

**Appendix -N****APPROVED VENDORS / MANUFACTURERS LIST****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)	Chevron International (S) PTE LTD	International
(xvi)	AJC Engineering Pvt Ltd	International/Pakistan

**1.03 SHELL & TUBE HEAT EXCHANGER**

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(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**

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(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.	

**1.05aGAS TURBINE**

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	GE	International
(ii)	MAN DIESEL & TURBO	International
(iii)	SIEMENS	International
(iv)	SOLAR	International
(v)	ANSALDO	International
(vi)	KAWASAKI	International

**1.05b CENTRIFUGAL COMPRESSORS**

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	GE	International
(ii)	MAN DIESEL & TURBO	International
(iii)	SIEMENS	International
(iv)	SOLAR	International
(v)	Dresser Rand	International
(vi)	mitsubishi heavy industries	International
(vii)	KAWASAKI	International
(viii)	Howden	International
(ix)	Sulzer	International

**1.05 AIR compressors/ Instrument Air Nitrogen 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

**1.06 Methanol Injection Skids**

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	STI Rome	International
(ii)	Hydroneumatic	International
(iii)	Check Point	International

**1.07 FLEXIBLE COUPLING**

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

**1.08 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

**1.09 COOLING TOWERS**

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Smithco Engineering Inc.	International
(ii)	SPX Chilling	International
(iii)	Super Chill	International
(iv)	Jord International	International

**1.10 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

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

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

**1.12 MECHANICAL SEALS (FOR PUMPS)**

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

**Article II. 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	Pakistan

	inch diameter)	
(x)	JFE	International
(xi)	Corinth	International
(xii)	US Steel	International
(xiii)	NKK	International
(xiv)	Mannessmann	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**

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(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**

<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 III. ELECTRICAL COMPONENTS****3.1 CIRCUIT BREAKERS**

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	ABB	International / Pakistan
(ii)	Nilsen Electric	International
(iii)	Schneider	International / Pakistan
(iv)	Siemens	International / Pakistan
(v)	Terasaki	International / Pakistan
(vi)	G.E	International

**3.2 400 / 230V DISTRIBUTION BOARDS**

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(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

### **3.3 LIGHT FITTINGS- NON HAZARDOUS AREA**

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(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

### **3.4 LIGHT FITTINGS- HAZARDOUS AREA**

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(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

**3.5 LOCAL CONTROL STATION (NON HAZARDOUS AREA)**

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(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

**3.6 LOCAL CONTROL STATION (HAZARDOUS AREA)**

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

**3.7 POWER CABLES**

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(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

### **3.8 ELECTRIC MOTORS**

<b>Sr. #</b>	<b>Vendor / Manufacturer</b>	<b>Country of Origin</b>
(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

### **3.9 CATHODIC PROTECTION (CP SYSTEM)**

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

### **3.10 CABLE GLANDS / JUNCTION BOXES**

<b>Sr. #</b>	<b>Vendor / Manufacturer</b>	<b>Country of Origin</b>
(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 IV. INSTRUMENT COMPONENTS**

##### **4.1 FLOW 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
(vii)	Rosemount	International
(viii)	Krohne	International

###### **DP Indicator**

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(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

**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

**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
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**Gauges**

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(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>
(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**

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(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**

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(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)

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(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**

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(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

#### **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>
(i)	Fisher	International
(ii)	Norgon	International
(iii)	Dresser	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>
(i)	Emerson	International
(ii)	Honeywell	International
(iii)	ABB	International
(iv)	Yokogawa	International
(v)	Foxboro	International
(vi)	CVS Controls	International
(vii)	Flowserve	International
(viii)	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)	Prysman Cables	International
(ix)	Eupen	International
(x)	North Sea Cable	International
(xi)	Erse Kablo	International
(xii)	ADC	International

**Cable Glands**

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(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**

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

**Modular Buildings**

<b>Sr. #</b>	<b>Vendor / Supplier Name</b>	<b>Country of Origin</b>
(i)	Kirby	International
(ii)	Portakabin	International
(iii)	Yorkon	International
(iv)	Losberger	International
(v)	Alsim	International