

# KPD-TAY COMPRESSION PROJECT

## Approved Vendor List



A	Issued for Bidding	Jan, 2022	ASF/SJA/AIB	UHI	MAS
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**ENAR Petrotech Services  
(Pvt.) Limited**

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## **1.0 OGDCL'S APPROVAL OF SUPPLIERS**

Lists of Suppliers, for various categories of Equipment and Materials which are acceptable to OGDCL are included in this Attachment. Bidder, in proposing sources of supplies in their bid shall strictly adhere to these lists. However, in exceptional cases, where bidder feels that alternate sources will have cost or schedule advantage to OGDCL without sacrificing the quality, reliability and maintainability of the Equipment and Materials, Bidders may propose alternate sources with complete details of the proposed Supplier for OGDCL's consideration.

For his proposal the Bidder shall select and include, a list of proposed Suppliers listed in this attachment against each item of supplies and services as listed in bid prices quotation.

Prior to award of the Contract an approved list of Suppliers and Sub-contractors (the "Approved List") will be developed based on OGDCL's review and approval of the proposed list of Suppliers.

The Contractor shall not issue enquiries to Suppliers not included on the Approved List unless he has the express written agreement of OGDCL. Any amendments to the Approved List, which will eventually be included to this Attachment to the Contract, will be at the sole discretion of OGDCL for amendment.

The use by the Contractor of any Supplier included on the Approved List shall not relieve the Contractor in any way whatsoever from his responsibility for the due performance of the Contract.

The bidder/contractor shall also ensure that no Custom General Order (CGO NO. 02 of 2017 updated by the Engineering Development Board or any latest revision) material/ equipment/ part of plant/ spares etc. which are being manufactured in Pakistan is being imported and it will submit an affidavit this effect as per Annexure-XIII with each shipment.

In this respect Contractor will check the Preferred Vendor list against the required material / items of the project to ensure that the project material/items which are included in Custom General Order (CGO NO. 02 of 2017 updated by the Engineering Development Board) as locally manufactured goods must be procured locally to avoid their import as foreign material resulting in payment of extra / additional duties/ taxes in contrast to exemption for E&P companies vide SRO 678/ 2004.

In case any CGO material/ equipment/ part of plant/ spares etc. which are being manufactured in Pakistan has been imported by the bidder/contractor then all the additional duties, taxes, guarantees and any other requirement levied by Pakistan Custom Authorities shall be sole responsibility of the bidder/Contractor. These additional payments if paid by OGDCL shall be



deducted from any due payment or retention amount in the letter of credits or guarantee or reimbursement by bidder/contractor on actual basis.

**APPROVED LIST OF MANUFACTURERS AND SUPPLIERS**

**Article I. VENDOR LIST AS PER EQUIPMENT CATEGORY**

***1.01 VIBRATION MONITORING EQUIPMENT/SYSTEM***

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Bentley Nevada (GE)	International
(ii)	Metrix Instrument Co.	International
(iii)	KrautKramer	International
(iv)	Entek	International
(v)	ProvibTech	International

***1.02 AIR COOLED HEAT EXCHANGERS (PROCESS GAS SERVICE)***

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Batignolles Technologies Thermiques	International
(ii)	Hudson Products Corporation	International
(iii)	Descon Engineering	International / Pakistan
(iv)	Airfin, Marley Cooling Technologies (Acquired by SPX)	International
(v)	Smithco	International
(vi)	Deutsche Babcock	International
(vii)	GEA Rainey	International
(viii)	Jiangsu Sunpower Technology Co. Ltd.	International
(ix)	Sasakura	International
(x)	D'Hondt	International
(xi)	Jord International	International
(xii)	Aztech Heat Exchangers Pte Ltd	International
(xiii)	Alfa Laval / ACE	International
(xiv)	Air-X-Changers	International
(xv)	Chevon International (S) PTE LTD	International

(xvi)	AJC Engineering Pvt Ltd	International/Pakistan
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### 1.03 SHELL & TUBE HEAT EXCHANGER

Sr. #	Vendor / Supplier Name	Country of Origin
(i)	Exell Inc.	International
(ii)	Fabsco	International
(iii)	Hudson Product Corporation	International
(iv)	Descon Engineering	International / Pakistan
(v)	Johnson Hunt	International
(vi)	Kawasaki Heavy Industries	International
(vii)	Calhex Industries	International
(viii)	Jiangsu Sunpower Technology Co., Ltd.	International
(ix)	Newpoint Gas	International
(x)	Exterran	International
(xi)	QB Johnson Manufacturing Inc.	International
(xii)	AztechHeatExchangersPte Ltd.	International
(xiii)	GEA	International
(xiv)	Alfa Laval / ACE	International
(xv)	Steeltek	International
(xvi)	Huffman	International
(xvii)	Shell &Tube LLC	International
(xviii)	LANPEC Technologies Limited	International
(xix)	Chevron International (S) PTE LTD	International
(xx)	AJC Engineering Pvt Ltd	International/Pakistan

### 1.04 PRESSURE VESSELS

Sr. #	Vendor / Supplier Name	Country of Origin
(i)	Heavy Mechanical Complex Ltd. (HMC)	Pakistan

(ii)	DDFC	Pakistan
(iii)	HMC-3	Pakistan
(iv)	AJC Engineering Pvt Ltd	International / Pakistan
(v)	Descon Engineering	International / Pakistan
(vi)	Deustche Babcock	International
(vii)	ADOS	International
(viii)	FMB Hudson	International
(ix)	GMMOS	International
(x)	JFE (NKK)	International
(xi)	Exterren	International
(xii)	Process Group International	International
(xiii)	Tianjin Hanyang Metal Equipment Co. Ltd.	International
(xiv)	QB Johnson Manufacturing Inc.	International
(xv)	Gastec Engineering Corporation	International
(xvi)	NatcoGroup Inc.	International
(xvii)	Newpoint Gas	International
(xviii)	GLP	International
(xix)	AMC SdnBhd	International
(xx)	Modern Fabrication (MEFAB)	International
(xxi)	V-Gas LLC	International
(xxii)	S-Con Engineering	International
(xxiii)	Pennum	International
(xxiv)	Premium Welding	International
(xxv)	Modern CustomFab	International
(xxvi)	Vendor having ASME U & S stamp certification and relative experience.	

#### **1.05 PROCESS RECIPROCATING COMPRESSORS**

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
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(i)	Siemens-Dresser Rand	International
(ii)	Nuovo Pignone	International
(iii)	Ariel	International
(iv)	GE	International

**1.06 GAS ENGINE DRIVER**

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Waukesha	International
(ii)	Caterpillar	International
(iii)	Siemens	International
(iv)	GE	International

**1.07 AIR COMPRESSORS/ INSTRUMENT AIR GENERATION PACKAGE**

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Atlas Copco	International
(ii)	BogeKompressor	International
(iii)	Ingersoll Rand	International
(iv)	Gardner Denver (Champion) Air Compressors	International
(v)	Kaeser Compressors	International
(vi)	Hanover Compressor Company	International
(vii)	Elliott	International
(viii)	Compare	International
(ix)	PALL pneumatic products	International
(x)	Air Products	International
(xi)	IGS Generon	International
(xii)	Kaishan Compressor Co., Ltd	International
(xiii)	Air Pack	International
(xiv)	Hitachi (Sullair)	International



**1.08 PULSATION STUDY**

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Beta Machinery	International
(ii)	PDI USA	International
(iii)	Compressor Dynamics USA	International

**1.09 FLEXIBLE COUPLING**

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Rexroth	International
(ii)	TB Woods	International

**1.10 PROTECTIVE COATINGS**

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Jotun	International / Pakistan
(ii)	International	International / Pakistan
(iii)	Sigma	International / Pakistan
(iv)	Ackzo Nobel	Pakistan
(v)	Cor-Pro	International
(vi)	Sutton	International
(vii)	Lonestar	International
(viii)	Seal For Life	International
(ix)	HEMPEL	International

**1.11 CENTRIFUGAL PUMPS (API 610)**

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Goulds	International
(ii)	KSB	International
(iii)	Sulzer	International

(iv)	Ebara	International
(v)	Weir	International
(vi)	Flowserve	International
(vii)	Girdlestone	International
(viii)	Ingersoll/Dresser-pumps	International
(ix)	Union	International

**1.12 CENTRIFUGAL PUMPS (NON API SERVICE)**

Sr. #	Vendor / Supplier Name	Country of Origin
(i)	Weir	International
(ii)	KSB	International
(iii)	ITT Goulds	International
(iv)	Sulzer	International
(v)	Ebara	International
(vi)	Flowserve	International

**1.13 MECHANICAL SEALS (FOR PUMPS)**

Sr. #	Vendor / Supplier Name	Country of Origin
(i)	John Crane	International
(ii)	Flowserve	International
(iii)	Burgmann	International
(iv)	Borg Warner	International
(v)	Durametallic	International
(vi)	Dresser Rand	International

**1.14 MECHANICAL SEALS (FOR PUMPS)**

Sr. #	Vendor / Supplier Name	Country of Origin
(i)	SPP Limited	International
(ii)	Ruhr Pump	International



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(iii)	Dickow Pumps	International
(iv)	Weir Engineering	International
(v)	Thomson Kelly & Lewis	International

**PIPING COMPONENTS**

***2.01 STAINLESS STEEL PIPE, FITTINGS & FLANGES***

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	SchoellerBleckmann	International
(ii)	Sandvik	International
(iii)	B.S.L	International
(iv)	Erndtebrucker	International
(v)	H. Buffing GmbH & Co.	International
(vi)	Mardale	International
(vii)	Raccordtubi	International
(viii)	Spromak	International
(ix)	Trouvay and Cauvin	International
(x)	Erne	International
(xi)	Zhejiang Jiuli Hi-Tech Metals Co., Ltd.	International
(xii)	Melesi	International
(xiii)	Metalfar	International
(xiv)	ULMA	International
(xv)	MGI	International
(xvi)	W Maass	International
(xvii)	Corinth	International
(xviii)	US Steel	International
(xix)	NKK	International
(xx)	Mannessmann	International
(xxi)	Bao Steel	International
(xxii)	Sumitomo	International
(xxiii)	Gerab National	International
(xxiv)	Inter Equipment	International

**2.02 CARBON STEEL PIPE, FITTINGS & FLANGES**

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Trouvay and Cauvin	International
(ii)	Sandvik	International
(iii)	Nippon Steel Corp.	International
(iv)	Kawasaki	International
(v)	Benteler	International
(vi)	Technoforge	International
(vii)	Erne	International
(viii)	Interfit	International
(ix)	Huffaz Engineering (for seamless pipe up to 10 inch diameter)	Pakistan
(x)	JFE	International
(xi)	Corinth	International
(xii)	US Steel	International
(xiii)	NKK	International
(xiv)	Mannesmann	International
(xv)	Crescent Steel	Pakistan
(xvi)	Data Steel	Pakistan
(xvii)	Hebei CangzhouHengtong Pipe fittings Manufacturing Co.,ltd	International
(xviii)	Sumitomo	International
(xix)	Hengyang Valin Steel	International
(xx)	Melesi	International
(xxi)	Metalfar	International
(xxii)	ULMA	International
(xxiii)	MGI	International
(xxiv)	Gerab National	International
(xxv)	Inter Equipment	International
(xxvi)	Elite Piping Manufacturer Co., Ltd	International

### 2.03 GASKETS

Sr. #	Vendor / Supplier Name	Country of Origin
(i)	Klinger	International / Pakistan
(ii)	James Walker	International / Pakistan
(iii)	Novus Sealing Technology (Shanghai) Co. Ltd.	International
(iv)	Garlock	International / Pakistan
(v)	Flexitallic	International / Pakistan
(vi)	Smith	International
(vii)	Burgmann	International

### 2.04 VALVES

#### **Manual Valves**

Sr. #	Vendor / Supplier Name	Country of Origin
(i)	Shiphram	International
(ii)	Grove	International
(iii)	Velan	International
(iv)	Cooper Cameron	International
(v)	Dresser	International
(vi)	Newman's / Newco	International
(vii)	OMB Valves	International
(viii)	Tyco	International
(ix)	KF	International
(x)	Brookbank Valves (For Bronze Valves)	International
(xi)	Crane Co (For Bronze Valves)	International
(xii)	Della Foglia	International
(xiii)	LVF	International
(xiv)	Valveitalia	International

(xv)	JC Valvulas	International
(xvi)	KVC (for manual valves)	International
(xvii)	Neway Valve (Suzhou) Co.,Ltd	China
(xviii)	Chaoda Valves Group Co.Ltd	China
(xix)	Chengdu Chengfeng Valve Group Company	China
(xx)	Sufa Technology Industry Co., Ltd	China
(xxi)	Wenzhou Elite Flow Control Co., Ltd	International

### ***Globe Valves***

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	AES	International
(ii)	Crane	International
(iii)	Newco	International
(iv)	Walworth	International
(v)	Kitz	International
(vi)	LVF	International
(vii)	Valveitalia	International
(viii)	JC Valvulas	International
(ix)	KVC	International
(x)	Velan	International
(xi)	Ecoline -KSB	International
(xxii)	Neway Valve (Suzhou) Co.,Ltd	China
(xxiii)	Chaoda Valves Group Co.Ltd	China
(xxiv)	Chengdu Chengfeng Valve Group Company	China
(xii)	Sufa Technology Industry Co., Ltd	China
(xiii)	Wenzhou Elite Flow Control Co., Ltd	International

### **Gate Valves (API 6D)**

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Cameron	International
(ii)	Kvaerner Oiltool	International
(iii)	Control Flow Inc.	International
(iv)	Newco	International
(v)	FMC	International
(vi)	LVF	International
(vii)	Valveitalia	International
(viii)	JC Valvulas	International
(ix)	KVC	International
(x)	KF	International
(xi)	Velan	International
(xii)	Ecoline -KSB	International
(xiii)	Neway Valve (Suzhou) Co.,Ltd	China
(xiv)	Chaoda Valves Group Co.Ltd	China
(xv)	Chengdu Chengfeng Valve Group Company	China
(xvi)	Sufa Technology Industry Co., Ltd	China

### **Ball Valves**

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Cameron	International
(ii)	Control Flow	International
(iii)	NelesJamesbury	International
(iv)	Orbit	International
(v)	Valvitalia	International
(vi)	LVF	International



(vii)	JC Valvulas	International
(viii)	KVC	International
(ix)	KF	International
(x)	Ecoline -KSB	International
(xi)	Force	International
(xii)	Quadrant	International
(xiii)	Flow-Tek / Bray	International
(xiv)	PBV	International
(xv)	Neway Valve (Suzhou) Co.,Ltd	China
(xvi)	Chaoda Valves Group Co.Ltd	China
(xvii)	Chengdu Chengfeng Valve Group Company	China
(xviii)	Sufa Technology Industry Co., Ltd	China
(xix)	Wenzhou Elite Flow Control Co., Ltd	International

### **Check Valves**

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Anvil	International
(ii)	Butler	International
(iii)	Crane	International
(iv)	Newco	International
(v)	Tom Wheatley - Cameron	International
(vi)	JC Valvulas	International
(vii)	KVC	International
(viii)	Goodwin	International
(ix)	KF	International
(x)	Velan	International
(xi)	Ecoline -KSB	International
(xii)	Neway Valve (Suzhou) Co.,Ltd	China
(xiii)	Chaoda Valves Group Co.Ltd	China

(xiv)	Chengdu Chengfeng Valve Group Company	China
(xv)	Sufa Technology Industry Co., Ltd	China
(xvi)	Wenzhou Elite Flow Control Co., Ltd	International

### ***Needle Valves***

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Anderson Greenwood	International
(ii)	Kenmac	International
(iii)	KF	International
(iv)	Oliver	International
(v)	Parker	International
(vi)	Precision Valves	International
(vii)	Swagelok	International

#### ***2.05 STEEL STRUCTURE AND CARBON STEEL PLATE***

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Pakistan Steel	Pakistan
(ii)	Izhar Steel (Pvt.) Limited	Pakistan
(iii)	Others may be proposed for OGDCL's Approval	-

#### ***2.06 FIRE FIGHTING EQUIPMENT***

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	ANGUS	UK
(ii)	SILVANI ANTINCENDI	ITALY
(iii)	FUKADA	JAPAN
(iv)	GUARD FIRE	SINGAPORE
(v)	DOLLEY TACKABERRY	USA
(vi)	HASEEN HABIB	PAKISTAN

(vii)	MIXEL	FRANCE
(viii)	FENSEN MIXERS	USA
(ix)	PERRY EQUIPMENT	USA
(x)	PALL TRINITY MICRO	USA
(xi)	WINSTON MANUFACTURING	USA
(xii)	FACET	USA
(xiii)	Tyco	international

**Article II. ELECTRICAL COMPONENTS**

**3.1 GAS ENGINE GENERATING SET**

<b>Sr. #</b>	<b>Vendor / Manufacturer</b>	<b>Country of Origin</b>
(i)	Caterpillar	International
(ii)	GE	International
(iii)	Waukesha	International
(iv)	Deutz (MWM)	International
(v)	Cummins	International
(vi)	Jan Bacher	International
(vii)	Kohler	International
(viii)	MAN	International

**3.2 DIESEL ENGINE GENERATING SET**

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Caterpillar	International
(ii)	MTU Detroit	International
(iii)	Wartsila	International
(iv)	Siemens	International
(v)	Waukesha	International
(vi)	Cummins	International
(vii)	Kohler	International

(viii)	MAN	International
(ix)	GE	International
(x)	FG Wilson	International

### 3.3 LOW VOLTAGE SWITCHGEAR - MOTOR CONTROL CENTER (MCC), BUS DUCT (BTD)

Sr. #	Vendor / Supplier Name	Country of Origin
(i)	ABB	International / Pakistan
(ii)	Schneider Electric	International / Pakistan
(iii)	Siemens	International / Pakistan
(iv)	G.E	International

### 3.4 CIRCUIT BREAKERS

Sr. #	Vendor / Supplier Name	Country of Origin
(v)	ABB	International / Pakistan
(vi)	Nilsen Electric	International
(vii)	Schneider	International / Pakistan
(viii)	Siemens	International / Pakistan
(ix)	Terasaki	International / Pakistan
(x)	G.E	International

### 3.5 400 / 230V DISTRIBUTION BOARDS

Sr. #	Vendor / Supplier Name	Country of Origin
(i)	Cutler Hammer (Eastan Electric)	International
(ii)	Heinemann	International
(iii)	NHP	International
(iv)	Siemens	International / Pakistan

(v)	Schneider	International / Pakistan
(vi)	BAKAT	International
(vii)	ABB	International / Pakistan
(viii)	G.E	International

### 3.6 LIGHT FITTINGS- NON HAZARDOUS AREA

Sr. #	Vendor / Supplier Name	Country of Origin
(i)	CLIPSAL	International / Pakistan
(ii)	Crouse Hinds	International
(iii)	Perlite	International
(iv)	Philips	Pakistan
(v)	Victor Products	International
(vi)	Govan	International
(vii)	Warom Technology Incorporated Company	International

### 3.7 LIGHT FITTINGS- HAZARDOUS AREA

Sr. #	Vendor / Supplier Name	Country of Origin
(i)	CLIPSAL	International
(ii)	Crouse Hinds	International
(iii)	Perlite	International
(iv)	Victor Products	International
(v)	Govan	International
(vi)	Chalmit	International
(vii)	Philips	International / Pakistan
(viii)	Killark	International
(ix)	Warom Technology Incorporated Company	International

### 3.8 LOCAL CONTROL STATION (NON HAZARDOUS AREA)

Sr. #	Vendor / Supplier Name	Country of Origin
(i)	CLIPSAL	International
(ii)	Cutler Hammer (Eastan Electric)	International
(iii)	NHP	International
(iv)	Allen Bradley	International
(v)	Killark	International
(vi)	Warom Technology Incorporated Company	International

### 3.9 LOCAL CONTROL STATION (HAZARDOUS AREA)

Sr. #	Vendor / Supplier Name	Country of Origin
(i)	CLIPSAL	International
(ii)	Legrand	International
(iii)	NHP	International
(iv)	Killark	International
(v)	Crouse Hinds	International
(vi)	Warom Technology Incorporated Company	International

### 3.10 POWER CABLES

Sr. #	Vendor / Supplier Name	Country of Origin
(i)	Olex	International
(ii)	Prysmen Cables	International
(iii)	MM Electrical	International
(iv)	Pakistan Cables	Pakistan
(v)	Pioneer Cables	Pakistan
(vi)	New Age Cables	Pakistan
(vii)	Cleveland	International
(viii)	Northsea Cables	International
(ix)	Riyad Cables	International

(x)	Saudi Cables	International
(xi)	Nexan	International
(xii)	Okonite	International
(xiii)	Amercable	International
(xiv)	Fast Cables	Pakistan
(xv)	General Cables	International

### 3.11 ELECTRIC MOTORS

Sr. #	Vendor / Manufacturer	Country of Origin
(i)	AEG	International
(ii)	Lawrence	International
(iii)	Reliance	International
(iv)	Siemens / Loher	International
(v)	Westinghouse	International
(vi)	WEG	International
(vii)	ABB	International
(viii)	Toshiba	International

### 3.12 CATHODIC PROTECTION (CP SYSTEM)

Sr. #	Vendor / Manufacturer	Country of Origin
(i)	Nakabohtec-Corrosion Pro	International
(ii)	Grobel	International
(iii)	Mapel	International
(iv)	Nippon Corrosion Engineering	International
(v)	Hockway	International
(vi)	Nuricon	Pakistan

### 3.13 CABLE GLANDS / JUNCTION BOXES

Sr. #	Vendor / Manufacturer	Country of Origin
(i)	BICC	International
(ii)	Hawke International	International
(iii)	Appleton	International
(iv)	CLIPSAL	International
(v)	CMP	International
(vi)	Peppers	International
(vii)	R.STAHL	International
(viii)	Crouse-Hinds	International
(ix)	Warom Technology Incorporated Company	International

**Article III. INSTRUMENT COMPONENTS**

**4.1 FLOW INSTRUMENTS**

***Transmitters (Electronic)***

Sr. #	Vendor / Supplier Name	Country of Origin
(i)	Emerson	International
(ii)	ABB	International
(iii)	Yokogawa	International
(iv)	Honeywell	International
(v)	Foxboro	International
(vi)	Endress+Hauser	International
(vii)	Rosemount	International
(viii)	Krohne	International

***DP Instruments***

Sr. #	Vendor / Supplier Name	Country of Origin
(i)	Emerson	International
(ii)	Yokogawa	International



(iii)	ABB	International
(iv)	Aschroft	International
(v)	Nouvafima	International
(vi)	Wika	International
(vii)	Precision	International
(viii)	Orange Research	International
(ix)	Krohne	International

### ***Rotameters***

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	ABB	International
(ii)	Brooks	International
(iii)	KDG	International
(iv)	Khrone	International
(v)	Fisher – Porter	International
(vi)	New Flow	International
(vii)	Parker / Porter	International

### ***Flow Indicators***

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Wallace & Tiernan	International
(ii)	Aschroft	International
(iii)	NouvaFima	International
(iv)	Wika	International
(v)	Budenberg	International
(vi)	Tel-Tru	International
(vii)	British Rototherm	International
(viii)	Rueger	International

(ix)	Bourdon	International
(x)	Endress + Hauser	International
(xi)	New Flow	International
(xii)	John. C. Ernst	International
(xiii)	Parker/Porter	International

### ***Orifice Plates & Flanges***

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Emerson / Daniel	International
(ii)	ISA	International
(iii)	Superior	International
(iv)	Invensys	International
(v)	Yokogawa	International
(vi)	ABB	International
(vii)	Precision Flow Inc.	International

#### **4.2 LEVEL INSTRUMENTS**

### ***DP Transmitters (Electronic)***

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Emerson	International
(ii)	ABB	International
(iii)	Yokogawa	International
(iv)	Honeywell	International
(v)	Foxboro	International
(vi)	KTek	International
(vii)	Endress+Hauser	International

(viii)	Magnetrol	International
(ix)	VEGA	International

### ***Transmitters***

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Yokogawa	International
(ii)	Honeywell	International
(iii)	Foxboro	International
(iv)	Magnetrol	International
(v)	Emerson	International

### ***Switches***

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Mobrey	International
(ii)	SOR	International
(iii)	Magnetrol	International
(iv)	Fisher (Emerson)	International
(v)	Dresser Masoneilan	International
(vi)	Orion	International
(vii)	Wellmark	International

### ***Gauge Glass***

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Penberthy	International
(ii)	Jerguson	International
(iii)	Simco	International
(iv)	Klinger	International
(v)	Jogler	International

(vi)	Inferno	International
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### ***Level Indicator (Float)***

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Magnetrol	International
(ii)	Honeywell	International
(iii)	Emerson	International
(iv)	Rosemount	International
(v)	VAREC	International
(vi)	Orion	International

#### **4.3 PRESSURE INSTRUMENTS**

### ***Transmitters (Electronic)***

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Emerson	International
(ii)	ABB	International
(iii)	Yokogawa	International
(iv)	Honeywell	International
(v)	Foxboro	International
(vi)	Endress+Hauser	International

### ***DP Transmitters (Electronic)***

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Emerson	International
(ii)	ABB	International
(iii)	Yokogawa	International
(iv)	Honeywell	International
(v)	Foxboro	International
(vi)	KTek	International
(vii)	Endress+Hauser	International

(viii)	Magnetrol	International
(ix)	VEGA	International

### ***Self-Contained Regulators***

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Emerson	International
(ii)	Norgen	International
(iii)	Masoneilan	International
(iv)	ABB	International
(v)	Fisher	International

### ***Switches***

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Ashcroft	International
(ii)	SOR	International
(iii)	DRUCK	International
(iv)	DELTA	International
(v)	HNL	International
(vi)	Neodyne	International
(vii)	UE	International
(viii)	ITT Snyder	International
(ix)	Honeywell	International
(x)	Ruelco	International
(xi)	Dwyer	International
(xii)	Wika	International

### ***Gauges***

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
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(i)	Ashcroft	International
(ii)	Wika	International
(iii)	Dobbie	International
(iv)	Bourdon	International
(v)	Budenberg	International
(vi)	NouvaFima	International
(vii)	Tel-Tru	International
(viii)	British Rototherm	International
(ix)	Dwyer	International
(x)	Prevision Valves	International
(xi)	Winters	International

### ***DP Gauges***

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Ashcroft	International
(ii)	Wika	International
(iii)	Bourdon	International
(iv)	Budenberg	International
(v)	NouvaFima	International
(vi)	Tel-Tru	International
(vii)	British Rototherm	International
(viii)	Precision Valves	International
(ix)	Winters	International

### ***Safety Relief Valves***

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Consolidated	International
(ii)	Farris	International
(iii)	Crosby	International
(iv)	Tyco	International

(v)	AGCO	International
(vi)	Bailey Birkett	International
(vii)	Dresser	International
(viii)	Metso	International
(ix)	Bopp & Reuther	International
(x)	Lesser	International
(xi)	ARI-Armaturen / Reyco	International

### ***Pressure Reducing Valves***

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Emerson	International
(ii)	Dresser Masoneilan	International
(iii)	Broady Valves	International
(iv)	BelGas	International
(v)	Cashco	International
(vi)	Wellmark	International
(vii)	Samson	International

#### **4.4 TEMPERATURE INSTRUMENTS**

### ***Transmitters (Electronic)***

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Emerson	International
(ii)	Yokogawa	International
(iii)	Honeywell	International
(iv)	Foxboro / Invensys	International

### ***Indicator (Line Mounted)***

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
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(i)	Ashcroft	International
(ii)	Wika	International
(iii)	Bourden	International
(iv)	Teletherm	International
(v)	Reugar	International
(vi)	Thermodevices	International
(vii)	Teltru	International
(viii)	Weksler	International
(ix)	Emerson	International

#### 4.5 CONTROL VALVES AND ACCESSORIES

##### ***Globe***

Sr. #	Vendor / Supplier Name	Country of Origin
(i)	Fisher	International
(ii)	Valtek	International
(iii)	Introl	International
(iv)	Samson	International
(v)	Dresser	International
(vi)	Flowserve	International
(vii)	Severn Glocon	International
(viii)	Norriseal	International
(ix)	Masoneilan	International
(x)	CVS Controls	International
(xi)	ARI - Armaturen	International
(xii)	DYNA-FLO	International

##### ***Electric Solenoid Valves***

Sr. #	Vendor / Supplier Name	Country of Origin
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(i)	Versa	International
(ii)	ASCO	International
(iii)	Maxseal	International
(iv)	RGS	International

### ***Shutdown Valves***

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Emerson	International
(ii)	Orbit	International
(iii)	Dresser	International
(iv)	Cameron	International
(v)	NelesJamesbury	International
(vi)	Metso	International
(vii)	Deutsche Audio	International
(viii)	Meridian	International
(ix)	Kitz	International
(x)	JC Valvulas	International
(xi)	Valvitalia	International
(xii)	Force	International
(xiii)	Quadrant	International
(xiv)	Flow-Tek / Bray	International
(xv)	PBV	International
(xvi)	Samson	International

#### **4.6 CONTROL SYSTEM**

### ***Programmable Logic Controller (PLC)***

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Allen Bradley (Rockwell Automation)	International

(ii)	ABB	International
(iii)	Siemens	International
(iv)	Yokogawa	International
(v)	Honeywell	International

#### 4.7 FIRE AND GAS DETECTORS

Flammable Gas Detector / Toxic Gas Detectors / Flame Detectors / Smoke Detectors - Multi Element / Smoke detectors - VESDA / Manual Alarm Call point / Siren / Beacons / Fire Indication Panel (FIP)

Sr. #	Vendor / Supplier Name	Country of Origin
(i)	Det-tronics	International
(ii)	Draeger	International
(iii)	Honeywell	International
(iv)	Tyco	International
(v)	Esser by Honeywell	International
(vi)	General Monitors / MSA	International
(vii)	MEDC	International
(viii)	Autronica	International
(ix)	Simrad	International

#### CO<sub>2</sub> and H<sub>2</sub>S Detectors

Sr. #	Vendor / Supplier Name	Country of Origin
(i)	Simrad	International
(ii)	Det-tronics	International
(iii)	Draeger	International
(iv)	Zellweqer	International
(v)	Applied analytical Inc	International
(vi)	General Monitors / MSA	International
(vii)	Autronica	International

### ***Addressable Fire Alarm System***

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Honeywell	International
(ii)	Techno-Control	International
(iii)	Draeger	International
(iv)	Det-Tronics	International
(v)	GENTS	International
(vi)	General Monitors / MSA	International

#### **4.8 MISCELLANEOUS**

##### ***Manifold Valves***

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	AGCO	International
(ii)	Oliver	International
(iii)	Parker - Hannifin	International
(iv)	Precision Valves	International

##### ***Enclosure***

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Hoffman Engineering	International
(ii)	Rittal	International

##### ***Junction Boxes***

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Klippon	International
(ii)	Stahl	International
(iii)	ABB	International
(iv)	Crouse Hind	International
(v)	Hoffman	International
(vi)	Govan	International
(vii)	Hawke	International
(viii)	AB Tech	International
(ix)	Warom Technology Incorporated Company	International

##### ***Air Regulator / Filter Sets***

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
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(i)	Fisher	International
(ii)	Norgon	International
(iii)	Dresser	International

### ***3-Pen Chart Recorder***

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Foxboro	International
(ii)	Honeywell	International
(iii)	ABB	International

### ***Gas Chromatograph***

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Emerson	International
(ii)	Honeywell	International
(iii)	ABB	International
(iv)	Yokogawa	International

### ***Moisture Analyzer***

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Ametek	USA / Singapore
(ii)	General Electric (G.E)	International
(iii)	Krohne	International

### ***I / P Converters***

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(iv)	Emerson	International
(v)	Honeywell	International
(vi)	ABB	International

(vii)	Yokogawa	International
(viii)	Foxboro	International
(ix)	CVS Controls	International
(x)	Flowserve	International
(xi)	Siemens	International

### ***Instrument Tubing & Fittings (stainless steel)***

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Swagelok	International
(ii)	Gyrolok	International
(iii)	Parker - Hannifin	International

### ***Instrument & Control Cables***

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Leoni Kerpen	International
(ii)	BICC	International
(iii)	Belden	International
(iv)	Fuji Kura	International
(v)	Teck	International
(vi)	Anixter	International
(vii)	Pirelli Cables Ltd	International
(viii)	Prysmian Cables	International
(ix)	Eupen	International
(x)	North Sea Cable	International
(xi)	Erse Kablo	International
(xii)	ADC	International

### ***Cable Glands***

Sr. #	Vendor / Supplier Name	Country of Origin
(i)	CCG	International
(ii)	ALCO	International
(iii)	CLIPSAL	International
(iv)	Weidmuller	International
(v)	Hawke	International
(vi)	CMP	International
(vii)	Peppers	International
(viii)	Crouse Hind	International
(ix)	ABB	International
(x)	Hoffman	International
(xi)	BICC	International
(xii)	Thomas & Betts	International

#### Earthing& Lighting Protection System

Sr. #	Vendor / Supplier Name	Country of Origin
(i)	Furse	International
(ii)	LPI	International
(iii)	Erico	International
(iv)	Kumwell	International
(v)	Burndy	International
(vi)	Wallis	International

#### Modular Buildings

Sr. #	Vendor / Supplier Name	Country of Origin
(i)	Kirby	International
(ii)	Portakabin	International
(iii)	Yorkon	International



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(iv)	Losberger	International
(v)	Alsim	International