLOWMETER**

BERTHOLD TECHNOLOGIES	GERMANY
MILLTRONICS	GERMANY
ZENNER	GERMANY

**3.4.54- FLOW SWITCH**

OFFICINE OROBICHE	ITALY
DELTA CONTROLS	UK
ENDRESS+HAUSER	GERMANY
EMERSON	UK / FRANCE
KOBOLD	GERMANY
KROHNE MESSTECHNIK GmbH (KROHNE)	GERMANY
MAGNETROL	W. EUROPE

**3.4.55- ORIFICE PLATE**

AZMOON MOTAMAM	IRAN
PARS JAHD	IRAN
PETRO DEGHAAT PART	IRAN
SANGAN SANAT	IRAN
SINA CONTROL	IRAN
EISPA	SPAIN
EMERSON	UK / FRANCE
EUROMISURE (WIKA GROUP)	ITALY
KROHNE MESSTECHNIK GmbH (KROHNE)	GERMANY
OKAZAKI	JAPAN
TERCOM	ITALY

\* For custody transfer applications and the same by Iranian Vendors, Refer to "Office of Supervision on Oil Exports" List. ([www.mop.ir](http://www.mop.ir))

**3.4.56- VENTURI TUBE AND NOZZLE**

BARTHEL	GERMANY
EMERSON	UK / FRANCE
EUROMISURE (WIKA GROUP)	ITALY
PARS JAHD	IRAN
SINA CONTROL	IRAN
TECNOMATIC	ITALY

**3.4.57- ANNUBAR**

AZMOON MOTAMAM	IRAN
PARS JAHD	IRAN
ABB	W. EUROPE
BUSH BEACH ENGINEERING	UK
EMERSON	UK / FRANCE
SPRIANO	ITALY
TERCOM	ITALY
YOKOGAWA	JAPAN

COMPANY NAME	ORIGIN
<b>3.4.58- PRESSURE &amp; TEMPERATURE GAUGE</b>	
ASHCROFT	UK
BADOTHERM	THE NETHERLANDS
BOURDON	FRANCE
DELTA CONTROLS	UK
ELFAB HUGHES	UK
ETTORE CELLA (Part Of Wika GROUP)	ITALY
FARAYAND LAKSAR / RUEGER	IRAN / SWITZERLAND
FORBES MARSHALL PVT	INDIA
NOUVA FIMA	ITALY
PARS JAHD	IRAN
REGULATEURS GEORGIN (GEORGIN)	FRANCE
SANGAN SANAT	IRAN
SCHMIERER PARS / SCHMIERER	IRAN / GERMANY
SPRIANO	ITALY
STEWARTS	UK
WIKA ALEXANDER WIEGAND SE & CO. KG (WIKA GROUP)	GERMANY

<b>3.4.59- PRESS. &amp; TEMP SWITCH</b>	
KELIDHAYE AUTOMATIC	IRAN
ASHCROFT	UK
BETA	THE NETHERLANDS
ETTORE CELLA (Part Of Wika GROUP)	ITALY
DELTA CONTROLS	UK
HERION	GERMANY
KROHNE MESSTECHNIK GmbH (KROHNE)	GERMANY
REGULATEURS GEORGIN (GEORGIN)	FRANCE
UNITED ELECTRIC	W. EUROPE
WIEGAND	GERMANY

<b>3.4.60- PRESS. &amp; DIFFERENTIAL PRESS. TRANSMITTER</b>	
ABB	W. EUROPE
AZBIL GROUP (YAMATAKE)	JAPAN
DELTA CONTROLS	UK
EMERSON	UK / FRANCE
ENDRESS+HAUSER	GERMANY
FUJI	JAPAN
HONEYWELL	BELGIUM
KROHNE MESSTECHNIK GmbH (KROHNE)	GERMANY
PARS ELECTRONIC KISH ( <i>WITHOUT SIL CERTIFICATE</i> )	IRAN
PARS JAHD	IRAN
REGULATEURS GEORGIN (GEORGIN)	FRANCE
SAKURA ENDRESS	JAPAN
SIEMENS	GERMANY
SMAR	BRAZIL
SPRIANO	ITALY
WIKA ALEXANDER WIEGAND SE & CO. KG (WIKA GROUP)	GERMANY
YOKOGAWA	JAPAN

<i>COMPANY NAME</i>	<i>ORIGIN</i>
ATBIN	IRAN
DELTA CONTROLS	UK
EISPA	SPAIN
EMERSON	UK / FRANCE
ENDRESS+HAUSER	GERMANY
EUROMISURE (WIKA GROUP)	ITALY
FARAYAND LAKSAR / RUEGER	IRAN / SWITZERLAND
FUJI	JAPAN
INT S.R.L	ITALY
KROHNE MESSTECHNIK GmbH (KROHNE)	GERMANY
NAGANO	JAPAN
NILGATA	JAPAN
PARS JAHD	IRAN
REGULATEURS GEORGIN (GEORGIN)	FRANCE
SINA PARDAZ APADANA (SIPNACO)	IRAN
THERMO ELECTRIC	UK
THERMOEST	FRANCE
WIKA ALEXANDER WIEGAND SE & CO. KG (WIKA GROUP)	GERMANY

#### 3.4.62- TEMPERATURE TRANSMITTER

ABB	W. EUROPE
AZBIL GROUP (YAMATAKE)	JAPAN
DELTA CONTROLS	UK
EMERSON	UK / FRANCE
ENDRESS+HAUSER	GERMANY
FLUIDWELL BV	THE NETHERLANDS
FOXBORO	UK
FUJI	JAPAN
HONEYWELL	BELGIUM
KROHNE MESSTECHNIK GmbH (KROHNE)	GERMANY
PARS ELECTRONIC KISH ( <i>WITHOUT SIL CERTIFICATE</i> )	IRAN
PARS JAHD	IRAN
REGULATEURS GEORGIN (GEORGIN)	FRANCE
SAKURA ENDRESS	JAPAN
SIEMENS	GERMANY
SMAR	BRAZIL
SPRIANO	ITALY
WIKA ALEXANDER WIEGAND SE & CO. KG (WIKA GROUP)	GERMANY
YOKOGAWA	JAPAN

#### 3.4.63- FIELD INDICATOR

BEKA	GERMANY
ENDRESS+HAUSER	GERMANY
FLUIDWELL BV	THE NETHERLANDS
REGULATEURS GEORGIN (GEORGIN)	FRANCE
PEPPERL+FUCHS	GERMANY
SMAR	BRAZIL
VEGA	GERMANY

<i>COMPANY NAME</i>	<i>ORIGIN</i>
<b>3.4.64- JUNCTION BOX</b>	
<b>3.4.64.1- EX. - JUNCTION BOX</b>	
CHALMIT	UK
COPER CROUSE-HINDS (CEAG)	GERMANY
CORTEM SPA	ITALY
DARIAN ELECTRIC & UTILITIES CO.	IRAN
HAWKE	UK
MACHIN SAZI SHOMAL (PIROOZ)	IRAN
NUOVA	ITALY
ROSE SYSTEMTECHNIK GmbH	GERMANY
SABER	ITALY
SCAME PARRE	ITALY
STAHL	GERMANY
<b>3.4.64.2- INDUSTRIAL - JUNCTION BOX</b>	
IMAN AFZAR	IRAN
MACHIN SAZI SHOMAL (PIROOZ)	IRAN
NOOR MEHVAR FARS	IRAN
PAJOHAN SANAT PARS	IRAN
ROSE SYSTEMTECHNIK GmbH	GERMANY
SCAME PARRE	ITALY
<b>3.4.65- CABLE GLAND</b>	
DARIAN ELECTRIC & UTILITIES CO.	IRAN
MACHIN SAZI SHOMAL (PIROOZ)	IRAN
BICC	UK
HAWKE	UK
NUOVA	ITALY
STAHL	GERMANY
<b>3.4.66- INSTRUMENT CABLE</b>	
AEG	GERMANY
BICC	UK
CABLE DE LYON	FRANCE
KABL KERMAN & KAVIYAN	IRAN
KABL SAZI IRAN	IRAN
KABL SAZI TAK	IRAN
KABLE ALBORZ	IRAN
KABLE SHAHIN	IRAN
LEONI KERPEN	GERMANY
NEXANS ( ALCATEL )	FRANCE
SIEMENS	GERMANY
SIM VA KABL ABHAR	IRAN
SIM VA KABL MOGHAN	IRAN
SIMBAF	IRAN
SIMCO	IRAN
SINA CABLE CO. (Only Analogue & Digital Cable)	IRAN
ZARSIM	IRAN



*COMPANY NAME* *ORIGIN*

**3.4.67- CABLE TRAY / LADDER**

AHWAZ FANOUS	IRAN
AJINEH	IRAN
FARAMIN TABLO	IRAN
PAJOHAN SANAT PARS	IRAN
PANJTASH	IRAN
SATHA	IRAN
TOSEH SANAYE PETRO FOOLADE GHARB	IRAN
VANASHID	IRAN
YEKTA	IRAN

**3.4.68- INSTRUMENT VALVE**

ARMATURENFABRIK FRANZ SCHNEIDER (AS-SCHNEIDER)	GERMANY
ASTAVA	THE NETHERLANDS
BULK	ITALY
DELTA CONTROLS	UK
DK-LOK CORPORATION	S. KOREA
EMERSON	UK / FRANCE
HSME CORPORATION	S. KOREA
INDRA S.R.L	ITALY
KEYSTONE	UK
MACHIN SAZI NEEV	IRAN
MET LOK (KISH)	IRAN
OLIVER VALVE	W. EUROPE
PARKER	UK
PARS JAHD	IRAN
REGULATEURS GEORGIN (GEORGIN)	FRANCE
SUPERLOK (BMT CO. LTD)	S. KOREA
VIMEC	W. EUROPE

**3.4.69- INSTRUMENT PIPE & FITTING**

ESFAHAN MAYSAM	IRAN
FOOLAD ASA	IRAN
GHARB FLANGE	IRAN
GOROOH SANATI SADID	IRAN
LOOLE SAZI KHOZESTAN	IRAN
LOOLE VA PROFILE SAVEH	IRAN
NAVARD LOOLE AHWAZ	IRAN
SEPAHAN	IRAN
SEPENTA	IRAN
TOOS PAYVAND	IRAN
VOG IRAN	IRAN
BASSI LUIGI	ITALY
CAPEX	CANADA
CAPITAL VALVE	UK
COPROSIDER	ITALY
DALMINE	SWEDEN
DEL CORTE	FRANCE
ICARUS	BELGIUM

<i>COMPANY NAME</i>	<i>ORIGIN</i>
IML	ITALY
INTERMETAL	FRANCE / UK
KOBE STEEL	JAPAN
KURVERS	GERMANY / FRANCE
LUEBECK	THE NETHERLANDS
MANNESMAN HANDLE	GERMANY
MID STEEL PIPELINE	UK
PHOCEEENNE	FRANCE / BELGIUM
SANDVIK	SWEDEN
SIDERINT	UK
STAAHL HANDEL	GERMANY / THE NETHERLANDS
STRAVAL	FRANCE
NIPPON STEEL & SUMITOMO METAL CORPORATION (NSSMC)	JAPAN
TAD	ITALY
TECTUBI	ITALY / FRANCE
VAN LEEUWEN	THE NETHERLANDS / BELGIUM

### 3.4.70- INSTRUMENT TUBE & FITTING

AJIR	IRAN
ALL METAL	IRAN
ASTAVA	THE NETHERLANDS
BULK	ITALY
CAPITAL VALVE	UK
DK-LOK CORPORATION	S. KOREA
FESTO	GERMANY
FITOK	USA
GYROLOCK	UK
HANSUN ENGINEERING	S. KOREA
HOKE	UK
HSME CORPORATION	S. KOREA
INDRA S.R.L	ITALY
JANDUIC	ITALY
KEON SAE HIGH PRESSURE	S. KOREA
LOOLEHAYE DAGHIGHE KAVEH	IRAN
MACHIN SAZI NEEV	IRAN
MANNESMAN	GERMANY
MET LOK (KISH)	IRAN
MID STEEL PIPELINE	UK
PARKER	UK
PARS REGULATOR	IRAN
ROTAREX	LUXEMBURG
SAMI INSTRUMENTS	ITALY
SANAYE HAVAYE FESHORDEH	IRAN
SUPERLOK (BMT CO. LTD)	S. KOREA
SWAGELOCK	GERMANY
TOOS PEYVAND	IRAN / UK

	<i>COMPANY NAME</i>	<i>ORIGIN</i>
<b>3.4.71- SPECIAL VALVES</b>		
	GUICHON (VALCO GROUP)	FRANCE
	SCHUF ARMATUREN & APPARATEBAU GmbH	GERMANY
	STRAHMAN VALVES FRANCE	FRANCE
<b>3.4.72- INSTRUMENT PROTECTION ENCLOSURE</b>		
	INTERTEC-HESS	GERMANY
<b>3.4.73- DECOCK &amp; CRACKED GAS VALVE</b>		
	STRAHMAN VALVES FRANCE	FRANCE

# **TELECOMMUNICATION**

## **4. TELECOMMUNICATION**

### **4. TELECOMMUNICATION**

#### **4.1- TRANSMISSION SYSTEM & ACCESSORIES**

- 4.1.1- FIBER OPTIC & CABLE ACCESSORIES
- 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
- 4.2.2- SWITCH SYSTEM

#### **4.3- RADIO SYSTEM & INTEGRATOR**

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

#### **4.4- INTERCOM PAGING/PUBLIC ADDRESS & INTEGRATOR**

- 4.4.1- INTERCOM PAGING/PUBLIC ADDRESS INTEGRATOR
- 4.4.2- INDUSTRIAL
- 4.4.3- NON INDUSTRIAL
- 4.4.4- CONFERENCE SYSTEM
- 4.4.5- 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

#### **4.7- NETWORK SWITCH**

COMPANY NAME

ORIGIN

4.1- TRANSMISSION SYSTEM & ACCESSORIES

4.1.1- FIBER OPTIC CABLE & ACCESSORIES

KABLE RAFSANJAN	IRAN
KABLE SHAHID QANDI YAZD	IRAN
ALCATEL	FRANCE
BELDEN	FRANCE / UK / GERMANY
BRUGG	SWITZERLAND
FUJIKURA	JAPAN
N.K.F.	THE NETHERLANDS
PIRELLI	ITALY
R & M	SWITZERLAND
SIEMENS	GERMANY

4.1.2- COPPER CABLE

KABL SAZI IRAN	IRAN
KABLE ABHAR	IRAN
KABLE ALBORZ	IRAN
KABLE KERMAN	IRAN
KABLE RAFSANJAN	IRAN
KABLE SHAHID QANDI YAZD	IRAN
MOGHAN CABLE	IRAN
OFOGHE ALBORZ CABLE	IRAN
SIMBAF	IRAN
KABLE SINA	IRAN
SIM VA CABLE MASHAD	IRAN
TAK CABLE	IRAN

4.1.3- TRANSMISSION EQUIPMENT & ACCESSORIES

4.1.3.1- OPTICAL BASED SYSTEM

PARSTEL	IRAN
ERICSSON	SWEDEN

4.1.3.2- SDH SYSTEM

ERICSSON	SWEDEN
MITEL	CANADA
NEC GROUP	JAPAN

4.1.3.3- COPPER WIRE BASED SYSTEM

PARSTEL	IRAN
TELLMAR	IRAN
ERICSSON	SWEDEN
NEC GROUP	JAPAN
SIEMENS	GERMANY

**COMPANY NAME**

**ORIGIN**

**4.1.3.4- RADIO BASED SYSTEM**

PARSTEL	IRAN
TELLMAR	IRAN
ERICSSON	SWEDEN
NEC GROUP	JAPAN
SIEMENS	GERMANY

**4.1.4- PULSE CODE MODULATION (PCM) SYSTEM**

SANAYE ERTEBATI PAYA	IRAN
SANAYE GHATAATE ELECTRONIC	IRAN

**4.1.5- COMMUNICATION TOWER STRUCTURE**

ANTEN KAR	IRAN
AVANGAN	IRAN
GORD ASIA	IRAN
MICRO MOJ	IRAN
SAEDANE SANAT	IRAN
SANAYE BONYAD POSHESH	IRAN
SANAYE ERTEBATI ZAEIM	IRAN
SANAYE MOKHABERATI ( SA IRAN )	IRAN
SANAYE MOKHABERATI IRAN ( ITMC )	IRAN
TAKTA	IRAN
ANDREW SRL	ITALY
TAIT	NEW ZEALAND

**4.2- SWITCH SYSTEM & INTEGRATOR**

**4.2.1- SWITCH SYSTEM INTEGRATOR**

TELEFONSAZAN YAZD	IRAN
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**4.2.2- SWITCH SYSTEM**

DIGITRON	IRAN
KARA TELEPHONE	IRAN
PARS TELEPHONE KAR	IRAN
SANAYE ERTEBATI IRAN	IRAN
SANAYE ERTEBATI PAYA (KARIN)	IRAN
SANAYE ERTEBATI RAHE DOOR	IRAN
SANAYE MOKHABERATI ( SA IRAN )	IRAN
SANAYE MOKHABERATI IRAN ( ITMC )	IRAN
ALCATEL	FRANCE
ERICSSON	SWEDEN
MITEL	CANADA
NEC GROUP	JAPAN
PANASONIC	JAPAN
SIEMENS	GERMANY
TRANSTEL	UK

**COMPANY NAME**

**ORIGIN**

**4.3- RADIO SYSTEM & INTEGRATOR**

**4.3.1- RADIO SYSTEM INTEGRATOR**

SANAYE ERTEBATI RAHE DOOR	IRAN
SANAYE ERTEBATI ZAEIM	IRAN
SANAYE MOKHABERATI ( SA IRAN )	IRAN

**4.3.2- FIXED SYSTEM**

TO BE ADVISED LATER.

**4.3.3- MOBILE SYSTEM**

ALCATEL	FRANCE
ERICSSON	SWEDEN
MOTOROLA	UK / JAPAN
NOKIA	FINLAND
TAIT	NEW ZEALAND

**4.3.4- HAND SET SYSTEM**

ALCATEL	FRANCE
ERICSSON	SWEDEN
FUJITSU	JAPAN
MARCONI	UK
MOTOROLA*	UK / JAPAN
NEC GROUP	JAPAN
NOKIA	FINLAND
NTT DOCOMO	JAPAN
OTE*	ITALY
SIAE	ITALY
SIEMENS	GERMANY
TAIT*	NEW ZEALAND

\* VENDORS PRODUCING INTRINSICALLY SAFE SET AS WELL AS NORMAL SET.

**4.3.5- REPEATER SYSTEM**

SANAYE ERTEBATI RAHE DOOR ( ITI )	IRAN
SANAYE ERTEBATI ZAEIM	IRAN
SANAYE MOKHABERATI ( SA IRAN )	IRAN
ALCATEL	FRANCE
ERICSSON	SWEDEN
MARCONI	UK / ITALY
MEGATEL	CANADA
MOTOROLA	UK / JAPAN
OTE	ITALY
ROHDE & SCHWARZ	GERMANY
ROHILL	THE NETHERLANDS



**COMPANY NAME**

**ORIGIN**

**4.4- INTERCOM PAGING/PUBLIC ADDRESS & INTEGRATOR**

**4.4.1- INTERCOM PAGING/PUBLIC ADDRESS INTEGRATOR**

ECHOCHANG	IRAN
HORAND	IRAN
MAZDAK	IRAN
SARIAK	IRAN

**4.4.2- INDUSTRIAL**

INDUSTRONIC	GERMANY
IWATSU	JAPAN
NEUMANN	GERMANY

**4.4.3- NON INDUSTRIAL**

MAZDAK	IRAN
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**4.4.4- CONFERENCE SYSTEM**

HORAND	IRAN
PANASONIC	JAPAN
PHILIPS	THE NETHERLANDS
SONY	JAPAN
TELEVIC	SWITZERLAND

**4.4.5- EXPLOSION PROOF**

INDUSTRONIC	GERMANY
INTEL	ITALY
IWATSU	JAPAN
NEUMANN	GERMANY

**4.5- CCTV**

**4.5.1- CCTV SYSTEM (FIX & PC BASE)**

**4.5.1.1- SECURITY**

ADISH ELECTRONIC	IRAN
ALKA PARDAZ TABRIZ	IRAN
ARDAL	IRAN
BAZARGANI ARIAN	IRAN
DENA SANAT	IRAN
FAN AVARAN TASVIR	IRAN
GITA VARZ	IRAN
IRAN AMVAJ ELECTRONIC	IRAN
MICRO NARM AFZAR	IRAN
OFOGH ROSHAN DENA	IRAN
RAH AVARD ELECTRONIC	IRAN
RAH ROSHD	IRAN

<i>COMPANY NAME</i>	<i>ORIGIN</i>
SHAYAN	IRAN
SHAR NOOR	IRAN
SANAYE ELECTRONIC ZAIEM	IRAN
SA IRAN	IRAN
SANAYE ELECTRONIC OPTIC ESFAHAN	IRAN
VIDA ELECTRONIC	IRAN

#### 4.5.1.2- NON SECURITY

AFRIZ FARAYAND	IRAN
DENA SANAT	IRAN
OFOGHE ROSHAN DENA	IRAN
PATSA	IRAN
RAH ROSHD	IRAN
SANAYE ERTEBATI ZAEIM	IRAN
SANAYE MOKHABERATI ( SA IRAN )	IRAN
SANAYE OPTIC ESFAHAN	IRAN
SARIAK	IRAN
INTEL	ITALY
HERNIS	NORWAY
PANASONIC	JAPAN
SYNECTIC SYSTEM GROUP LTD	UK

#### 4.5.2- CCTV EQUIPMENT

##### 4.5.2.1- MONITORING EQUIPMENT

HERNIS	NORWAY
PANASONIC	JAPAN
SIEMENS	GERMANY
SONY	JAPAN
SYNECTIC SYSTEM GROUP LTD	UK

##### 4.5.2.2- CAMERA

HERNIS	NORWAY
IQEYE	USA
PANASONIC	JAPAN
SIEMENS	GERMANY
SONY	JAPAN
SPARK LAN	USA / TAIWAN
SYNECTIC SYSTEM GROUP LTD	UK

#### 4.6- TELEPHONE SYSTEM

##### 4.6.1- EXPLOSION PROOF TELEPHONE SET

DAC	UK
FERNISIG	GERMANY
LELAS	FRANCE

<i>COMPANY NAME</i>	<i>ORIGIN</i>
MIETL TELECOM.	UK
NEUMANN ELECTRONIC	GERMANY
NEC GROUP	JAPAN
S.A.EQUIPMENT	UK
SIEMENS	GERMANY

#### 4.6.2- INDUSTRIAL TELEPHONE SET

DAC	UK
FERNSIG	GERMANY
LELAS	FRANCE
MIETL TELECOM.	UK
NEUMANN ELECTRONIC	GERMANY
NEC GROUP	JAPAN
S.A.EQUIPMENT	UK
SIEMENS	GERMANY

#### 4.6.3- OFFICE TELEPHONE SET

SANAYE ERTEBATI PAYA	IRAN
SANAYE MOKHABERATI ( SA IRAN )	IRAN
ALCATEL	FRANCE
SIEMENS	GERMANY
PANASONIC	JAPAN

#### 4.6.4- FAX SYSTEM

EPSON	JAPAN
HP	USA
PANASONIC	JAPAN
PHILIPS	THE NETHERLANDS
RICO	JAPAN
SHARP	JAPAN

#### 4.6.5- CENTRAL AND IP PHONE/PABX SYSTEM

AVA COMMUNICATION	IRAN
ERICSSON	SWEDEN
PANASONIC	JAPAN
SIEMENS	GERMANY

#### 4.7- NETWORK SWITCH

3COM	USA
BELDEN	USA
D-LINK	USA
CISCO	USA
HIRCHAMANN	GERMANY
WESTRMO	SWEDEN

**HSE**

## **5. HSE EQUIPMENT**

### **5.1. HEALTH**

- 5.1.1- ELECTROMAGNETIC FIELD ANALYZER**
- 5.1.2- SOUND LEVEL METER**
- 5.1.3- LUXMETER**
- 5.1.4- WET BULB GLOBE TEMPERATURE (WBGT)**
- 5.1.5- DUST MONITOR**
- 5.1.6- GAS AND VAPOURE DETECTOR**
- 5.1.7- UV AND IR RADIATION DETECTOR**
- 5.1.8- IONIZED RADIATION DETECTOR**
- 5.1.9- FIT TEST FOR BREATHING MASK**
- 5.1.10- POTABLE WATER QC EQ.**
  - 5.1.10.1- MICROBIOLOGY**

### **5.2. SAFETY & FIRE FIGHTING**

- 5.2.1- FIXED EQUIPMENT**
  - 5.2.1.1- WATER SPRAY, SPRINKLER SYSTEM**
  - 5.2.1.2- FOAM SYSTEM**
  - 5.2.1.3- WATER SUPPLY ( HYDRANTS , MONITORS & REELS )**
    - 5.2.1.3.1- POST INDICATOR VALVE**
    - 5.2.1.3.2- SELF OSCILLATING MONITOR**
  - 5.2.1.4- FIRE FIGHTING PUMP**
  - 5.2.1.5- FIRE BOX**
  - 5.2.1.6- GAS DETECTOR SYSTEM**
  - 5.2.1.7- INERT GAS (IG) & CO2 SYSTEM**
- 5.2.2- PORTABLE EQUIPMENT**
  - 5.2.2.1- EXTINGUISHER**
    - 5.2.2.1.1- DRY POWDER / WATER**
    - 5.2.2.1.2- CO2 / FOAM**
  - 5.2.2.2- FIRE MONITOR**
  - 5.2.2.3- PUMP FOR FIRE ENGINE**
- 5.2.3- FIRE TRUCK**
  - 5.2.3.1- FOAM TENDER , WATER & FOAM TENDER & TANKER**
  - 5.2.3.2- POWDER TRUCK , RESCUE TRUCK & LADDER , MULTI - PURPOSE**

#### **5.2.4- GENERAL FIRE FIGHTING MATERIALS & ACCESSORIES**

**5.2.4.1- HOSES**

**5.2.4.2- FITTING , COUPLING & ADAPTOR**

**5.2.4.3- NOZZLE**

**5.2.4.4- POWDER & FOAM (ONLY MAT'S)**

**5.2.4.5- CO2 FILLING MACHINE , HOSE BINDING MACHINE , HOSE WINDING MACHINE , BREATHING AIR COMPRESSOR AND POWDER FILLING MACHINE.**

#### **5.2.5- FIRE PROOFING SYSTEM**

#### **5.2.6- RESCUE SYSTEM EQUIPMENT**

#### **5.2.7- SAFETY DEVICES**

#### **5.2.8- SPECIAL ITEMS**

**5.2.8.1- FALL PROTECTION EQUIPMENT**

**5.2.8.2- SAFTY VESTS AND SUB SEA WORK EQ.**

**5.2.8.3- CHEMICAL RESISTANCE ANTI-FIRE CLOTHING**

**5.2.8.4- SELF CONTAIN BREATHING APPARATUS (SCBA) / AIR LINE & FILTERING**

### **5.3- ENVIRONMENT**

**5.3.1- AIR POLLUTION ANALYSER**

**5.3.2- STACK FLUE GAS ANALYZER**

**5.3.3- WASTE WATER PORTABLE ANALYZER**

**5.3.4- WASTE WATER AUTOMATIC SAMPLING DEVICE**

**5.3.5- WASTE WATER ON-LINE ANALYZER**

**5.3.6- SOIL POLLUTION MONITOR & ANALYZER**

**5.3.7- UNDER GROUND WATER MONITOR & ANALYZER**

**5.3.8- OIL MIST COLLECTORS**

### **5.4- QUALITY**

COMPANY NAME

ORIGIN

**5.1. HEALTH**

**5.1.1- ELECTROMAGNETIC FIELD ANALYZER**

CASELLA-CEL	UK
HOLA DAY	USA / W.EUROPE

**5.1.2- SOUND LEVEL METER**

BRÜEL & KJÆR	DENMARK
CASELLA-CEL	UK
CASTLE	UK
CIRRUS	UK
QUEST	USA / W.EUROPE

**5.1.3- LUXMETER**

HAGNER	SWEDEN
TESTO AG	GERMANY

**5.1.4- WET BULB GLOBE TEMPERATURE (WBGT)**

CASELLA-CEL	UK
KIMO	FRANCE
QUEST	USA / W.EUROPE

**5.1.5- DUST MONITOR**

BGI	USA / W.EUROPE
CASELLA-CEL	UK
DRAGER	GERMANY
MSA	USA / W.EUROPE
SKC	USA / W.EUROPE
TERMO	USA / W.EUROPE
WESTECH	USA / UK

**5.1.6- GAS AND VAPOURE DETECTOR**

COMPUR MONITOR	GERMANY
DRAGER	GERMANY
GASTEC	JAPAN
GFG	GERMANY
MSA	USA / W.EUROPE
SKC	USA / W.EUROPE

**5.1.7- UV AND IR RADIATION DETECTOR**

HAGNER	SWEDEN
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**5.1.8- IONIZED RADIATION DETECTOR**

WILL BE ADVISED LATER	
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**5.1.9- FIT TEST FOR BREATHING MASK**

DRAGER	GERMANY
FENZY	FRANCE
MSA	USA / W.EUROPE

**COMPANY NAME**

**ORIGIN**

**5.1.10- POTABLE WATER QC EQ.**

HACH	USA
ZULLIG AG	SWITZERLAND

**5.1.10.1- MICROBIOLOGY**

ZULLIG AG	SWITZERLAND
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**5.2. SAFETY & FIRE FIGHTING**

**5.2.1- FIXED EQUIPMENT**

**5.2.1.1- WATER SPRAY, SPRINKLER SYSTEM**

SAKHTAR ENERGY ZHARF	IRAN
ANGUS FIRE LTD.	UK
ANSUL	UK
DELTA FIRE Inc.	USA
FIRENOR	NORWAY
FUKU HODA	JAPAN
HATSUTA	JAPAN
INBAL VALVES	UK
JOMOS	SWITZERLAND
KIDDE FIRE CO.	ITALY
MINIMASK	GERMANY
ROSENBAUER	GERMANY / AUSTRIA
SAMTEKNO-Tempus OY	FINLAND
SES ASA PROTECTION( SES ENSER ENGINEERING)	ITALY
SILVANI	ITALY
SIMTRONICS	NORWAY
SPRAY SAFE	UK
TOTAL FEURCHUTZ	GERMANY
VIKING	USA / W.EUROPE

**5.2.1.2- FOAM SYSTEM**

ANGUS FIRE LTD.	UK
CHEMETRON	USA / W.EUROPE
CHUBB FIRE	UK
CHUBB NATIONAL FOAM	UK
FIRENOR	NORWAY
FUKU HODA	JAPAN
KIDDE FIRE CO.	ITALY
MURITA	JAPAN
PYRENE	CANADA
ROSENBAUER	GERMANY / AUSTRIA
SHILLA FIRE	S. KOREA
SILVANI	ITALY
TOTAL WALTHER	GERMANY
WILLIAMS	USA / W. EUROPE
ZIEGLER	GERMANY



**COMPANY NAME**

**ORIGIN**

**5.2.1.3- WATER SUPPLY ( HYDRANTS , MONITORS & REELS )**

IMEN SAHAND ARYA	IRAN
IMEN TIAR (WET ONLY)	IRAN
SAKHTAR ENERGY ZHARF	IRAN
ALCO CONTROLS GmbH	GERMANY
AMERICAN DARLING	CANADA / W. EUROPE
ANGUS FIRE LTD.	UK
KENEDY VALVE	CANADA
KNOWSLEY SK LTD.	UK
MULLER	GERMANY
POK	FRANCE
SHILLA FIRE	S. KOREA
SILVANI	ITALY
SIMTRONICS	NORWAY

**5.2.1.3.1- POST INDICATOR VALVE**

ANGUS FIRE	UK
FIRENOR	NORWAY
KENEDY VALVE	CANADA

**5.2.1.3.2- SELF OSCILLATING MONITOR**

FIRENOR	NORWAY
POK	FRANCE
SHILLA FIRE	S. KOREA

**5.2.1.4- FIRE FIGHTING PUMP ON TRUCK**

GODAIVA	UK
ROSENBAURE	GERMANY / AUSTRIA
SIDES	FRANCE
ZIEGLER	GERMANY

**5.2.1.5- FIRE BOX**

DENA SHIRAZ	IRAN
ETFAYE HARIGHE BOSTAN	IRAN
EAMEN PARS	IRAN
IMEN SAHAND ARYA	IRAN
IMEN TIAR	IRAN
KIMIAGAR	IRAN
NARFOAMKAR	IRAN
NEGAHBAN	IRAN
SAKHTAR ENERGY ZHARF	IRAN

**5.2.1.6- GAS DETECTOR SYSTEM**

ANSUL	UK
BLACK FIRE	CANADA
B.W	CANADA
CHUBB FIRE	UK
DRAGER	GERMANY
HOCKE	JAPAN

<i>COMPANY NAME</i>	<i>ORIGIN</i>
MINIMAX	GERMANY
SIEMENS	AUSTRALIA / NEW ZEALAND
SILVANI	ITALY
TOTAL WALTHER	GERMANY

**5.2.1.7- INERT GAS (IG) & CO2 SYSTEM**

EUSEBI IMPIANTI	ITALY
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**5.2.2- PORTABLE EQUIPMENT**

**5.2.2.1- EXTINGUISHER**

**5.2.2.1.1- DRY POWDER / WATER**

AZAR CYLANDR	IRAN
DARROOS IRAN	IRAN
IMEN TIAM SEPAHAN	IRAN
IRAN ATASHBAR	IRAN
IRAN NEJAT	IRAN
PISHROW	IRAN
TOCHAL	IRAN
YADEGAR	IRAN
ANGUS FIRE LTD.	UK
BAVARIA	GERMANY
CHUBB FIRE	UK
GLORIA	GERMANY
SIMTRONICS	NORWAY
TOTAL WALTHER	GERMANY
VICTORIA	ITALY

**\* THE EQUIPMENT SUPPLIED BY IRANIAN VENDORS SHOULD BE CERTIFIED BY ISIRI, ALSO TO BE EQUIPPED BY VALVES SUPPLIED FROM OFF-SHORE.**

**5.2.2.1.2- CO2 / FOAM**

ANGUS FIRE LTD.	UK
ANSUL	UK
BAVARIA	GERMANY
BLACK FIRE	CANADA
CHUBB FIRE	UK
GLORIA	GERMANY
MINIMAX	GERMANY
SILVANI	ITALY
TOTAL WALTHER	GERMANY
VICTORIA	ITALY

**5.2.2.2- FIRE MONITOR**

AZAR KHODRO	IRAN
IMEN SAHAND ARYA	IRAN
IMEN TIAR	IRAN
MACHIN ATASHMAHAR NO	IRAN
SAKHTAR ENERGY ZHARF	IRAN
SANATKARAN BERMU CO.	IRAN

<i>COMPANY NAME</i>	<i>ORIGIN</i>
SANGUIN KAR SANAT	IRAN
ALCO CONTROLS GmbH	GERMANY
ANGUS FIRE LTD.	UK
ELKHARTE	UK
MORITA	JAPAN
POK	FRANCE
SILVANI	ITALY
TOTAL WALTHER	GERMANY
ZIEGLER	GERMANY

**5.2.2.3- PUMP FOR FIRE ENGINE**

AZAR KHODRO	IRAN
SANATKARAN BERM CO.	IRAN
SANGUIN KAR SANAT	IRAN
CAMIVA	ITALY
GODIVA	UK
HALE	UK
ROSENBAUER	GERMANY / AUSTRIA
SILVANI	ITALY
ZIEGLER	GERMANY

**5.2.3- FIRE TRUCK**

**5.2.3.1- FOAM TENDER , WATER & FOAM TENDER & TANKER**

AFTAB EKBATAN	IRAN
ATASH MAHAR NO	IRAN
MOJTAMA SANAYE HADID	IRAN
SANATKARAN BERM CO.	IRAN
SANGUIN KAR SANAT	IRAN
BAI	ITALY
BARIBBI	ITALY
CHENETTI	ITALY
CHUBB NATIONAL FOAM	UK
JOHN DENNIS COACHBUILDERS LTD	UK
EMERGENCY ONE	USA / W.EUROPE
KAR MICHAEL	UK
METZ	FRANCE
ROSENBAUER	GERMANY / AUSTRIA
SAVAL	BELGIUM
SIDES	FRANCE
SILVANI	ITALY
SOMATI	FRANCE
SUPERIOR	CANADA
ZIEGLER	GERMANY

**5.2.3.2- POWDER TRUCK , RESCUE TRUCK & LADDER , MULTI - PURPOSE**

ATASH MAHAR NO	IRAN
SANGUIN KAR SANAT	IRAN
BAI	ITALY
BARIBBI	ITALY

<i>COMPANY NAME</i>	<i>ORIGIN</i>
CHENETTI	ITALY
CHUBB NATIONAL FOAM	UK
JOHN DENNIS COACHBUILDERS LTD	UK
EMERGENCY ONE	USA / THE NETHERLANDS
KAR MICHAEL	UK
METZ	FRANCE
ROSENBAUER	GERMANY / AUSTRIA
SAVAL	BELGIUM
SIDES	FRANCE
SILVANI	ITALY
SOMATI	FRANCE
SUPERIOR	CANADA
ZIEGLER	GERMANY

#### 5.2.4- GENERAL FIRE FIGHTING MATERIALS & ACCESSORIES

##### 5.2.4.1- HOSES

ANGUS FIRE LTD.	UK
G & H (GOLLMER & HUMMEL)	GERMANY
MEHLER	GERMANY
NAFFCO	UK
ROSENBAUER	GERMANY / AUSTRIA
TOTAL WALTHER	GERMANY
ZIEGLER	GERMANY

##### 5.2.4.2- FITTING, COUPLING & ADAPTOR

IMEN SAHAND ARYA	IRAN
IMEN TIAR	IRAN
NEGAHBAN	IRAN
SAKHTAR ENERGY ZHARF	IRAN
A.W.G.	GERMANY
ANGUS FIRE LTD.	UK
JOHN MORRIS	UK
MORITA	JAPAN
POK	FRANCE
ROSENBAUER	GERMANY / AUSTRIA
SHILLA FIRE	S. KOREA
TOTAL WALTHER	GERMANY

##### 5.2.4.3- NOZZLE

IMEN SAHAND ARYA	IRAN
IMEN TIAR	IRAN
NEGAHBAN	IRAN
SAKHTAR ENERGY ZHARF	IRAN
ANGUS FIRE LTD.	UK
CHUBB FIRE	UK
KIDDE FIRE CO.	ITALY
FUKU HUDA	JAPAN
KNOWSLEY SK LTD.	UK
POK	FRANCE

<i>COMPANY NAME</i>	<i>ORIGIN</i>
PYRENE	CANADA
ROSENBAUER	GERMANY / AUSTRIA
SHILLA FIRE	S. KOREA
SILVANI	ITALY

**5.2.4.4- POWDER & FOAM (ONLY MAT'S)**

ATASHBAS	IRAN
AZAR KABIN	IRAN
EYMAN TASH SEPAHAN	IRAN
LOSHAREH	IRAN
AJAX	THE NETHERLANDS
ANGUS FIRE LTD.	UK
N.F ( NATIONAL FOAM )	UK
NAFFCO	UK
PURPLE K	THE NETHERLANDS
SABO	FRANCE / ITALY
SILVANI	ITALY
TOTAL	FRANCE

**5.2.4.5- CO2 FILLING MACHINE , HOSE BINDING MACHINE , HOSE WINDING MACHINE , BREATHING AIR COMPRESSOR AND POWDER FILLING MACHINE.**

AFTAB EKBATAN (Hose Binding Machine Ooly)	IRAN
TIGRA	IRAN
BAVARIA	GERMANY
DRAGER	GERMANY
G & H ( GOLLMER & HUMMEL )	GERMANY
INTERSPIRO	SWEDEN
ROSENBAUER	GERMANY / AUSTRIA
SILVANI	ITALY
WAGNER	GERMANY
ZIEGLER	GERMANY

**5.2.5- FIRE PROOFING SYSTEM**

*( SUBJECT TO DISCUSSION IN CIVIL ENGINEERING )*

**5.2.6- RESCUE SYSTEM EQUIPMENT**

BEAL	ITALY
HE / MATRO	THE NETHERLANDS
LUCAS	UK
NORTH SAFETY	CANADA / W. EUROPE
PETZL	FRANCE
ROSENBAUER	GERMANY / AUSTRIA
ZIEGLER	GERMANY

**COMPANY NAME**

**ORIGIN**

**5.2.7- SAFETY DEVICES [PPE ( PERSONAL PROTECTIVE EQUIPMENT )]**

B.W.	CANADA
BRISTOL	UK
CLAR	IRAN
CROWCON	UK
DENA SHIRAZ	IRAN
DRAGER	GERMANY
FENZY	FRANCE
G.S.P	IRAN
HEYAAT	IRAN
IMEN SANAT	IRAN
IMEN TIAR	IRAN
IMEN TORK	IRAN
INTERSPIRO	SWEDEN
KAFSH MELLI	IRAN
KEMIRA	GERMANY
MILAD	IRAN
MOJTAMEH BESAT	IRAN
MO-OD	IRAN
NEGAHBAN	IRAN
NORTH SAFETY	CANADA / W. EUROPE
OLDHAM	FRANCE
PAAD JAMEH ASR	IRAN
ROSENBAUER	GERMANY / AUSTRIA
SABER	FRANCE
SAFE	IRAN
TEMPEX	UK
TOTAL	FRANCE

**5.2.8- SPECIAL ITEMS**

**5.2.8.1- FALL PROTECTION EQUIPMENT**

PETZL	FRANCE
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**5.2.8.2- SAFTY VESTS AND SUB SEA WORK EQ.**

PETZL	FRANCE
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**5.2.8.3- CHEMICAL RESISTANCE ANTI-FIRE CLOTHING**

MOJTAMA BESAT	IRAN
ARTHURE FIRE	CANADA
BRISTOL	UK
DRAGER	GERMANY
MSA	USA / W.EUROPE
NORTH SAFETY	CANADA / W. EUROPE
ROSENBAUER	GERMANY / AUSTRIA

**5.2.8.4- SELF CONTAIN BREATHING APPARATUS (SCBA) / AIR LINE & FILTERING**

AUER	GERMANY
DRAGER	GERMANY
FENZY	FRANCE / POLAND
MSA	USA / W.EUROPE
ROSENBAUER	GERMANY / AUSTRIA

**COMPANY NAME**

**ORIGIN**

**5.3- ENVIRONMENT**

**5.3.1- AIR POLLUTION ANALYSER**

BUHLER TECHNOLOGIES	GERMANY
ENVIROMENT S.A.	FRANCE
POLLUTION S.P.A	ITALY
PROTEA	UK
TESTO	GERMANY

**5.3.2- STACK FLUE GAS ANALYZER**

ABB	UK
APEX	USA / W.EUROPE
HORIBA	USA / W.EUROPE
LAND	UK
MRU	GERMANY
OP SIS	SWEDEN
PROTEA	UK
TESTO	GERMANY

**5.3.3- WASTE WATER PORTABLE ANALYZER**

EXACT TM	UK
JENWAY	UK
THERMO	USA / W.EUROPE
WINDOUS	GERMANY
W.T.W	GERMANY

**5.3.4- WASTE WATER AUTOMATIC SAMPLING DEVICE**

ENDRESS+HAUSER	GERMANY
ISCO	USA / W.EUROPE
NEMOL	GERMANY
W.T.W	GERMANY

**5.3.5- WASTE WATER ON-LINE ANALYZER**

STIP & PROMINENT	USA / CANADA
W.T.W	GERMANY

**5.3.6- SOIL POLLUTION MONITOR & ANALYZER**

WILL BE ADVISED LATER

**5.3.7- UNDER GROUND WATER MONITOR & ANALYZER**

KPSI	USA / W.EUROPE
SEBA	GERMANY

**5.3.8- OIL MIST COLLECTORS**

WILL BE ADVISED LATER

**5.4- QUALITY**

WILL BE ADVISED LATER

# **CIVIL & STRUCTURE**



## **6. CIVIL & STRUCTURE**

### **6. CIVIL & STRUCTURE**

- 6.1- STEEL STRUCTURE**
- 6.2- FALSE FLOOR / CEILING / ALUMINIUM COMPOSITE PANEL**
- 6.3- GROUT / ADDITIVE CONCRETE / HARDNER**
- 6.4- GALVANIZED COATING**
- 6.5- SEALING MATERIAL**
  - 6.5.1- CONCRETE JOINT SEALANT / WATER STOP**
  - 6.5.2- GEOTEXTILE**
  - 6.5.3- GEOMEMBRANE**
  - 6.5.4- ISOLATING MAT'S**
  
- 6.6- GRATING**
  - 6.6.1- METALIC**
  - 6.6.2- COMPOSITE**
  
- 6.7- SPATIAL (SPACE) FRAME**
- 6.8- MARINE STRUCTURE**
- 6.9- FIRE PROOFING (REGULAR / LIGHT WEIGHT)**
- 6.10- PRE - CAST**
  - 6.10.1- CONCRETE**
  - 6.10.2- NON-CONCRETE**
  
- 6.11- SANDWICH PANEL**
- 6.12- BRIDGE CRANE (E.O.T)**
- 6.13- SPECIAL DOOR (EXPLOSION PROOF)**
- 6.14- DOUBLE PANE WINDOW**
- 6.15- ANCHOR CABLE**
- 6.16- NEW MAT'S / COMPONENTS**
- 6.17- PRE-FABRICATED BUILDING**
  - 6.17.1- CONCRETE**
  - 6.17.2- NON-CONCRETE/CONEX**
  
- 6.18- ANCHOR BOLTS**
- 6.19- LIGHT WEIGHTED MAT'S**
- 6.20- ACID PROOF TILES**
- 6.21- ACID PROOF MORTARS**
- 6.22- GLASS**
  - 6.22.1- NORMAL**
  - 6.22.2- ARMY**
  - 6.22.3- SECURIT**
  - 6.22.4- DOUBLE GLAZED**
  - 6.22.5- REFLECTOR/ MIRROR (CONCAVE, CONVEX, FLAT)**

**COMPANY NAME**

**ORIGIN**

**6.1 - STEEL STRUCTURE**

AHANSAY	IRAN
ALFA SAM	IRAN
ARIA FOOLAD SABALAN	IRAN
AZAR FELEZAN	IRAN
BAMDAD ZENDEHROUD	IRAN
DAVAN SANAT	IRAN
DORSA SANAT SPADANA	IRAN
ESKELETHAI FOOLAD VA MAKHAZEN IRAN	IRAN
ESTA FELEZ	IRAN
FOOLAD FAN	IRAN
FOOLAD NAGHSH EURASIA	IRAN
JAHANKAR ESFAHAN	IRAN
KARA SAZEH KIMIYA	IRAN
KARON SAZEH	IRAN
MASHINE AJZA	IRAN
MASHIN SAZI AZARBAYJANI	IRAN
MASHIN SAZI ARAK	IRAN
MASHIN SAZI ESFAHAN	IRAN
MASHIN SAZI PARS	IRAN
MASHIN SAZI SAZEHAYEH SANATI ASTOTOOS	IRAN
MERAT POOLAD	IRAN
METEC	IRAN
MILAD	IRAN
NAFT SAZEH GHESHM	IRAN
NASB SAMAN ARAK	IRAN
NEYRPERS	IRAN
PAYBAND SAZEH	IRAN
PAYSAZ	IRAN
ROKN SAZEH	IRAN
SABZ ASHIAN APADANA ENG. CO. (SAAPEC)	IRAN
SADAD MASHIN	IRAN
SANAYE FELEZI IRAN	IRAN
SANAYE KOLAHDOZ	IRAN
SAZEHAYEH FELEZI SHAHRYAR	IRAN
SAZVAR SAZEH AZARESTAN	IRAN
SOOLEH KAVEH PARS	IRAN
YEKTA ANDISH SAZEH	IRAN

**6.2 - FALSE FLOOR / CEILING / ALUMINIUM COMPOSITE PANEL**

ALMICO	IRAN
ALUMINUM BAMKAR	IRAN
AZARAN PLASTIC	IRAN
FATH IRAN	IRAN
GHATAAT FOLADI	IRAN
IRAN SAGHF	IRAN
KNAUF IRAN	IRAN
PARSI TAK	IRAN

<i>COMPANY NAME</i>	<i>ORIGIN</i>
PROFILE ALUMINIUM ZIAE	IRAN
RAIZIRAN	IRAN
SANAYE ARMIN AZAR	IRAN
SANAYE AYTAK DARB	IRAN
TEHRAN DAMA	IRAN
STEEL SYSTEM	FRANCE

### **6.3 - GROUT / ADDITIVE CONCRETE / HARDNER**

ATROPAT SHIMI	IRAN
BETON SHIMIE KHAVARMIANEH	IRAN
CLINIC SAKHTEMANI IRAN	IRAN
FARAVARDEHYE SHIMIAEI SAKHTEMAN	IRAN
FOMAN SHIMI	IRAN
MOHANDESI SHIMI IRAN	IRAN
REZIN BETON BARTAR	IRAN
SANATI REZIN SAZAN FARIS	IRAN
SANAYE SHIMI SAKHTEMAN ABADGARAN	IRAN
SHIMI SAKHTEMAN	IRAN
MAZ	GERMANY
SIKA	SWITZERLAND

### **6.4 - GALVANIZED COATING**

IRAN YASA ARAK	IRAN
KHORDEGI GHADIR	IRAN
MERKID	IRAN
NAVARD VA LOOLEH AHWAZ	IRAN
SEPENTA	IRAN
TEHRAN HARA	IRAN
ZENDEH ROOD	IRAN

### **6.5 - SEALING MATERIAL**

#### **6.5.1- CONCRETE JOINT SEALANT / WATER STOP**

ATROPAT SHIMI	IRAN
AYEGHHAYE ROTOBATI	IRAN
CLINIC SAKHTEMANI IRAN	IRAN
FIROZ GAM	IRAN
HAMGERAYAN TOLID (CAPCO)	IRAN
ISOGAM	IRAN
PASHM SANG IRAN	IRAN
POM CO	IRAN
SANAYE SHIMI SAKHTEMAN ABADGARAN	IRAN
SHIMI SAKHTEMAN	IRAN

#### **6.5.2- GEOTEXTILE**

BEHSAZ NASJ	IRAN
CHESHMEH SAR YAZD	IRAN
SABZ GOSTAR KANDOVAN	IRAN

**COMPANY NAME**

**ORIGIN**

**6.5.3- GEOMEMBRANE**

CHESHMEH SAR YAZD	IRAN
CHIDAK BASPAR	IRAN
SABZ GOSTAR KANDOVAN	IRAN
SEPIDEH SOBH ALAGHEBAND	IRAN
NEROU	SWITZERLAND

**6.5.4- ISOLATING MAT'S**

AYEGH PARDIS SAEI	IRAN
BAB	IRAN
IDEH SAZAN	IRAN
PASHM & SHISHEH IRAN / THERMO TANK	IRAN
PASHM CERAMIC IRAN	IRAN
PASHM SANG IRAN	IRAN
TARABGIN	IRAN
TARADIS	IRAN

**6.6 - GRATING**

**6.6.1- METALLIC**

AHVAZ FANOOS	IRAN
ALFA SAM	IRAN
ARAK RAIL	IRAN
DOZHPAD	IRAN
FAZA SAZAN AMIN	IRAN
FELEZ SAZEH	IRAN
FOOLAD DRAKHSAN	IRAN
FOOLAD PERESS	IRAN
GHATEATE FOOLADI	IRAN
MOSHABAK POSH SAZEH VATAN	IRAN
PARS MOSHABAK	IRAN
SANAYE AYTAK DARB	IRAN
SANAYE FLEZI IRAN	IRAN
TADAROKAT SANATI SEPAHAN	IRAN

**6.6.2- COMPOSITE**

COMPOSITE ASIA	IRAN
PARS MOSHABAK	IRAN
FIBERSTRUCT	THE NETHERLANDS

**6.7- SPATIAL (SPACE) FRAME**

SANAYE SHAHABADI	IRAN
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**6.8 - MARINE STRUCTURE**

NAFT SAZEH GHESHM	IRAN
SADRA	IRAN
TASISAT DARYAEI IRAN (IOEC)	IRAN

<i>COMPANY NAME</i>	<i>ORIGIN</i>
<b>6.9- FIRE PROOFING (REGULAR / LIGHT WEIGHT)</b>	
GILAN MIKA	IRAN
COOL THERM	UK
LAPINUS	THE NETHERLANDS
WARNERISOFT ISOLATION	FRANCE
<b>6.10- PRE - CAST</b>	
<b>6.10.1- CONCRETE</b>	
AZARIT	IRAN
DOKAL	IRAN
FIAL BETON	IRAN
IRDAK	IRAN
SANAT IRAN	IRAN
SIMAN DOROUD	IRAN
TOSHEH SANAT FAZELAB IRAN	IRAN
<b>6.10.2- NON-CONCRETE</b>	
KNAUF IRAN	IRAN
MAMOUT	IRAN
<b>6.11- SANDWICH PANEL</b>	
FABIS	IRAN
GHATATE FOOLADI	IRAN
GHATATE PISHSAKHTEH FELEZI KIAN (KIAN PANEL)	IRAN
MAMOUT	IRAN
<b>6.12- BRIDGE CRANE (E.O.T)</b>	
AHROM VAZIN	IRAN
ARIAN	IRAN
FIROZA	IRAN
IRAN SAKHT CRANE	IRAN
MASHIN SAZI MANGAN	IRAN
MASHIN SAZI PARS	IRAN
SADAD MASHIN	IRAN
SADID KARAN SABA	IRAN
SAZEH GOSTAR VAZIN (UP TO 25 TON)	IRAN
SHAHANG VAZIN	IRAN
TAVAN SANAT PARSIAN (UP TO 25 TON)	IRAN
TEFLER	IRAN
VAZNEH PARS	IRAN
<b>6.13- SPECIAL DOOR (EXPLOSION PROOF)</b>	
GANGINEH MEHR PARS	IRAN
SANDOGH NASOZ KAVEH	IRAN
SANDOGH NASOZ KHORAM	IRAN
<b>6.14- DOUBLE PANE WINDOW</b>	
ARIAN PAZHANG	IRAN
SANAYE ARMIN AZAR	IRAN
SECO	IRAN

	<i>COMPANY NAME</i>	<i>ORIGIN</i>
<b>6.15- ANCHOR CABLE</b>		
	MASHIN SAZI MANGHAN	IRAN
	MALAYER WIRE ROPE	IRAN
	SADAD MASHIN	IRAN
<b>6.16- NEW MAT'S / COMPONENTS</b>		
	SECO	IRAN
<b>6.17- PRE-FABRICATED BUILDING</b>		
<b>6.17.1- CONCRETE</b>		
	WILL BE ADVISED LATER	
<b>6.17.2- NON-CONCRETE / CONEX</b>		
	MAMOUT	IRAN
<b>6.18- ANCHOR BOLTS</b>		
	AHVAZ FANOOS	IRAN
	FARASAZAN PITCH GOSTAR PARS	IRAN
	GOROOH TOLIDI VA SANATI PICH ESHPIR IRAN	IRAN
<b>6.19- LIGHT WEIGHTED MAT'S</b>		
	HEBLEX	IRAN
<b>6.20- ACID PROOF TILES</b>		
	ANZAN SANAT POLYMER	IRAN
<b>6.21- ACID PROOF MORTARS</b>		
	WILL BE ADVISED LATER	
<b>6.22- GLASS</b>		
<b>6.22.1- NORMAL</b>		
	SHISHEH GHAZVIN	IRAN
<b>6.22.2- ARMY</b>		
	SHISHEH GHAZVIN	IRAN
<b>6.22.3- SECURIT</b>		
	SHISHEH GHAZVIN	IRAN
<b>6.22.4- DOUBLE GLAZED</b>		
	SHISHEH GHAZVIN	IRAN
<b>6.22.5- REFLECTOR/ MIRROR (CONCAVE, CONVEX, FLAT)</b>		
	SHISHEH GHAZVIN	IRAN

**CATALYST , CHEMICALS & OIL**

## **7. CATALYST / CHEMICALS / OIL**

### **7.1- CATALYST**

**7.1.1- NON POLYMERIC PLANT**

**7.1.2- POLYMERIC PLANT**

### **7.2- ADSORBENT, DESORBENT & RESIN**

**7.2.1- MOLECULAR SIEVE**

**7.2.2- SILICAGEL / ACTIVATED ALUMINA / ADSORBENTS**

**7.2.3- ION EXCHANGE RESIN / MEMBRANE**

**7.2.4- ACTIVATED CARBON**

### **7.3- CHEMICALS / ADDITIVES / ABSORBENTS**

### **7.4- SUPPORT & PACKING**

### **7.5- OIL & GREASE**



**COMPANY NAME**

**ORIGIN**

**7.1- CATALYST**

**7.1.1- NON POLYMERIC PLANT**

AXENS	FRANCE
BASF	GERMANY
BAYER	GERMANY
CECA	FRANCE / JAPAN
CRI	USA / W. EUROPE
EVONIK	GERMANY
EXXON-MOBIL	USA
HALDOR TOPSOE	DENMARK
INEOS	UK / BELGIUM
JOHNSON MATTHEY	UK
KATALEUNA	USA / THE NETHERLANDS
NIPPON SHOKUBAI	JAPAN
PERCHEM	SWITZERLAND
PETROGAS	UK
SCI	UK
SD (SCIENTIFIC DESIGN)	USA
SUD-CHEMIE	GERMANY
SYNETIX	UK
TORAY	JAPAN
UNICAT CATALYST	USA
UOP	USA / W. EUROPE
ZEOLYST	USA

**7.1.2- POLYMERIC PLANT**

AKZO NOBEL	USA / W. EUROPE
BASEL	GERMANY
BASF	GERMANY
ETHYL S.A.	USA / BELGIUM
HULS	GERMANY
INOES	UK / FRANCE
INTER CHIM	AUSTRIA
JOHNSON MATTHEY	UK
MITSUI	JAPAN
SCHERING	GERMANY
SIBA - GIEGY	SWITZERLAND
STAUFFER	USA / SWITZERLAND
SUD-CHEMIE	GERMANY
WITCO	GERMANY

**7.2- ADSORBENT, DESORBENT & RESIN**

**7.2.1- MOLECULAR SIEVE**

AXENS	FRANCE
CECA	FRANCE
ENITECNI	SWITZERLAND
MITSUI	JAPAN
NITEL PARS	IRAN
SIBEL HEGNER	JAPAN

<i>COMPANY NAME</i>	<i>ORIGIN</i>
UNION SHOWA	JAPAN
ZEOCHEM	SWITZERLAND

#### 7.2.2- SILICAGEL / ACTIVATED ALUMINA / ADSORBENTS

JAHAD DANESHGAHI SHARIF	IRAN
AIRSEC S.A.	FRANCE
ARKEMA CANADA INC.	CANADA
AXENS	FRANCE
CECA	FRANCE
JOHNSON MATTHEY	UK
GEEJAY CHEMICAL	UK

#### 7.2.3- ION EXCHANGE RESIN / MEMBRANE

BAYER	GERMANY
DOW CHEMICAL CO. LTD.	UK
FIMTEC	USA
HYDRONATIC	CANADA
PROULITE	UK
ROHM & HAAS	UK / ITALY
TORAY	JAPAN

#### 7.2.4- ACTIVATED CARBON

PAD ARVIN	IRAN
SHIMI PAJOOHAN	IRAN
DOW CHEMICAL CO. LTD.	UK
JACOBI CARBONS AB	SWEDEN

#### 7.3- CHEMICALS / ADDITIVES / ABSORBENTS

ABTIN REZIN	IRAN
CHASSB SAZ SARI	IRAN
ELMI SAZAN PISHROW	IRAN
EMEN TASH SEPAHAN	IRAN
ENERGY SEMNAN	IRAN
EXIR KIMIAGAR ZARRIN	IRAN
FAKHR CHEMIE RAZAN	IRAN
FARAVAR PAJOOHESH RAZI	IRAN
FARSHID SHAHREZA	IRAN
IRANOL	IRAN
JAHAD DANESHGAHI SHARIF	IRAN
KAROOON SHIMI KHOOZESTAN	IRAN
KIMIA MAHAN ALBORZ	IRAN
MAHAM PARCHIN	IRAN
MAVAD SHIMIAI	IRAN
MEHRTASH SEPAHAN	IRAN
NARBON	IRAN
NIROO CHLOR	IRAN
PADRAVIN	IRAN
PARS CHLOR	IRAN
PARS LIAN	IRAN

<i>COMPANY NAME</i>	<i>ORIGIN</i>
PETRO POOYESH KIMIA	IRAN
ROSOUBGIRI	IRAN
ROUDBAR TOUTIA	IRAN
SADR CHEMIE	IRAN
SALAR SHIMI SHAHRYAR	IRAN
SANAYEH DEFA SHIMIA YEE	IRAN
SHIMIA YEE FARS SHIRAZ	IRAN
SHIMIA EEE TASFIEH	IRAN
SIMAB REZIN	IRAN
SINA CHEMICAL INDUSTRIAL COMPANY	IRAN
SULFUR SODIUM IRAN	IRAN
TAJDAR SAMAN	IRAN
ZOHAL CHEMI	IRAN
AAE CHEMIE	SWITZERLAND
AKZO NOBEL	THE NETHERLANDS
AREMA	FRANCE
ARKEMA	FRANCE
ASHI DENKA	JAPAN
BARABANT	UK
BASF	GERMANY
BAYER	GERMANY
BECKMANN	GERMANY
BETZ	ITALY
BOLTH	UK
BUDENHEM	GERMANY
BWA	UK
CHAMPION	UK
CHEMCOR	THE NETHERLANDS
CHEMICAL INDUSTRIES	THE NETHERLANDS
CHIMEC	ITALY
CIBA	SWITZERLAND
DARACOR	FRANCE
DEGUSSA	FRANCE
DYCAR INT	UK
ENITECNI	SWITZERLAND
ERWIN H-BRAMMER	GERMANY
FACI	ITALY
HACHEM	GERMANY
HENKEL	GERMANY
HERCULES	UK
HOTAN	SWITZERLAND
HOZART	IRELAND
ICI KATALCO	UK
INTER CHEM	AUSTRIA
IRMECO GMBH	GERMANY
MATERTEC	SWITZERLAND
MESSER	UK
MITSUI	JAPAN
NALCO	ITALY

<i>COMPANY NAME</i>	<i>ORIGIN</i>
NORIT	THE NETHERLANDS
PERCHEM	SWITZERLAND
PETRO VLISL	THE NETHERLANDS
SOJITZ	JAPAN
STEPAN EUROPE	GERMANY
STEULER	GERMANY
SUDCHEMICAL	GERMANY
VOGLER	SWITZERLAND
WATERTEC	SWITZERLAND
WITCO	GERMANY

#### 7.4- SUPPORT & PACKING

ARDAKAN CERAMIC	IRAN
AZAR ENERGY	IRAN
DAMAVAND FELEZ (MONTZ)	IRAN / GERMANY
FARA ALIAJ ARAK	IRAN
GAHR CERAM	IRAN
MABNA GOSTAR SEPAHAN	IRAN / GERMANY
PAYDAR	IRAN
POLIKA KARAJ	IRAN
SANAYE CERAMIC TEHRAN	IRAN
SANAYE PANTAN SHIMI	IRAN
SETAREH SANAT TOOS	IRAN
SHIRIN YAR TEHRAN	IRAN
TAVAN AFZAR	IRAN
TAVANKARAN SANAT	IRAN
BASF	GERMANY
PERCHEM	SWITZERLAND
SAINT - GOBAIN NOR-PRO	THE NETHERLANDS
VEREINIGTE FULLKORPER	GERMANY
VOGLER	THE NETHERLANDS
WATERTEC	SWITZERLAND

#### 7.5- OIL & GREASE

ASIA GULEH	IRAN
BEHRAN	IRAN
BEHTOTAL	IRAN
IRANOL	IRAN
NAFT PARS	IRAN
NAFT SEPAHAN	IRAN
PALAYESH SHOMAL	IRAN
AGIP	ITALY
BP	UK
CPI	USA
ESSO	W. EUROPE
EXXON MOBIL	W. EUROPE
MOLYKOTE	W. EUROPE
SHELL	UK
TOTAL FINA ELF	FRANCE

# **LABORATORY**

## **8. LABORATORY EQUIPMENT**

### **8- LABORATORY**

#### **8.1- CHROMATOGRAPHY**

8.1.1- GAS CHROMATOGRAPH /MASS SPECTROSCOPE (GC , GC / MS)

8.1.2- HIGH PERFORMANCE LIQUID CHROMATOGRAPHY (HPLC)

8.1.3- ION CHROMATOGRAPHY (IC)

#### **8.2- SPECTROPHOTOMETER**

8.2.1- FOURIER TRANSFORMER INFRARED (FTIR) , INFRA RED (IR)

8.2.2- ULTRA VIOLET (UV / UV VISIBLE)

8.2.3- INDUCTIVELY COUPLED PLASMA / MASS (ICP, ICP / MS)

8.2.4- EMISSION SPECTROSCOPE (ES)

8.2.5- ATOMIC ABSORPTION (AA)

8.2.6- X-RAY FLUORESCENCE (XRF) / X-RAY DIFFRACTION (XRD)

8.2.7- FLAME PHOTOMETER

#### **8.3- AIR ANALYZER**

#### **8.4- O2 ANALYZER (DISSOLVER)**

#### **8.5- O2 ANALYZER (GAS)**

#### **8.6- WATER ANALYZER**

#### **8.7- ION SELECTIVE**

#### **8.8- OIL ANALYZER**

8.8.1- FLASH/ POUR/CLOUD POINT

8.8.2- VISCOSITY

8.8.3- WATER IN OIL

8.8.4- LIQUID DENSITY METER

#### **8.9- ELEMENTAL (CHNOS) ANALYZER**

#### **8.10- POLYMER TEST EQUIPMENT**

8.10.1- PHYSICAL

8.10.1.1- BRITTLENESS TEMPERATURE

8.10.1.2.- BULK DENSITY

8.10.1.3- DENSITOMETER (WITH BALANCE)

8.10.1.4- DIFFERENTIAL SCANNING CALORIMETER (DSC)

8.10.1.5- DIFFERENTIAL THERMAL ANALYZER (DTA)

8.10.1.6- BALL DROP

8.10.1.7- ELECTRICAL RESISTANCE METER

8.10.1.8- ENVIRONMENT STRESS CORROSION RESISTANCE(ESCR)

8.10.1.9- GLOSS METER

- 8.10.1.10- DENSITY METER (GRADIENT)
- 8.10.1.11- HARDNESS TESTER
- 8.10.1.12- HAZE METER
- 8.10.1.13- HDT / VICAT
- 8.10.1.14- IZOD IMPACT
- 8.10.1.15- MELT FLOW INDEX (MFI)
- 8.10.1.16- MELTING POINT
- 8.10.1.17- MICROMETER
- 8.10.1.18- TENSILE & FLEXURAL
- 8.10.1.19- TGA
- 8.10.1.20- VOLATILENESS METER (WITH BALANCE)
- 8.10.1.21- VOLATILE METER
- 8.10.1.22- NOTCHING MACHINE
- 8.10.1.23- DART DROP IMPACT
- 8.10.1.24- GEL PERMEATION CHROMATOGRAPH (GPC)
- 8.10.1.25- PIPE TESTER
- 8.10.1.26- LIMITED OXYGENATION INDEX (LOI)
- 8.10.1.27- TEAR TESTER
- 8.10.1.28- YELLOW / WHITE INDEX TESTER
- 8.10.1.29- PLAX TESTER

#### 8.10.2 - TECHNICAL

- 8.10.2.1- BALL MILL MIXER
- 8.10.2.2- BLOW FILM
- 8.10.2.3- BLOW MOULDING
- 8.10.2.4- CAST FILM
- 8.10.2.5- INJECTION
- 8.10.2.6- PIPE EXTRUDER
- 8.10.2.7- PRESS
- 8.10.2.8- PELLETIZER

#### 8.11- GENERAL ITEMS

- 8.11.1- ANALYTICAL BALANCE
- 8.11.2- CENTRIFUGE
- 8.11.3- COLORIMETER (UV)
- 8.11.4- COLORIMETER (SAYBOLT)
- 8.11.5- COLORIMETER (COMPERATOR)
- 8.11.6- CONTAMINATING METER
- 8.11.7- BOD / COD / TOC METER
- 8.11.8- AIR / N<sub>2</sub> / H<sub>2</sub> GENERATOR
- 8.11.9- DEMINERALIZED WATER (DM WATER MAKER)
- 8.11.10- DENSITY METER
- 8.11.11- DEW POINT
- 8.11.12- DISTILLATION
- 8.11.13- EXPLOSION PROOF REFRIGERATOR
- 8.11.14- FURNACE
- 8.11.15- HOT PLATE / STRIPPER / MANTLE
- 8.11.16- INDUCTION PERIOD
- 8.11.17- KARL-FISCHER TITRATOR (COULOMETRY / VOLUMETRIC)
- 8.11.18- OVEN / INCUBATOR

- 8.11.19- PARTICLE SIZE (LASERIC)
- 8.11.20- PH METER
- 8.11.21- REID VAPOUR PRESSURE (RVP)
- 8.11.22- REFRACTO METER
- 8.11.23- PARTICLE SIZE (SIEVE SHAKER)
- 8.11.24- STOP WATCH
- 8.11.25- TECHNICAL BALANCE
- 8.11.26- TITRATOR
- 8.11.27- TURBIDITY METER
- 8.11.28- ULTRASONIC BATH
- 8.11.29- VACUUM PUMP
- 8.11.30- WATER BATH
- 8.11.31- HVAC

**8.12- SPECIAL SOFT / HARDWARE**

- 8.12.1- LABORATORY INFORMATION MANAGEMENT SYSTEM

**8.13- LABORATORY GLASSWARE**

**8.14- LABORATORY CHEMICALS**

**8.15- LABORATORY FURNITURE**

- 8.15.1- ACID PROOF TILES
- 8.15.2- ACID PROOF MORTARS

**8.16- SAMPLING EQUIPMENT**

- 8.16.1- NEEDLE VALVE
- 8.16.2- CYLINDER
- 8.16.3- QUICK CONNECTION
- 8.16.4- HOSE
- 8.16.5- RUBBER BLADDER

**8.17- CALIBRATION & STANDARD GASES**

**8.18- CONSUMABLE GOODS**



**COMPANY NAME**

**ORIGIN**

**8.1- CHROMATOGRAPHY**

**8.1.1- GAS CHROMATOGRAPH /MASS SPECTROSCOPE (GC , GC / MS)**

AGILENT TECHNOLOGIES	UK
HP	USA / THE NETHERLANDS
M&I LABTECH	BELGIUM
PHILIPS	THE NETHERLANDS
SHIMADZU	JAPAN
SIEMENS	GERMANY
VARIAN CHROMPACK	USA / THE NETHERLANDS

**8.1.2- HIGH PERFORMANCE LIQUID CHROMATOGRAPHY (HPLC)**

HP	USA / THE NETHERLANDS
PHILIPS	THE NETHERLANDS
VARIAN CHROMPACK	USA / THE NETHERLANDS

**8.1.3- ION CHROMATOGRAPHY (IC)**

METROHM	SWITZERLAND
WATERS	USA / W. EUROPE

**8.2- SPECTROPHOTOMETER**

**8.2.1- FOURIER TRANSFORMER INFRARED (FTIR) , INFRA RED (IR)**

BRUCKER	GERMANY
JASCO	JAPAN
PERKIN ELMER	USA / W. EUROPE
PHILIPS	THE NETHERLANDS
SHIMADZU	JAPAN
THERMOELECTRON	W. EUROPE
VARIAN CHROMPACK	USA / W. EUROPE

**8.2.2- ULTRA VIOLET (UV / UV VISIBLE)**

CARRY	USA / W. EUROPE
CECIL	UK
HACH	USA
PERKIN ELMER	USA / W. EUROPE
PHILIPS	THE NETHERLANDS
VARIAN CHROMPACK	USA / THE NETHERLANDS
WTW	USA / GERMANY

**8.2.3- INDUCTIVELY COUPLED PLASMA / MASS (ICP, ICP / MS)**

PERKIN ELMER	USA / W. EUROPE
PHILIPS	THE NETHERLANDS
VARIAN CHROMPACK	USA / W. EUROPE

**8.2.4- EMISSION SPECTROSCOPE (ES)**

PERKIN ELMER	USA / W. EUROPE
PHILIPS	THE NETHERLANDS
THERMOELECTRON	W. EUROPE
VARIAN CHROMPACK	USA / THE NETHERLANDS

**COMPANY NAME**

**ORIGIN**

**8.2.5- ATOMIC ABSORPTION (AA)**

PERKIN ELMER	USA / W. EUROPE
PHILIPS	THE NETHERLANDS
THERMOELECTRON	W. EUROPE
VARIAN CHROMPACK	USA / THE NETHERLANDS

**8.2.6- X-RAY FLUORESCENCE (XRF) / X-RAY DIFFRACTION (XRD)**

PANALYTICAL (PHILIPS)	UK / THE NETHERLANDS
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**8.2.7- FLAME PHOTOMETER**

PERKIN ELMER	USA / W. EUROPE
SHIMADZU	JAPAN

**8.3- AIR ANALYZER**

ENVIRONMENT S.A.	FRANCE
HORIBA	W. EUROPE
MCZ	GERMANY
TESTO	GERMANY

**8.4- O2 ANALYZER (DISSOLVER)**

HACH	USA / W. EUROPE
METROHAM	SWITZERLAND
METTLER	SWITZERLAND
TOA-DKK	JAPAN
WTW	GERMANY

**8.5- O2 ANALYZER (GAS)**

SERVOMEX	GERMANY
TELEDYNE	USA / W. EUROPE

**8.6- WATER ANALYZER**

METROHM	SWITZERLAND
METTLER	SWITZERLAND
MILLIPORE	USA / W. EUROPE
SARTORIUS	GERMANY
WTW	GERMANY

**8.7- ION SELECTIVE**

METROHM	SWITZERLAND
WATERS	USA / W. EUROPE
WTW	GERMANY

**8.8- OIL ANALYZER**

**8.8.1- FLASH/ POUR/CLOUD POINT**

HERZOG	GERMANY
PAC-ISL SA	FRANCE
PETROTEST	GERMANY

**COMPANY NAME**

**ORIGIN**

**8.8.2- VISCOSITY**

ANTON PAAR	AUSTRIA
HERZOG	GERMANY
KOEHLER	USA / W. EUROPE
LAUDA	AUSTRIA
PERKIN ELMER	USA / W. EUROPE

**8.8.3- WATER IN OIL**

METROHM	SWITZERLAND
METTLER	SWITZERLAND

**8.8.4- LIQUID DENSITY METER**

METTLER	SWITZERLAND
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**8.9- ELEMENTAL (CHNOS) ANALYZER**

WILL BE ADVISED LATER

**8.10- POLYMER TEST EQUIPMENT**

**8.10.1- PHYSICAL**

**8.10.1.1- BRITTLENESS TEMPERATURE**

CEAST	ITALY
ZWICK	GERMANY

**8.10.1.2- BULK DENSITY**

CEAST	ITALY
ZWICK	GERMANY

**8.10.1.3- DENSITYMETER (WITH BALANCE)**

METTLER	SWITZERLAND
SARTORIUS	GERMANY

**8.10.1.4- DIFFERENTIAL SCANNING CALORIMETER (DSC)**

METTLER	SWITZERLAND
PERKIN ELMER	USA / W. EUROPE
PHILIPS	SWITZERLAND

**8.10.1.5- DIFFERENTIAL THERMAL ANALYZER (DTA)**

METTLER	SWITZERLAND
PERKIN ELMER	USA / W. EUROPE
PHILIPS	THE NETHERLANDS

**8.10.1.6- BALL DROP**

CEAST	ITALY
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**8.10.1.7- ELECTRICAL RESISTANCE METER**

CEAST	ITALY
ZWICK	GERMANY

	<i>COMPANY NAME</i>	<i>ORIGIN</i>
<b>8.10.1.8- ENVIRONMENT STRESS CORROSION RESISTANCE(ESCR)</b>		
	CEAST	ITALY
	RAY RAN	W. EUROPE
	ZWICK	GERMANY
<b>8.10.1.9- GLOSS METER</b>		
	AMETEC / DAVEN PORT	W. EUROPE
	CEAST	ITALY
	GARDNER	JAPAN
	ZWICK	GERMANY
<b>8.10.1.10- DENSITY METER (GRADIENT)</b>		
	GARD CO.	JAPAN
<b>8.10.1.11- HARDNESS TESTER</b>		
	WILL BE ADVISED LATER	
<b>8.10.1.12- HAZE METER</b>		
	GARDNER	JAPAN
<b>8.10.1.13- HDT / VICAT</b>		
	WILL BE ADVISED LATER	
<b>8.10.1.14- IZOD IMPACT</b>		
	AMETEC / DAVEN PORT	W. EUROPE
	CEAST	ITALY
	ZWICK	GERMANY
<b>8.10.1.15- MELT FLOW INDEX (MFI)</b>		
	CEAST	ITALY
	ZWICK	GERMANY
<b>8.10.1.16- MELTING POINT</b>		
	CEAST	ITALY
	YAMATO	JAPAN
	ZWICK	GERMANY
<b>8.10.1.17- MICROMETER</b>		
	CEAST	ITALY
	MITUTOYO	JAPAN
	ZWICK	GERMANY
<b>8.10.1.18- TENSILE &amp; FLEXURAL</b>		
	ADAMEL	FRANCE
	INSTRON	UK
	LLOYD	W. EUROPE
<b>8.10.1.19- TGA</b>		
	METTLER	SWITZERLAND
	PERKIN ELMER	USA / W. EUROPE
	PHILIPS	THE NETHERLANDS

	<i>COMPANY NAME</i>	<i>ORIGIN</i>
<b>8.10.1.20- VOLATILENESS METER (WITH BALANCE)</b>		
	WILL BE ADVISED LATER	
<b>8.10.1.21- VOLATILE METER</b>		
	HERAEUS	GERMANY
	POR-LABO	FRANCE
	THERMOELECTRON	W. EUROPE
<b>8.10.1.22- NOTCHING MACHINE</b>		
	CEAST	ITALY
	ZWICK	GERMANY
<b>8.10.1.23- DART DROP IMPACT</b>		
	CEAST	ITALY
	DYNISCO	USA / W. EUROPE
	ZWICK	GERMANY
<b>8.10.1.24- GEL PERMISSION CHROMATOGRAPH (GPC)</b>		
	CEAST	ITALY
	HP	USA / THE NETHERLANDS
	PHILIPS	THE NETHERLANDS
	THERMOELECTRON	W. EUROPE
	VARIAN CHROMPACK	USA / W. EUROPE
	WATERS	USA / W. EUROPE
<b>8.10.1.25- PIPE TESTER</b>		
	CEAST	ITALY
	IPT	GERMANY
<b>8.10.1.26- LIMITED OXYGENATION INDEX (LOI)</b>		
	CEAST	ITALY
	DYNISCO	UK
<b>8.10.1.27- TEAR TESTER</b>		
	CEAST	ITALY
	DAVENPORT	USA
	ZWICK	GERMANY
<b>8.10.1.28- YELLOW / WHITE INDEX TESTER</b>		
	MINOLTA	JAPAN
<b>8.10.1.29- PLAX TESTER</b>		
	CEAST	ITALY
	INFRASERV	GERMANY
	ZWICK	GERMANY
<b>8.10.2- TECHNICAL</b>		
<b>8.10.2.1- BALL MILL MIXER</b>		
	WEBER	GERMANY

	<i>COMPANY NAME</i>	<i>ORIGIN</i>
<b>8.10.2.2- BLOW FILM</b>		
	DR. COLLIN	GERMANY
	REIFENHÄUSER	GERMANY
	WEBER	GERMANY
<b>8.10.2.3- BLOW MOULDING</b>		
	BEKUM	W. EUROPE
	DR. COLLIN	GERMANY
	REIFENHÄUSER	GERMANY
<b>8.10.2.4- CAST FILM</b>		
	DR. COLLIN	GERMANY
	REIFENHÄUSER	GERMANY
	WEBER	GERMANY
<b>8.10.2.5- INJECTION</b>		
	ARBURG	GERMANY
	BATTENFELD	GERMANY
	BILLION	UK
	DR. COLLIN	GERMANY
	HERBERG	GERMANY
	NEGRI BOSSI S.P.A.	ITALY
	REIFENHÄUSER	GERMANY
	WEBER	GERMANY
<b>8.10.2.6- PIPE EXTRUDER</b>		
	BATTENFELD	GERMANY
	BILLION	GERMANY
	DR. COLLIN	GERMANY
	HERBERG	GERMANY
	REIFENHÄUSER	GERMANY
	WEBER	GERMANY
<b>8.10.2.7- PRESS</b>		
	CEAST	ITALY
	DR. COLLIN	GERMANY
<b>8.10.2.8- PELLETIZER</b>		
	BATTENFELD	GERMANY
	DR. COLLIN	GERMANY
	HERBERG	GERMANY
	REIFENHÄUSER	GERMANY
	WEBER	GERMANY
<b>8.11- GENERAL ITEMS</b>		
<b>8.11.1- ANALYTICAL BALANCE</b>		
	A&D	UK
	ADAMLAB	UK
	METTLER	SWITZERLAND

<i>COMPANY NAME</i>	<i>ORIGIN</i>
OHAUS	GERMANY
SARTORIUS	GERMANY
<b>8.11.2- CENTRIFUGE</b>	
CENTRINO	UK
HERAEUS	GERMANY
SIGMA / ALDRICH	GERMANY
<b>8.11.3- COLORIMETER (UV)</b>	
HACH	USA
PERKIN ELMER	USA / W. EUROPE
SHIMADZU	JAPAN
VARIAN	USA / W. EUROPE
<b>8.11.4- COLORIMETER (SAYBOLT)</b>	
LOVIBOND	GERMANY
<b>8.11.5- COLORIMETER (COMPERATOR)</b>	
WILL BE ADVISED LATER	
<b>8.11.6- CONTAMINATING METER</b>	
WILL BE ADVISED LATER	
<b>8.11.7- BOD / COD / TOC METER</b>	
HACH	USA / W. EUROPE
WTW	GERMANY
<b>8.11.8- AIR / N2 / H2 GENERATOR</b>	
DOMNICK	UK
PEAK SCIENTIFIC	UK
SCHMIDLIN-DBS AG	GERMANY
<b>8.11.9- DEMINERALIZED WATER (DM WATER MAKER)</b>	
TKA	GERMANY
MILLIPORE	GERMANY
<b>8.11.10- DENSITY METER</b>	
ANTON PAAR	SWITZERLAND
METROHM	SWITZERLAND
METTLER	SWITZERLAND
<b>8.11.11- DEW POINT</b>	
SHAW	UK
<b>8.11.12- DISTILATION</b>	
HERZOG	GERMANY
KOEHLER	USA / W. EUROPE
NORMALAB	GERMANY
PETROTEST	GERMANY

<i>COMPANY NAME</i>	<i>ORIGIN</i>
<b>8.11.13- EXPLOSION PROOF REFRIGERATOR</b>	
FISHER SCIENTIFIC	GERMANY
LABCOLD	GERMANY
LABLINE	USA / W. EUROPE
<b>8.11.14- FURNACE</b>	
HERAEUS	GERMANY
<b>8.11.15- HOT PLATE / STRIPPER / MANTLE</b>	
COLE PARMER	USA / W. EUROPE
HEIDOLPH	GERMANY
IKA	GERMANY
SCHCOTT	GERMANY
<b>8.11.16- INDUCTION PERIOD</b>	
KOHLER	USA / W. EUROPE
<b>8.11.17- KARL-FISCHER TITRATOR (COULOMETRY / VOLUMETRIC)</b>	
METROHM	SWITZERLAND
METTLER	SWITZERLAND
<b>8.11.18- OVEN / INCUBATOR</b>	
COLE PARMER	USA / W. EUROPE
HERAEUS	GERMANY
IKA	GERMANY
MEMMERT	GERMANY
THERMOELECTRON	W. EUROPE
<b>8.11.19- PARTICLE SIZE (LASERIC)</b>	
MALVERN	UK
METROHM	SWITZERLAND
RETSCH	GERMANY
<b>8.11.20- PH METER</b>	
FISCHER	GERMANY
HACH	GERMANY
METROHM	SWITZERLAND
METTLER	SWITZERLAND
WTW	GERMANY
<b>8.11.21- REID VAPOUR PRESSURE (RVP)</b>	
HERZOG	GERMANY
<b>8.11.22- REFRACTO METER</b>	
COLE PARMER	USA / W. EUROPE
METROHM	SWITZERLAND
METTLER	SWITZERLAND



**COMPANY NAME**

**ORIGIN**

**8.11.23- PARTICLE SIZE (SIEVE SHAKER)**

ATS FAAR	ITALY
HOSOKAWA	JAPAN
RETSCH	GERMANY

**8.11.24- STOP WATCH**

DRÄGER	GERMANY
MILLIPORE	USA / W. EUROPE
PERKIN ELMER	USA / W. EUROPE

**8.11.25- TECHNICAL BALANCE**

A&D	UK
METTLER	SWITZERLAND
OHAUS	GERMANY
SARTORIUS	GERMANY

**8.11.26- TITRATOR**

METTLER	SWITZERLAND
METROHM	SWITZERLAND

**8.11.27- TURBIDITY METER**

HACH	GERMANY
WTW	GERMANY

**8.11.28- ULTRASONIC BATH**

IKA	GERMANY
SONOREX	GERMANY

**8.11.29- VACUUM PUMP**

STERLING	GERMANY
BRAND GMBH	GERMANY

**8.11.30- WATER BATH**

HUBER	GERMANY
JULABO	GERMANY
LAUDA	GERMANY
MEMMERT	GERMANY

**8.11.31- HVAC**

WILL BE ADVISED LATER	
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**8.12- SPECIAL SOFT / HARD WARE**

**8.12.1- LABORATORY INFORMATION MANAGEMENT SYSTEM**

THERMOELECTRON	W. EUROPE
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**8.13- LABORATORY GLASSWARE**

BRAND GMBH	GERMANY
B.B.STERLLING	UK
SCHOTT - DURAN	GERMANY

**COMPANY NAME**

**ORIGIN**

**8.14- LABORATORY CHEMICALS**

ACROSS	USA / W. EUROPE
ALDRICH	USA / W. EUROPE
FLUCKA	USA / W. EUROPE
MERCK	GERMANY
ROMIL	UK
SIGMA	USA / W. EUROPE

**8.15- LABORATORY FURNITURE**

**8.15.1- ACID PROOF TILES**

ARVIN TEC	IRAN
AZAR PARS TAJHIZ	IRAN
FARAYAD TEHRAN	IRAN
FARPAJOOH	IRAN
SHIMA	IRAN
TEHRAN NOAVAR	IRAN

**8.15.2- ACID PROOF MORTARS**

WILL BE ADVISED LATER

**8.16- SAMPLING EQUIPMENT**

**8.16.1- NEEDLE VALVE**

PARKER	USA / W. EUROPE
SUPELCO / SIGMA-ALDRICH	USA / W. EUROPE
SWAGELOK	GERMANY

**8.16.2- CYLINDER**

PARKER	USA / W. EUROPE
SUPELCO / SIGMA-ALDRICH	USA / W. EUROPE
SWAGE-LOCK	GERMANY

**8.16.3- QUICK CONNECTION**

PARKER	USA / W. EUROPE
SUPELCO / SIGMA-ALDRICH	USA / W. EUROPE
SWAGELOK	GERMANY

**8.16.4- HOSE**

PARKER	USA / W. EUROPE
SUPELCO / SIGMA-ALDRICH	USA / W. EUROPE
SWAGELOK	GERMANY

**8.16.5- RUBBER BLADDER**

WILL BE ADVISED LATER

**8.17- CALIBRATION & STANDARD GASES**

AIR LIQUIDE	FRANCE
AIR PRODUCTS	USA / W. EUROPE
B.O.C.	UK
LINDE	GERMANY

	<i>COMPANY NAME</i>	<i>ORIGIN</i>
<b>8.18- CONSUMABLE GOODS</b>		
	DRÄGER	GERMANY
	JULABO	GERMANY
	KERN	GERMANY
	LABCOLD	USA / W. EUROPE
	MILLIPORE	USA / W. EUROPE
	SUPELCO / SIGMA-ALDRICH	USA / W. EUROPE

# **WORKSHOP**

## **9. WORKSHOP & MAINTENANCE EQUIPMENT**

### **9.1- MECHANICAL EQUIPMENT**

#### **9.1.1- MACHINE SHOP**

- 9.1.1.1- BENDING MACHINE
- 9.1.1.2- BEVELING MACHINE
- 9.1.1.3- MILLING MACHINE
- 9.1.1.4- LATHE MACHINE
- 9.1.1.5- BORING MACHINE
- 9.1.1.6- DYNAMIC BALANCING MACHINE
- 9.1.1.7- DRILLING MACHINE
- 9.1.1.8- GRINDER MACHINE
- 9.1.1.9- CUTTING MACHINE
- 9.1.1.10- ROLLING MACHINE

#### **9.1.2- VALVE SHOP**

- 9.1.2.1- VALVE TEST BENCH
- 9.1.2.2- LAPPING MACHINE
- 9.1.2.3- RING & GASKET CUTTER / PACKING CUTTER

#### **9.1.3- WELDING SHOP**

- 9.1.3.1- ELECTRODE OVEN
- 9.1.3.2- POLYETHYLENE WELDING EQUIPMENT
- 9.1.3.3- WELDING MACHINE
- 9.1.3.4- POST WELD HEAT EQUIPMENT
- 9.1.3.5- PLASMA CUTTING

#### **9.1.4- PUMP SHOP**

- 9.1.4.1- HYDROSTATIC TEST PUMP

#### **9.1.5- AUXILIARY**

- 9.1.5.1- CHAIN HOIST
- 9.1.5.2- GANTRY / MOBILE CRANE
- 9.1.5.3- JET CLEANER
- 9.1.5.4- AIR COMPRESSOR
- 9.1.5.5- CHAIN BLOCK
- 9.1.5.6- HOT TAP
- 9.1.5.7- HYDRAULIC PRESS
- 9.1.5.8- HOLIDAY TEST EQUIPMENT
- 9.1.5.9- ALIGNMENT TOOLS
- 9.1.5.9.1- DIAL GAUGE
- 9.1.5.9.2- LASER
- 9.1.5.10- PORTABLE FLANGE FACE
- 9.1.5.11- STROBOSCOPE
- 9.1.5.12- TUBE EXPANDER
- 9.1.5.13- VIBRATION METER & ANALYZER
- 9.1.5.14- COATING THICKNESS GAUGE METER
- 9.1.5.15- HYDRAULIC BEARING REMOVAL TOOL

- 9.1.5.16- FORMING MACHINE
- 9.1.5.17- GRINDING MACHINE
- 9.1.5.18- AXIAL / CYLINDRICAL GRINDING MACHINE
- 9.1.5.19- ELECTRICAL LIFT TRUCK
- 9.1.5.20- MACHINE TOOLS

#### 9.1.6- HIGH TEC. SPARE PARTS (CRITICAL MACHINERY)

- 9.1.6.1- BLADE & VANE
- 9.1.6.2- BEARING
- 9.1.6.3- ROTOR (SHAFT & DISK)
- 9.1.6.4- IMPELLER
- 9.1.6.5- MECHANICAL / LIQUID & DRY GAS SEAL TYPE (PARTS & COMPLETED)
- 9.1.6.6- NOZZLE & COMBUSTOR
- 9.1.6.7- SUCTION / DISCHARGE VALVE
- 9.1.6.8- CUTTER BLADE

## 9.2- INSTRUMENTATION EQUIPMENT

- 9.2.1- COUNTER TIMER
- 9.2.2- DEAD WEIGHT TESTER
- 9.2.3- ELECTRONIC BENCH TEST
- 9.2.4- FIELDBUS CALIBRATOR
- 9.2.5- FREQUENCY METER
- 9.2.6- HART COMMUNICATOR
- 9.2.7- IC TESTER
- 9.2.8- MEMORY PROGRAMMER / ERASER
- 9.2.9- OIL BATH / OVEN
- 9.2.10- OSCILLOSCOPE
- 9.2.11- PNEUMATIC TEST BENCH
- 9.2.12- PNEUMATIC HAND PUMP
- 9.2.13- PORTABLE 24 VDC POWER SUPPLY
- 9.2.14- PORTABLE CALIBRATOR WITH DIGITAL MANOMETER
- 9.2.15- PORTABLE DIGITAL MULTIMETER
- 9.2.16- DC CLAMP MILLI AMMETER
- 9.2.17- PORTABLE HAND HELD TACHOMETER
- 9.2.18- PORTABLE MANOMETER DIGITAL / ANALOGUE TYPE
- 9.2.19- PORTABLE PNEUMATIC CALIBRATOR
- 9.2.20- PORTABLE SIGNAL GENERATOR
- 9.2.21- PORTABLE SURFACE THERMOMETER
- 9.2.22- PORTABLE TEMPERATURE INDICATOR
- 9.2.23- PORTABLE THERMOCOUPLE / RTD SIMULATOR AND TESTER
- 9.2.24- PORTABLE UNIVERSAL METER
- 9.2.25- LCR METER
- 9.2.26- PORTABLE VACUUM SET
- 9.2.27- PORTABLE VIBRATION METER
- 9.2.28- PORTABLE VIBRATION CALIBRATOR
- 9.2.29- RESISTANCE DECADE BOX
- 9.2.30- CAPACITANCE BOX
- 9.2.31- STANDARD DC VOLTAGE / CURRENT SOURCE
- 9.2.32- STANDARD Hg COLUMN MANOMETER

- 9.2.33- STANDARD MERCURY THERMOMETER
- 9.2.34- STANDARD TEST GAUGE
- 9.2.35- STANDARD WATER COLUMN MANOMETER
- 9.2.36- PORTABLE PH METER
- 9.2.37- PORTABLE CONDUCTIVITY METER
- 9.2.38- ABSOLUTE MANOMETER

### **9.3- ELECTRICAL EQUIPMENT**

- 9.3.1- INSULATION RESISTANCE TESTER
- 9.3.2- HIPOT TESTER (AC/DC)
- 9.3.3- CLAMP- ON MULTIMETER
- 9.3.4- EARTH RESISTANCE TESTER
- 9.3.5- HI-POTENTIAL EQUIPMENT METER
- 9.3.6- HYDROLIC PRESS CABLE SHOE
- 9.3.7- INDUCTION BEARING HEATER
- 9.3.8- MCC TEST BENCH
- 9.3.9- PHASE SEQUENCE TESTER
- 9.3.10- PRIMARY / SECONDARY CURRENT INJECTION SET
- 9.3.11- TRANSFORMER OIL TESTER
- 9.3.12- WINDING MACHINE
- 9.3.13- WINDING TESTER
- 9.3.14- OIL TREATING PACKAGE
- 9.3.15- RELAY TEST SET
- 9.3.16- MOTOR TEST BENCH
- 9.3.17- LOW RESISTANCE METER
- 9.3.18- CABLE LOCATION FAULT SYSTEM (CABLE FAULT LOCATOR / SURGE GENERATOR / CABLE BURN TEST)
- 9.3.19- LASER TERMOMETER
- 9.3.20- LUX METER
- 9.3.21- PORTABLE CHARGER
- 9.3.22- RESISTIVE LOAD BANK

COMPANY NAME

ORIGIN

**9.1- MECHANICAL EQUIPMENT**

**9.1.1- MACHINE SHOP**

**9.1.1.1- BENDING MACHINE**

GHAEM MACHINE	IRAN
ENERPAC	USA / W. EUROPE
RIGID	USA / W. EUROPE
SAHINLER	TURKEY

**9.1.1.2- BEVELING MACHINE**

WILL BE ADVISED LATER	
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**9.1.1.3- MILLING MACHINE**

MACHINE SAZI TABRIZ	IRAN
CINCINNATI MACHINES	USA / W. EUROPE
DMG MORI	GERMANY
HITACHI VIA MECHANICS LTD.	JAPAN
KENT	USA
KNÜTH	GERMANY

**9.1.1.4- LATHE MACHINE**

MACHINE SAZI TABRIZ	IRAN
DMG MORI	GERMANY
KENT	USA
KNÜTH	GERMANY
POREBA	POLAND

**9.1.1.5- BORING MACHINE**

CINCINNATI MACHINES	USA / W. EUROPE
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**9.1.1.6- DYNAMIC BALANCING MACHINE**

CEMB	ITALY
ABRO	THE NETHERLANDS
HOFMANN	GERMANY
PHOENIX	UK
IRD	USA / W. EUROPE
SCHENCK	GERMANY

**9.1.1.7- DRILLING MACHINE**

MACHINE SAZI TABRIZ	IRAN
BOSCH	GERMANY
CINCINNATI MACHINES	USA / W. EUROPE
KENT	USA
KNÜTH	GERMANY
LAP MASTEK	UK / W. EUROPE
POREBA	POLAND



**COMPANY NAME**

**ORIGIN**

**9.1.1.8- GRINDER MACHINE**

MACHINE SAZI TABRIZ	IRAN
CINCINNATI MACHINES	USA / W. EUROPE
KENT	USA
SAHINLER	TURKEY

**9.1.1.9- CUTTING MACHINE**

GHAEM MACHINE	IRAN
SAHINLER	TURKEY
TOS - MET SRO	CZECH

**9.1.1.10- ROLLING MACHINE**

MACHINE SAZI TABRIZ	IRAN
SAHINLER	TURKEY

**9.1.2- VALVE SHOP**

**9.1.2.1- VALVE TEST BENCH**

AZAR SANGAN	IRAN
MEHAND HYDRAULICS ENG.	IRAN
MASHINALAT DAVAR JONOOB	IRAN
POOLAD OWJAZ	IRAN
VENTIL	THE NETHERLANDS

**9.1.2.2- LAPPING MACHINE**

IDEH GOSTAR KAVEH	IRAN
LAMPLAN	UK
NAHORAN	IRAN
KEMET	UK
LAPMASTER INTERNATIONAL (UK) LTD	USA / W. EUROPE

**9.1.2.3- RING & GASKET CUTTER / PACKING CUTTER**

ALLPAX	USA
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**9.1.3- WELDING SHOP**

**9.1.3.1- ELECTRODE OVEN**

BOHLER (VOESTALPINE BÖHLER WELDING)	GERMANY
ESAB	USA
KEEN OVENS	USA
LINKOLN ELECTRIC	UK

**9.1.3.2- POLYETHYLENE WELDING EQUIPMENT**

WILL BE ADVISED LATER	
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**9.1.3.3- WELDING MACHINE**

BOHLER (VOESTALPINE BÖHLER WELDING)	GERMANY
ESAB	USA

<i>COMPANY NAME</i>	<i>ORIGIN</i>
GAAM ELECTRIC	IRAN
LINCOLN ELECTRIC	UK
MILLER	USA
SANAYE JOOSH VA BORESH KARA	IRAN

**9.1.3.4- POST WELD HEAT EQUIPMENT**

MARITIME STRESS	CANADA
WELDOTHERM	GERMANY

**9.1.3.5- PLASMA CUTTING**

ESAB	USA
GAAM ELECTRIC	IRAN
SANAYE JOOSH VA BORESH KARA	IRAN

**9.1.4- PUMP SHOP**

**9.1.4.1- HYDROSTATIC TEST PUMP**

ENERPAC	USA
HYDRO FORCE PUMPS	UK

**9.1.5- AUXILIARY**

**9.1.5.1- CHAIN HOIST**

KAVOSH SANAT TOOS	IRAN
SADID KARAN SABA	IRAN
TELFER	IRAN
VITAL	JAPAN

**9.1.5.2- GANTRY/MOBILE CRANE**

LAGVAR	IRAN
MACHINE SAZI ARAK	IRAN
SABAHANG VAZIN	IRAN
SADAD MACHINE	IRAN
POWER TEAM	USA
TADANO	GERMANY

**9.1.5.3- JET CLEANER**

EUREKA	JAPAN
HAWA	GERMANY
INGRID KRANZLE	GERMANY
WOMA	W. EUROPE

**9.1.5.4- AIR COMPRESSOR**

ATLAS COPCO.	IRAN
BARON	IRAN
COMPRESSOR SAZI TABRIZ	IRAN
HAVAYAR	IRAN

	<i>COMPANY NAME</i>	<i>ORIGIN</i>
<b>9.1.5.5- CHAIN BLOCK</b>		
	ABZAR MAHDI	IRAN
<b>9.1.5.6- HOT TAP</b>		
	MIRRAGE	UK
	NATIONAL PIPING SERVICE IPSCO	USA
<b>9.1.5.7- HYDRAULIC PRESS</b>		
	MACHINE SAZI IRAN	IRAN
	MEHAND HYDRAULICS ENG.	IRAN
<b>9.1.5.8- HOLIDAY TEST EQUIPMENT</b>		
	WILL BE ADVISED LATER	
<b>9.1.5.9- ALIGNMENT TOOLS</b>		
<b>9.1.5.9.1- DIAL GAUGE</b>		
	EASYVIBER	SWEDEN
<b>9.1.5.9.2- LASER</b>		
	EASYVIBER	SWEDEN
<b>9.1.5.10- PORTABLE FLANGE FACE</b>		
	MIRAGE	UK
<b>9.1.5.11- STROBOSCOPE</b>		
	WILL BE ADVISED LATER	
<b>9.1.5.12- TUBE EXPANDER</b>		
	AIR TOOL	USA
	WICKSTEED	UK
<b>9.1.5.13- VIBRATION METER &amp; ANALYZER</b>		
	IRD	UK
	SCHENCK	W. EUROPE
<b>9.1.5.14- COATING THICKNESS GAUGE METER</b>		
	ELCOMETER	UK
	FILMETRICS	USA / W. EUROPE
	LUMETRICES	USA / W. EUROPE
	MICRO EPSILON	USA / W. EUROPE
<b>9.1.5.15- HYDRAULIC BEARING REMOVAL TOOL</b>		
	HI FORCE	UK
	SKF	W. EUROPE
	ENERPAC	USA / W. EUROPE
<b>9.1.5.16- FORMING MACHINE</b>		
	MACHINE SAZI TABRIZ	IRAN

	<i>COMPANY NAME</i>	<i>ORIGIN</i>
<b>9.1.5.17- GRINDING MACHINE</b>		
	BOSCH	GERMANY
	KUNG	S. KOREA
	METABO	W. EUROPE
<b>9.1.5.18- AXIAL/CYLINDRICAL GRINDING MACHINE</b>		
	KENT	USA
	KNÜTH	GERMANY
<b>9.1.5.19- ELECTRICAL LIFT TRUCK</b>		
	WILL BE ADVISED LATER	
<b>9.1.5.20- MACHINE TOOLS</b>		
	SANDVIK	SWEDEN

**9.1.6- HIGH TEC. SPARE PARTS (CRITICAL MACHINERY)**

**9.1.6.1- BLADE & VANE**

TURBINHAYE SANATI GHADIR YAZD (ONLY VANE)	IRAN
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**9.1.6.2- BEARING**

BOLBERING SAZI TABRIZ	IRAN
FAG	W. EUROPE
NACHI	JAPAN
SKF	W. EUROPE
TURBINHAYE SANATI GHADIR YAZD	IRAN

**9.1.6.3- ROTOR (SHAFT & DISK)**

KAVOSH SANAT TOOS	IRAN
KHADAMAT TEHRAN WIRA	IRAN

**9.1.6.4- IMPELLER**

KAVOSH SANAT TOOS	IRAN
KHADAMAT TEHRAN WIRA	IRAN

**9.1.6.5- MECHANICAL / LIQUID & DRY GAS SEAL TYPE (PARTS & COMPLETED)**

SANAYE HAFTOM TIRE ESFAHAN (SILHAYE SANATI IRAN) *	IRAN
REFER TO ITEM NO. 1.1.5 (MECHANICAL SEAL) OF MECHANICAL VENDOR LIST-REV.7	
* <b>ONLY FOR MECHANICAL SEAL</b>	

**9.1.6.6- NOZZLE & COMBUSTOR**

WILL BE ADVISED LATER	
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**9.1.6.7- SUCTION/DISCHARGE VALVE**

WILL BE ADVISED LATER	
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**9.1.6.8- CUTTER BLADE**

WILL BE ADVISED LATER	
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COMPANY NAME

ORIGIN

**9.2- INSTRUMENTATION EQUIPMENT**

**9.2.1- COUNTER TIMER**

ESCORT	W. EUROPE
LEADER	JAPAN
OMRON	JAPAN

**9.2.2- DEAD WEIGHT TESTER**

DH-BUDENBERG (WIKA GROUP)	GERMANY
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**9.2.3- ELECTRONIC BENCH TEST**

PARS HASSAS	IRAN
METRIX	USA / W. EUROPE

**9.2.4- FIELDBUS CALIBRATOR**

EMERSON	UK
YOKOGAWA	JAPAN / W. EUROPE
HONEYWELL	GERMANY

**9.2.5- FREQUENCY METER**

BK	USA / W. EUROPE
ESCORT	W. EUROPE
FLUKE	USA / W. EUROPE
LEADER	JAPAN

**9.2.6- HART COMMUNICATOR**

EMERSON	UK
FLUKE	USA / W. EUROPE
HONEYWELL	USA / W. EUROPE
YOKOGAWA	JAPAN / W. EUROPE

**9.2.7- IC TESTER**

ABI	UK
LEADER	JAPAN
LEAP	W. EUROPE

**9.2.8- MEMORY PROGRAMMER / ERASER**

SUPER PRO.	W. EUROPE
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**9.2.9- OIL BATH/OVEN**

DRUCK	USA / W. EUROPE
INDOMART	CANADA
ISOTECH PEGASUS	UK
TECHNE	W. EUROPE

**9.2.10- OSCILLOSCOPE**

SA IRAN	IRAN
FLUKE	USA / W. EUROPE
HIOKI	JAPAN

<i>COMPANY NAME</i>	<i>ORIGIN</i>
HITACHI	JAPAN
LEADER	JAPAN
METRIX	USA / W. EUROPE
TEXTRONIX	UK / W. EUROPE
<b>9.2.11- PNEUMATIC TEST BENCH</b>	
PARS HASSAS	IRAN
DH-BUDENBERG (WIKA GROUP)	GERMANY
<b>9.2.12- PNEUMATIC HAND PUMP</b>	
AMETEK	UK
DRUCK	USA / W. EUROPE
INDOMART	CANADA
<b>9.2.13- PORTABLE 24 VDC POWER SUPPLY</b>	
FLUKE	USA / W. EUROPE
INDOMART	CANADA
YOKOGAWA	JAPAN
<b>9.2.14- PORTABLE CALIBRATOR WITH DIGITAL MANOMETER</b>	
DH-BUDENBERG (WIKA GROUP)	GERMANY
YOKOGAWA	JAPAN
<b>9.2.15- PORTABLE DIGITAL MULTIMETER</b>	
FLUKE	USA / W. EUROPE
HIOKI	JAPAN
METRIX	USA / W. EUROPE
<b>9.2.16- DC CLAMP MILLI AMMETER</b>	
FLUKE	USA / W. EUROPE
HIOKI	JAPAN
METRIX	USA / W. EUROPE
<b>9.2.17- PORTABLE HAND HELD TACHOMETER</b>	
MITCHELL INSTRUMENTS	USA
PCE INSTRUMENTS	UK
SHERMAN INSTRUMENTS	CANADA
<b>9.2.18- PORTABLE MANOMETER DIGITAL / ANALOGUE TYPE</b>	
AMETEK	UK
DH-BUDENBERG (WIKA GROUP)	GERMANY
WIKA ALEXANDER WIEGAND SE & CO. KG (WIKA GROUP)	GERMANY
<b>9.2.19- PORTABLE PNEUMATIC CALIBRATOR</b>	
AMETEK	UK
DH-BUDENBERG (WIKA GROUP)	GERMANY
DRUCK	USA / W. EUROPE

<i>COMPANY NAME</i>	<i>ORIGIN</i>
<b>9.2.20- PORTABLE SIGNAL GENERATOR</b>	
SA IRAN	IRAN
FLUKE	USA / W. EUROPE
INDOMART	CANADA
PROMAC	W. EUROPE
TTI	UK
<b>9.2.21- PORTABLE SURFACE THERMOMETER</b>	
FLUKE	USA / W. EUROPE
HIOKI	JAPAN
<b>9.2.22- PORTABLE TEMPERATURE INDICATOR</b>	
DRUCK	USA / W. EUROPE
FLUKE	USA / W. EUROPE
HIOKI	JAPAN
INDOMART	CANADA
OMRON	JAPAN
PROMAC	W. EUROPE
<b>9.2.23- PORTABLE THERMOCOUPLE / RTD SIMULATOR AND TESTER</b>	
AMETEK	UK
DRUCK	USA / W. EUROPE
FLUKE	USA / W. EUROPE
INDOMART	CANADA
ISOTECH	UK
PROMAC	W. EUROPE
<b>9.2.24- PORTABLE UNIVERSAL METER</b>	
SA IRAN	IRAN
DRUCK	USA / W. EUROPE
FLUKE	USA / W. EUROPE
HIOKI	JAPAN
<b>9.2.25- LCR METER</b>	
FLUKE	USA / W. EUROPE
HIOKI	JAPAN
LEADER	JAPAN
<b>9.2.26- PORTABLE VACUUM SET</b>	
DH-BUDENBERG (WIKA GROUP)	GERMANY
DRUCK	USA / W. EUROPE
<b>9.2.27- PORTABLE VIBRATION METER</b>	
BENTLY NEVADA	USA / W. EUROPE
IRD	UK
<b>9.2.28- PORTABLE VIBRATION CALIBRATOR</b>	
BENTLY NEVADA	USA / W. EUROPE

	<i>COMPANY NAME</i>	<i>ORIGIN</i>
<b>9.2.29- RESISTANCE DECADE BOX</b>	YOKOGAWA	JAPAN
<b>9.2.30- CAPACITANCE BOX</b>	IET LABS	USA
<b>9.2.31- STANDARD DC VOLTAGE / CURRENT SOURCE</b>	PARS HASSAS	IRAN
	INDOMART	CANADA
	YOKOGAWA	JAPAN
<b>9.2.32- STANDARD Hg COLUMN MANOMETER</b>	LAMBRECHT	GERMANY
	PRINCO	GERMANY
<b>9.2.33- STANDARD MERCURY THERMOMETER</b>	FLUKE	USA / W. EUROPE
<b>9.2.34- STANDARD TEST GAUGE</b>	ASHCROFT	USA / W. EUROPE
	DH-BUDENBERG (WIKA GROUP)	GERMANY
	HEISE	USA / W. EUROPE
<b>9.2.35- STANDARD WATER COLUMN MANOMETER</b>	FISHER & PAYKEL	USA / W. EUROPE
<b>9.2.36- PORTABLE PH METER</b>	EMERSON	W. EUROPE
	METTLER	USA / W. EUROPE
	YOKOGAWA	JAPAN
<b>9.2.37- PORTABLE CONDUCTIVITY METER</b>	EMERSON	W. EUROPE
	METTLER	USA / W. EUROPE
	YOKOGAWA	JAPAN
<b>9.2.38- ABSOLUTE MANOMETER</b>	ASHCROFT	USA / W. EUROPE
	WIKA ALEXANDER WIEGAND SE & CO. KG (WIKA GROUP)	GERMANY

### **9.3- ELECTRICAL EQUIPMENT**

#### **9.3.1- INSULATION RESISTANCE TESTER**

AVO / MEGGER	UK
CHAUVIN ARNOUX	FRANCE
FLUKE	USA / W. EUROPE
HIOKI	JAPAN
KYORITSU	JAPAN



	<i>COMPANY NAME</i>	<i>ORIGIN</i>
<b>9.3.2- HI-POT TESTER (AC/DC)</b>		
	JAHADE DANESHGAHI ELM VA SANAT	IRAN
	AVO / MEGGER	UK
	SEBAKMT	GERMANY
	MUSASHI	JAPAN
<b>9.3.3- CLAMP- ON MULTIMETER</b>		
	AVO / MEGGER	UK
	CHAUVIN ARNOUX	FRANCE
	FLUKE	USA / W. EUROPE
	HIOKI	JAPAN
	KYORITSU	JAPAN
<b>9.3.4- EARTH RESISTANCE TESTER</b>		
	AVO / MEGGER	UK
	CHAUVIN ARNOUX	FRANCE
	FLUKE	USA / W. EUROPE
	HIOKI	JAPAN
	KYORITSU	JAPAN
<b>9.3.5- HI-POTENTIAL EQUIPMENT METER</b>		
	AVO / MEGGER	UK
	DETEX	USA / W. EUROPE
<b>9.3.6- HYDROLIC PRESS CABLE SHOE</b>		
	BURNDY	USA / W. EUROPE
	ENERPACK	USA / W. EUROPE
	HIGHFORCE	UK
	KARL PFISTERER	GERMANY
	NISHIDA	JAPAN
<b>9.3.7- INDUCTION BEARING HEATER</b>		
	FAG	GERMANY
	SKF	GERMANY
	SN-THERM220	GERMANY
	SNR	FRANCE
	TM INDUCTION HEATING	THE NETHERLANDS
<b>9.3.8- MCC TEST BENCH</b>		
	TO BE SUPPLIED BY MCC MANUFACTURER	
<b>9.3.9- PHASE SEQUENCE TESTER</b>		
	AVO / MEGGER	UK
	CHAUVIN ARNOUX	FRANCE
	FLUKE	USA / W. EUROPE
	HIOKI	JAPAN
	KYORITSU	JAPAN

**COMPANY NAME**

**ORIGIN**

**9.3.10- PRIMARY/SECONDARY CURRENT INJECTION SET**

JAHAD DANESHGAHI ELM VA SANAT	IRAN
AVO / MEGGER	UK
BAUR	AUSTRIA
EURO SMC S.A.	SPAIN
FOSTER	UK
HIPOTRONICS	USA / W. EUROPE
SIEMENS	GERMANY

**9.3.11- TRANSFORMER OIL TESTER**

AVO / MEGGER	UK
BAUR	AUSTRIA
MUSASHI	JAPAN

**9.3.12- WINDING MACHINE**

ELECTRICAL POWER INDUSTRIES LABORATORIES (EPIL)	IRAN
AVO / MEGGER	UK
WHITELEGG MACHINES	UK

**9.3.13- WINDING TESTER**

AVO / MEGGER	UK
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**9.3.14- OIL TREATING PACKAGE**

AAN	GERMANY
HERING	GERMANY
VOKES	USA / W. EUROPE

**9.3.15- RELAY TEST SET**

JAHAD DANESHGAHI ELM VA SANAT	IRAN
AVO / MEGGER	UK
BAUR	AUSTRIA
CEE	FRANCE
EUROSMC S.A.	SPAIN
FOSTER	UK
SIEMENS	GERMANY

**9.3.16- MOTOR TEST BENCH**

ABB GROUP	GERMANY
WHITELEGG MACHINES	UK

**9.3.17- LOW RESISTANCE METER**

AVO / MEGGER	UK
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**9.3.18- CABLE LOCATION FAULT SYSTEM (cable fault locator/surge generator/cable burn test)**

AVO / MEGGER	UK
BICOTEST	UK
SEBAKMT	GERMANY

**COMPANY NAME**

**ORIGIN**

**9.3.19- LASER TERMOMETER**

FLUKE	USA / W. EUROPE
RAYTEK	GERMANY
TES	TAIWAN

**9.3.20- LUX METER**

AVO / MEGGER	UK
CHAUVIN ARNOUX	FRANCE
FLUKE	USA/ W. EUROPE

**9.3.21- PORTABLE CHARGER**

BORNA ELCTRONIC	IRAN
FARATEL	IRAN
JAHAD DANESHGAH ELM VA SANAT	IRAN
ALCAD	SWEDEN
GUTOR ELECTRONIC	FRANCE
SAFT POWER SYSTEM	FRANCE
SCHNEIDER GROUP	FRANCE
SIEMENS	GERMANY
SOCOMEK	FRANCE
TOSHIBA CORPORATION	JAPAN

**9.3.22- RESISTIVE LOAD BANK**

BORNA ELECTRONIC	IRAN
JAHADE DANESHGAHI ELM VA SANAT	IRAN