

Sohar Refinery Expansion Project



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This revision 5 is the same as included in Volume 3 as Appendix P, but without revision box.

APPROVED VENDORS

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General:

Whenever "International" is mentioned as a geographic location for a worldwide corporation, client prefers to procure from the parent company directly. If the subsidiaries of the parent company are selected, the same shall be approved by the client.

1.0 COLUMNS AND VESSELS INCLUDING INTERNALS AND ACCESSORIES

Note: Vendors for columns and vessels are not listed separately as requisitioning and inquiries for these items will be go to same vendors.

1.1 Pressure Vessels, C.S., Small Sizes, Up to 20 T. WT up to 30 mm.

Aker Process systems	Canada
CITBA	France
Neumann	Germany
Leffer	Germany
ISGEC	India
Larsen & Toubro	India/Oman
Universal Heat Exchangers LTD.	India
SICES	Italy
Luigi Resta	Italy
Brembana	Italy
Ettore Zanon SpA	Italy
Chiyoda Protech	Japan
Hitachi Zosen	Japan
Hitachi Kasado JU.K.ogyo	Japan
Mitsui Shipbuilding	Japan
KNM Steel Construction SDN BHD	Malaysia/Saudi Arabia
Kooiman Apparatenbouw	Netherlands
De Plaatijzerindustrie B.V.	Netherlands
Arabian Industries	Oman
STS	Oman
UES	Oman
Arsopi S.A.	Portugal
BILFAL	Saudi Arabia
Oil Tools Eng. Services	Singapore
Sembawang	Singapore
Applied Engineering	Singapore
Doosan Mecatec	S. Korea
Sewon	S. Korea
Daekyung Machinery	S. Korea
Hantech	S. Korea
NPCC	UAE
Ryder Process Plant	U.K.
Cool Technology	U.K.
Ardeth Eng.	U.K.
A. Forsythe & Son	U.K.
Oil & Gas Systems	U.K.
James Bendall & Sons	U.K.
KCC	U.K.
Baker Products Services	USA-U.K.

Metrol	USA
Tex-Fab	USA
Brighton	USA
G.A. Mosites	USA
Modern Welding	USA
General Welding	USA
Graham Corporation	USA

1.2 Pressure Vessels, C.S., medium sizes, up to 40 T, WT up to 60 mm.

Aker Process Systems	Canada
CITBA	France
ECMP	France
Leffer	Germany
Neumann	Germany
Larsen & Toubro	India/Oman
Universal Heat Exchangers LTD.	India
ISGEC	India
ATB Caldereria Spa	Italy
Ettore Zanon SpA	Italy
Walter Tosto SPA	Italy
Mangiarotti	Italy
Hitachi Kasado	Japan
Chiyoda Protech	Japan
Mitsubishi Nagasaki	Japan
Hitachi Zosen	Japan
Mitsui Shipbuilding	Japan
Japan Steel Works	Japan
Sumitomo Heavy Ind.	Japan
KNM Steel Construction SDN BHD	Malaysia/Saudi Arabia
Kooiman Apparatenbouw	Netherlands
De Plaatijzerindustrie B.V.	Netherlands
Arabian Industries	Oman
STS	Oman
UES	Oman
Arsopi S.A.	Portugal
BILFAL	Saudi Arabia
Applied Engineering	Singapore
Oil Tools Eng. Services	Singapore
Sembawang	Singapore
Duro Felguera	Spain
Daekyung Machinery	S. Korea
Doosan Mecatec	S. Korea
Sewon	S. Korea
Hantech	S. Korea
NPCC	UAE
Motherwell Bridge Eng.	U.K.
Wellman Robey	U.K.
NEI	U.K.
A. Forsythe & Son	U.K.
Oil & Gas Systems	U.K.
James Bendall & Sons	U.K.
KCC	U.K.
Baker Products Services	USA-U.K.
Metrol	USA

	Tex-Fab	USA
	Ga-Mosites	USA
	Reiley-Beaird	USA
	Modern Welding	USA
	General Welding	USA
	Graham Corporation	USA
1.3	<u>Pressure Vessels, C.S., large sizes, over 40 T. WT up to 60 mm.</u>	
	Schoeller-Bleckmann	Austria
	ECMP	France
	Leffer	Germany
	Neumann	Germany
	Larsen & Toubro	India/Oman
	ISGEC	India
	Walter Tosto Serbatoi SPA	Italy
	Mangiarotti	Italy
	ATB Caldereria SPA	Italy
	Nuovo Pignone	Italy
	Sumitomo Heavy Ind.	Japan
	Hitachi Zosen	Japan
	Chiyoda Protech	Japan
	Hitachi Kasado	Japan
	Mitsubishi Nagasaki	Japan
	Kobe Steel	Japan
	Mitsubishi Heavy	Japan
	Mitsui Shipbuilding	Japan
	KNM Steel Construction SDN BHD	Malaysia/Saudi Arabia
	De Plaatijzerindustrie B.V.	Netherlands
	Arabian Industries	Oman
	STS	Oman
	UES	Oman
	Arsopi S.A.	Portugal
	BILFAL	Saudi Arabia
	Sembawang	Singapore
	Duro Felguera	Spain
	Doosan Mecatec	S. Korea
	Hantech	S. Korea
	NPCC	UAE
	Motherwell Bridge Eng.	U.K.
	Wellman Robey	U.K.
	NEI	U.K.
	A. Forsythe & Son	U.K.
	Reiley-Beaird	USA
	General Welding	USA
	Nooter	USA
	Tex-Fab	USA
	G.A. Mosites	USA
	Modern Welding	USA
	Berry Fabricators	USA
	Taylor Forge	USA
1.4	<u>Pressure Vessels, S.S., small sizes, up to 20T. WT up to 30 MM</u>	

Neumann	Germany
Winkels	Germany
Larsen & Toubro	India/Oman
ISGEC	India
Walter Tosto SPA	Italy
Ettore Zanon SpA	Italy
Mangiarotti	Italy
ATB Caldereria	Italy
Mitsui Shipbuilding	Japan
Hitachi Zosen	Japan
Hitachi Kasado	Japan
Sumitomo Heavy	Japan
KNM Steel Construction SDN BHD	Malaysia/Saudi Arabia
SRI	Netherlands
FIB	Netherlands
De Plaatijzerindustrie B.V.	Netherlands
Arsopi S.A.	Portugal
Arabian Industries	Oman
STS	Oman
UES	Oman
Olayan Descon Engineering	Saudi Arabia
BILFAL	Saudi Arabia
Sembawang	Singapore
Doosan Mecatec	S. Korea
Daekyung Machinery	S. Korea
Hantech	S. Korea
NPCC	UAE
Whiteley Read	U.K.
Ardeth Eng.	U.K.
Ryder Process Plants	U.K.
A. Forsythe & Son	U.K.
Brighton	USA
Curtis Kelly	USA
Offenhauser	USA
Graham Corporation	USA

1.5 Pressure Vessels, S.S., medium sizes, up to 40T. WT up to 60 mm

Aker Process Solutions	France
Leffer	Germany
Winkels	Germany
Neumann	Germany
Larsen & Toubro	India/Oman
ISGEC	India
ATB Caldererla SPA	Italy
Walter Tosto SPA	Italy
Mangiarotti	Italy
Ettore Zanon SpA	Italy
Mitsui Shipbuilding	Japan
Sumitomo Heavy Ind.	Japan
Hitachi Zosen	Japan
Mitsubishi Nagasaki	Japan
Hitachi Kasado	Japan
KNM Steel Construction SDN BHD	Malaysia/Saudi Arabia
De Plaatijzerindustrie B.V.	Netherlands

Arabian Industries	Oman
STS	Oman
UES	Oman
Arsopi S.A.	Portugal
BILFAL	Saudi Arabia
Sembawang	Singapore
Doosan Mecatec	S. Korea
Daekyung Machinery	S. Korea
Dehan Chemical Machinery	S. Korea
Hantech	S. Korea
Duro Felguera	Spain
Motherwell Bridge Eng.	U.K.
Wellman Robey	U.K.
NEI	U.K.
A. Forsythe & Son	U.K.
Mitternight	USA
Nooter	USA
Brighton	USA
Offenhauser	USA
Taylor Forge	USA
Graham Corporation	USA

1.6 Pressure Vessels, S.S., large sizes, over 40T. WT up to 60 mm

Aker Process Solutions	France
Neumann	Germany
Leffer	Germany
GEA Wiegand	Germany
Larsen & Toubro	India/Oman
ISGEC	India
ATB Caldererla SPA	Italy
Walter Tosto SPA	Italy
Nuovo Pignone	Italy
Mangiarotti	Italy
Ettore Zanon SpA	Italy
Hitachi Kasado	Japan
Hitachi Zosen	Japan
Sumitomo Heavy Ind.	Japan
Mitsui Shipbuilding	Japan
Japan Steel Works	Japan
Kobe Steel	Japan
Mitsubishi Heavy Ind. (Hiroshima)	Japan
Mitsubishi Nagasaki	Japan
KNM Steel Construction SDN BHD	Malaysia/Saudi Arabia
De Plaatijzerindustrie B.V.	Netherlands
Arsopi S.A.	Portugal
BILFAL	Saudi Arabia
Doosan Mecatec	S. Korea
Daekyung Machinery	S. Korea
Hantech	S. Korea
Duro Felguera	Spain
Motherwell Bridge Eng.	U.K.
NEI	U.K.
A. Forsythe & Son	U.K.

Reiley-Beaird	USA
Brighton	USA
Nooter	USA
Taylor Forge	USA

1.7 Pressure Vessels, Clad Steel, small & medium sizes, up to 40T. WT up to 60 mm

Aker Process Solutions	France
Leffer	Germany
Neumann	Germany
Larsen & Toubro	India/Oman
ISGEC	India
ATB Caldereria Spa	Italy
Walter Tosto SPA	Italy
Mangiarotti	Italy
Ettore Zanon SpA	Italy
Hitachi Zosen	Japan
Hitachi Kasado	Japan
Mitsui Shipbuilding	Japan
Sumitomo Heavy	Japan
Mitsubishi Nagasaki	Japan
KNM Steel Construction SDN BHD	Malaysia/Saudi Arabia
De Plaatiizerindustrie B.V.	Netherlands
United Engineering Service	Oman
Special Technical Service	Oman
Arsopi S.A.	Portugal
BILFAL	Saudi Arabia
Doosan Mecatec	S. Korea
Daekyung Machinery	S. Korea
Hantech	S. Korea
Motherwell Bridge Eng.	U.K.
Wellman Robey	U.K.
NEI	U.K.
A. Forsythe & Son	U.K.
Brighton	USA
General Welding	USA
Nooter	USA
Taylor Forge	USA
Reiley-Beaird	USA
Graham Corporation	USA

1.8 Pressure Vessels, Clad Steel, large sizes, over 40T. WT up to 60 mm

Aker Process Solutions	France
DWE	Germany
Leffer	Germany
Neumann	Germany
Larsen & Toubro	India/Oman
ISGEC	India
ATB Caldereria Spa	Italy
Nuovo Pignone	Italy
Walter Tosto SPA	Italy
Mangiarotti	Italy
Ettore Zanon SpA	Italy

Sumitomo Heavy Ind.	Japan
Mitsui Shipbuilding	Japan
Hitachi Kasado	Japan
Mitsubishi Nagasaki	Japan
Hitachi Zosen	Japan
Kobe Steel	Japan
Mitsubishi Heavy	Japan
KNM Steel Construction SDN BHD	Malaysia/Saudi Arabia
De Plaatiizerindustrie B.V.	Netherlands
Arsopi S.A.	Portugal
BILFAL	Saudi Arabia
Doosan Mecatec	S. Korea
Daekyung Machinery	S. Korea
Hantech	S. Korea
Motherwell Bridge Eng.	U.K.
Wellman Robey	U.K.
NEI	U.K.
A. Forsythe & Son	U.K.
Reiley-Beaird	USA
Nooter	USA
Brighton	USA
G.A. Mosites	USA
Taylor Forge	USA
Graham Corporation	USA

1.9 Pressure Vessels, Low Alloy, small & medium sizes, up to 40T. WT up to 60 mm

Aker Process Solutions	France
DWE	Germany
Leffer	Germany
Neumann	Germany
ISGEC	India
Guido Sartori	Italy
Hitachi Kasado	Japan
Mitsubishi Nagasaki	Japan
Mitsui Shipbuilding	Japan
Sumitomo Heavy Ind.	Japan
Kobe Steel	Japan
Hitachi Zosen	Japan
KNM Steel Construction SDN BHD	Malaysia/Saudi Arabia
Arabian Industries	Oman
Special Technical Service	Oman
United Engineering Service	Oman
BILFAL	Saudi Arabia
Daekyung Machinery	S. Korea
Doosan Heavy Industries	S. Korea
Sewon	S. Korea
Hantech	S. Korea
Duro Felguera	Spain
Motherwell Bridge Eng.	U.K.
Wellman Robey	U.K.
CP Hobal	U.K.
A. Forsythe & Son	U.K.

Brighton	USA
General Welding	USA
Graham Corporation	USA

1.10 Pressure Vessels, Low Alloy, large sizes, over 40T. WT up to 60 mm

Larsen & Toubro	India/Oman
ISGEC	India
Walter Tosto SPA	Italy
Mangiarotti	Italy
Ettore Zanon SpA	Italy
ATB	Italy
Nuovo Pignone	Italy
Kobe Steel	Japan
Mitsubishi Heavy Ind. (Hiroshima)	Japan
Mitsui Shipbuilding	Japan
Sumitomo Heavy	Japan
Hitachi Zosen	Japan
Leffer	Germany
DWE	Germany
Neumann	Germany
De Plaatijzerindustrie B.V.	Netherlands
Arsopi S.A.	Portugal
KNM Steel Construction SDN BHD	Malaysia/Saudi Arabia
BILFAL	Saudi Arabia
Doosan Mecatec	S. Korea
Daekyung Machinery	S. Korea
Hantech	S. Korea
Duro Felguera	Spain
Motherwell Bridge Eng.	U.K.
Wellman Robey	U.K.
A. Forsythe & Son	U.K.
Reiley-Beaird	USA
Nooter	USA

1.11 Pressure Vessels, Heavy Wall, WT over 60 mm (all materials)

Aker Process Solutions	France
Leffer	Germany
Larsen & Toubro	India/Oman
ISGEC	India
ATB Caldereria Spa	Italy
Nuovo Pignone (Forged)	Italy
Walter Tosto SPA	Italy
Ettore Zanon SpA	Italy
Hitachi Zosen	Japan
Japan Steel Works (up to 450 mm)	Japan
Kobe Steel (up to 450 mm)	Japan
Mitsubishi Heavy (up to 190 mm)	Japan
Sumitomo Heavy (up to 100 mm)	Japan
IHI	Japan
De Plaatijzerindustrie B.V.	Netherlands
BILFAL	Saudi Arabia
Doosan Mecatec	S. Korea

Duro Felguera (C/Stl. Only)	Spain
Motherwell Bridge Eng.	U.K.
A. Forsythe & Son	U.K.
Reiley-Beaird (C/Stl. Only) (up to 100 mm)	USA
Nooter (up to 150 mm)	USA
Taylor Forge	USA

1.12 Pressure Vessels, 9 per cent NI

ISGEC	India
Larsen & Toubro	India/Oman
ATB Caldereria Spa	Italy
Nuovo Pignone	Italy
Walter Tosto SPA	Italy
Ettore Zanon SpA	Italy
Kobe Steel	Japan
Hitachi Zosen	Japan
Sumitomo Heavy Ind.	Japan
De Plaattijzerindustrie B.V.	Netherlands

BILFAL	Saudi Arabia
Doosan Mecatec	S. Korea
Hantech	S. Korea
Duro Felguera (C/Stl. Only)	Spain
Motherwell Bridge Eng.	U.K.
A. Forsythe & Son	U.K.
Nooter USA	USA
Taylor Forge	USA

1.13 Pressure Vessels, 3.5 per cent NI

ISGEC	India
Larsen & Toubro	India/Oman
Walter Tosto SPA	Italy
Ettore Zanon SpA	Italy
Nuovo Pignone	Italy
Hitachi Zosen	Japan
Japan Steel Works	Japan
Kobe Steel	Japan
Mitsubishi Heavy	Japan
Sumitomo Heavy Ind.	Japan
IHI	Japan
De Plaattijzerindustrie B.V.	Netherlands
BILFAL	Saudi Arabia

Doosan Mecatec	S. Korea
Hantech	S. Korea
Duro Felguera	Spain
Motherwell Bridge Eng.	U.K.
A. Forsythe & Son	U.K.
Nooter	USA
Taylor Forge	USA

1.14 Column Trays

Stahl GmbH	Germany
Koch Glitsch	International
BARETTI MEFE SRL	Italy
Sulzer Chemtech Netherlands B.V.	Netherlands
Sunkyona	S. Korea
Sunkyog Eng. & Const. (Glitsch's Licence)	S. Korea
Hanbal Metal Eng. (Norton's Licence)	S. Korea
Nutter Engineering	U.K./USA
Norton	U.K.

1.15 Molecular Sieves

CECA	France
Procatalyse	France
W R Grace	Germany
UOP	International
Tosoh	Japan
Union Showa (Union Carbide License)	Japan
Zeochem	USA

1.16 Pig Receivers

Prematechnik (Steiner)	Germany
VeeKay Vikram Co.	India
Bassi Luigi	Italy
SICES	Italy
Fai-Officine Di Carvio Spa	Italy
Metano Impianti	Italy
Siirtec Nigi	Italy
Belleli Energy	Italy / UAE
Toyodo International	Japan
PEB Pipeline Equipment Benelux BV	Netherlands
MIS	Saudi Arabia
Pipeline Engineering	U.K.
Peco / Perry Equipment Company	U.K./USA
Scomark Engineering	U.K.
GD Engineering	U.K.
Ryder Process Plants	U.K.
Taylor Forge	USA

1.17 Slug Catchers - Fabricators

Fabricom	Belgium
VeeKay Vikram Co.	India
Rosetti Marino	Italy
Hitachi Zosen	Japan
Japan Steel Works	Japan
Mitsubishi Heavy Ind.	Japan
Duro Felguera S.A.	Spain
Motherwell Bridge Eng.	U.K.
Wellman Robey	U.K.

Taylor Forge

USA

2.0. HEAT EXCHANGERS

2.1 Main Cryogenic Heat Exchanger

Brembana
APCI

Italy
USA

2.2 Heat Exch., Shell & Tube, Shell:C.S., DIA up to 1000 mm I.D.

Foure Lagadec	France
Pecquet-Tesson	France
ISGEC	India
Larsen & Toubro	India/Oman
Godrej	India
TEMA	India
Villa & Bonaldi	Italy
Koch Heat Transfer	Italy
Olmi	Italy
SICES	Italy
Mangiarotti	Italy
Brembana	Italy
Officine Luigi Resta SPA	Italy
FBM Hudson Italiana	Italy/UAE
Hitachi Zosen	Japan
Tokki	Japan
Olayan Descon Engineering Company	Saudi Arabia
Gulf Engineering	Saudi Arabia
MIS	Saudi Arabia
BILFAL	Saudi Arabia
Zamil Steel	Saudi Arabia
Samsung Fine Chemicals	S. Korea
Doosan Mecatec	S. Korea
Daekyung Machinery	S. Korea
Daebong	S. Korea
Sungjin	S. Korea
Hantech	S. Korea
Wellman Hunt-Graham	U.K.
Heat Transfer Equip	USA
Smithco	USA
Fabsco. Inc.	USA
Krueger	USA
Graham Corporation	USA.
Ohmstede	USA
Hughes Anderson	USA
Energy Exchanger	USA

2.3 Heat Exch., Shell & Tube, Shell:C.S., DIA over 1000 mm I.D.

As per licensor bidderslist and as recommended by CB&I:

Koch Heat Transfer	Italy
Officine Luigi Resta SPA	Italy
Belleli Energy	Italy

FBM Hudson Italiana	Italy/UAE
Japan Steel Works	Japan
Mitsubishi Heavy Industries	Japan
Hitachi Zosen	Japan

Additional bidders for non-licensed equipment:

KVaerner Process Systems	Canada
Foure Lagadec	France
Pecquet-Tesson	France
Leffer	Germany
Larsen & Toubro	India/Oman
ISGEC	India
Godrej	India
TEMA	India
Nuovo Pignone	Italy
Olmi	Italy
Villa & Bonaldi	Italy
Mangiarotti	Italy
Brembana	Italy
Walter Tosto SPA	Italy
Mitsui Shipbuilding	Japan
Chiyoda Protech	Japan
Tokki	Japan
BILFAL	Saudi Arabia
Olayan Descon Engineering Co.	Saudi Arabia
MIS	Saudi Arabia
Zamil Steel	Saudi Arabia
Doosan Mecatec	S. Korea
Daebong	S. Korea
Sungjin	S. Korea
Samsung Fine Chemicals	S. Korea
Seoul Plant Engineering	S. Korea
Hantech	S. Korea
Babcock Mitsui	U.K.
KCC	U.K.
Serck Heat Transfer	U.K.
YUBA	USA
Energy Exchanger	USA
Heat Transfer Equip	USA
Smithco	USA
Fabsco. Inc.	USA
Krueger	USA
Ohmstede	USA

2.4 Heat Exch., Shell & Tube, Shell:S.S., DIA up to 1000 mm I.D.

Pecquet-Tesson	France
Foure Lagadec	France
Leffer	Germany
Larsen & Toubro	India/Oman
ISGEC	India
Godrej	India
TEMA	India
FBM Hudson Italiana	Italy/UAE
Brembana	Italy

Officine Luigi Resta SPA	Italy
Olmi	Italy
Villa & Bonaldi	Italy
Mangiarotti	Italy
Koch Heat Transfer	Italy
Hitachi Zosen	Japan
Mitsui Shipbuilding	Japan
Chiyoda Protech	Japan
Tokki	Japan
BILFAL	Saudi Arabia
Olayan Descon Engineering Co	Saudi Arabia
Gulf Heavy Industries	Saudi Arabia
MIS	Saudi Arabia
Zamil Steel	Saudi Arabia
Samsung Fine Chemicals	S. Korea
Seoul Plant Engineering	S. Korea
Daebong	S. Korea
Sungjin	S. Korea
Hantech	S. Korea
Wellman Hunt-Graham	U.K.
Energy Exchanger	USA
Heat Transfer Equip	USA
Smithco	USA
Fabsco. Inc.	USA
Krueger	USA
Graham Corporation	USA
Ohmstede	USA

2.5 Heat Exch., Shell & Tube, Shell: High NI (9%), solid or clad

Aker Process Solutions	France
Pecquet-Tesson	France
Leffer	Germany
ISGEC	India
Larsen & Toubro	India/Oman
Godrej	India
TEMA	India
Nuovo Pignone	Italy
VRV	Italy
Olmi	Italy
Brembana	Italy
Walter Tosto SPA	Italy
Japan Steel Works	Japan
Kobe Steel	Japan
Mitsubishi Heavy	Japan
Mitsubishi Nagasaki	Japan
Hitachi Zosen	Japan
Chiyoda Protech	Japan
Olayan Descon Engineering Co,	Saudi Arabia
Gulf Heavy Industries	Saudi Arabia
Zamil Steel	Saudi Arabia
MIS	Saudi Arabia
S. Korea Fertilizer	S. Korea
Doosan Mecatec	S. Korea
Daekyung Machinery	S. Korea
Daebong	S. Korea

Sungjin	S. Korea
Hantech	S. Korea
Wellman Hunt-Graham	U.K.
Graham Corporation	USA.
Ohmstede	USA
Nooter	USA
YUBA	USA

2.6 Heat Exch., Shell & Tube, Shell:S.S., DIA over 1000 mm I.D.

Leffer	Germany
Larsen & Toubro	India/Oman
ISGEC	India
Mangiarotti	Italy
Nuovo Pignone	Italy
Olmi (Subject to Evaluation)	Italy
Resta	Italy
Villa & Bonaldi	Italy
Walter Tosto SPA	Italy
Brembana	Italy
Hitachi Zosen	Japan
Mitsui Shipbuilding	Japan
Chiyoda Protech	Japan
BILFAL	Saudi Arabia
Olayan Descon Engineering Co.	Saudi Arabia
Zamil Steel	Saudi Arabia
Hantech	S. Korea
Hughes Anderson	USA
Krueger	USA
Nooter	USA
Energy Exchanger	USA

2.7 Heat Exch., Shell & Tube, Shell: Clad ST. DIA up to 1000 mm I.D.

Leffer	Germany
Larsen & Toubro	India/Oman
ISGEC	India
Godrej	India
TEMA	India
Mangiarotti	Italy
Resta	Italy
Olmi	Italy
Villa & Bonaldi	Italy
Walter Tosto SPA	Italy
Brembana	Italy
Hitachi Zosen	Japan
Mitsui Shipbuilding	Japan
Chiyoda Protech	Japan
BILFAL	Saudi Arabia
Olayan Descon Engineering Co.	Saudi Arabia
Gulf Heavy Industries	Saudi Arabia
MIS	Saudi Arabia
Zamil Steel	Saudi Arabia
Daebong	S. Korea
Sungjin	S. Korea
Hantech	S. Korea

Graham Corporation	USA
Ohmstede	USA
Hughes Anderson	USA
Krueger	USA
Energy Exchanger	USA

2.8 Heat Exch., Shell & Tube, Shell: Clad ST. DIA over 1000 mm I.D.

As per licensor bidderslist and as recommended by CB&I:

Belleli Energy	Italy
FBM Hudson Italiana	Italy
Koch Heat Transfer	Italy
Officine Luigi Resta	Italy
Japan Steel Works	Japan
Mitsubishi Heavy Industries	Japan
Hitachi Zosen	Japan

Additional bidders for non-licensed equipment:

Leffer	Germany
Larsen & Toubro	India/Oman
ISGEC	India
Godrej	India
TEMA	India
Walter Tosto SPA	Italy
Brembana	Italy
Nuovo Pignone	Italy
Olmi	Italy
Kobe Steel	Japan
Mitsui Engineering	Japan
Chiyoda Protech	Japan
BILFAL	Saudi Arabia
Olayan Descon Engineering Co.	Saudi Arabia
Zamil Steel	Saudi Arabia
Daebong	S. Korea
Sungjin	S. Korea
Hantech	S. Korea
Hughes Anderson	USA
Energy Exchanger	USA
Ohmstede	USA

2.9 Heat Exch., Shell & Tube, Shell: Low Alloy, DIA up to 1000 mm I.D.

Pecquet-Tesson	France
Leffer	Germany
Larsen & Toubro	India/Oman
ISGEC	India
Godrej	India
TEMA	India
Brembana	Italy
Olmi	Italy
VRV	Italy
Resta	Italy
Walter Tosto SPA	Italy
Hitachi Zosen	Japan

Mitsubishi Heavy	Japan
Mitsubishi Nagasaki	Japan
Mitsui Engineering	Japan
Chiyoda Protech	Japan
BILFAL	Saudi Arabia
Olayan Descon Engineering Co.	Saudi Arabia
MIS	Saudi Arabia
Zamil Steel	Saudi Arabia
S. Korea Fertilizer	S. Korea
Daekyung Machinery	S. Korea
Doosan Machinery	S. Korea
Daebong	S. Korea
Sungjin	S. Korea
Hantech	S. Korea
Wellman Hunt-Graham	U.K.
Graham Corporation	USA
Ohmstede	USA
Hughes Anderson	USA
Krueger	USA

2.10 Heat Exch., Shell & Tube, Shell: Low Alloy, DIA over 1000 mm I.D.

G&G International	Belgium
Pecquet-Tesson	France
Leffer	Germany
Larsen & Toubro	India/Oman
ISGEC	India
Godrej	India
TEMA	India
Walter tosto SPA	Italy
Brembana	Italy
ATB	Italy
Nuovo Pignone	Italy
Olmi	Italy
VRV	Italy
Resta	Italy
Hitachi Zosen	Japan
Kobe Steel	Japan
Mitsubishi Kakoki	Japan
Mitsui Engineering	Japan
Mitsubishi Heavy	Japan
Chiyoda Protech	Japan
BILFAL	Saudi Arabia
Olayan Descon Engineering Co.	Saudi Arabia
Zamil Steel	Saudi Arabia
Daebong	S. Korea
Sungjin	S. Korea
Korea Fertilizer	S. Korea
Daekyung Machinery	S. Korea
Doosan Machinery	S. Korea
Hantech	S. Korea
Wellman Hunt-Graham	U.K.
Hughes Anderson	USA
Krueger	USA
Graham Corporation	USA
Ohmstede	USA

2.11 Heat Exch., Shell & Tube, Heavy Wall (over 60 mm)

As per licensor bidderslist and as recommended by CB&I:

Belleli Energy	Italy
FBM Hudson Italiana	Italy
Koch Heat Transfer	Italy
Officine Luigi Resta	Italy
Japan Steel Works	Japan
Mitsubishi Heavy Industries	Japan
Hitachi Zosen	Japan

Additional bidders for non-licensed equipment:

Leffer	Germany
Larsen & Toubro	India/Oman
Godrej	India
TEMA	India
ISGEC	India
Walter Tosto SPA	Italy
Brembana	Italy
Nuovo Pignone	Italy
Olmi	Italy
Mitsui Engineering	Japan
Chiyoda Protech	Japan
BILFAL	Saudi Arabia
Olayan Descon Engineering Co	Saudi Arabia
Zamil Steel	Saudi Arabia
Daebong	S. Korea
Sungjin	S. Korea
Krueger	USA
YUBA	USA
Ohmstede	USA

2.12 Heat Exch., Shell & Tube, Shell: Cupro Nickel

G&G International	Belgium
Pecquet-Tesson	France
Leffer	Germany
Larsen & Toubro	India/Oman
ISGEC	India
Godrej	India
TEMA	India
Walter Tosto SPA	Italy
Bosco	Italy
Brembana	Italy
Scai SNFC	Italy
Resta	Italy
Olmi	Italy
Hitachi Kasado	Japan
Mitsui Engineering	Japan
Mitsubishi Heavy	Japan
Chiyoda Protech	Japan
Bronswerk	Netherlands
Olayan Descon Engineering Co.	Saudi Arabia

	BILFAL	Saudi Arabia
	Zamil Steel	Saudi Arabia
	MIS	Saudi Arabia
	Doosan Mecatec	S. Korea
	Daebong	S. Korea
	Sungjin	S. Korea
	Hantech	S. Korea
	Korea Fertilizer	S. Korea
	Daekyung Machinery	S. Korea
	Johnson Hunt	U.K.
	Wellman Hunt-Graham	U.K.
	Graham Corporation	USA
	Ohmstede	USA
	Krueger	USA
2.13	<u>Heat Exch., Shell & Tube: 3.5% NI</u>	
	Pecquet-Tesson	France
	Delaunay	France
	Fischer & Fils	France
	Leffer	Germany
	Larsen & Toubro	India/Oman
	ISGEC	India
	Godrej	India
	TEMA	India
	Nuovo Pignone	Italy
	Brembana	Italy
	Scai SNFC	Italy
	SICES	Italy
	Olmi	Italy
	Villa & Bonaldi	Italy
	Walter Tosto SPA	Italy
	Hitachi Zosen	Japan
	Sumitomo Heavy Ind.	Japan
	Mitsubishi Heavy	Japan
	Kobe Steel	Japan
	Mitsui Engineering	Japan
	Chiyoda Protech	Japan
	BILFAL	Saudi Arabia
	Olayan Descon Engineering Co.	Saudi Arabia
	Zamil Steel	Saudi Arabia
	MIS	Saudi Arabia
	Daebong	S. Korea
	Sungjin	S. Korea
	Hantech	S. Korea
	Ohmstede	USA
	Graham Corporation	USA
	Hughes Anderson	USA
	Energy Exchanger	USA
2.14	<u>Heat Exch., Shell & Tube, Shell: Titanium</u>	
	Welders	Belgium
	Pecquet-Tesson	France
	BSL	France
	Aker Process Solutions	France

Larsen & Toubro	India/Oman
ISGEC	India
Godrej	India
TEMA	India
Nuovo Pignone	Italy
Olmi	Italy
Walter Tosto SPA	Italy
Brembana	Italy
Resta	Italy
Mangiarotti	Italy
Mitsubishi Heavy	Japan
Mitsui Engineering	Japan
Sumitomo Heavy Ind.	Japan
Kobe Steel	Japan
Hitachi Zosen	Japan
Chiyoda Protech	Japan
Oostendorp	Netherlands
Sembawang	Singapore
Daekyung	S. Korea
Doosan	S. Korea
Hantech	S. Korea
Johnson Hunt	U.K.
Wellman Hunt-Graham	U.K.
Ohmstede	USA
Nooter	USA
Titanium Industries	USA
Josephoto	USA
YUBA	USA

2.15 Aluminium Brazed Heat Exchangers

Aker Process Solutions	France
Fives	France
Linde	Germany
Winkels	Germany
ISGEC	India
Larsen & Toubro	India/Oman
Walter Tosto SPA	Italy
Olmi	Italy
FBM Hudson	Italy
Mangiarotti	Italy
Kobe Steel	Japan
Sumitomo Precision	Japan
Chart Marston	U.K.
Altec	USA
Chart	USA

2.16 Air Cooled Heat Exchangers

GEA	International
SPX Cooling Technologies (Marley)	International
FBM Hudson	Italy/UAE
Chiyoda	Japan
Hitachi Zosen	Japan
Ecodyne MRM	USA

Hamon D'Hondt	France
ISGEC	India
GEI Hammon	India
Nuovo Pignone	Italy
Olmi	Italy
Sices Srl	Italy
Koch Heat Transfer (Brown Fintube)	Italy
Bronswerk HT	Netherlands
APV Spiro-Gills (Hudson Licence)	U.K.
Specialist Heat Exchanger	U.K.
Hudson	USA
Smithco	USA

2.17 Double Pipe/Finned Tubes

Aker Process Solutions	France
Brown Fintube	France/UK/USA
ISGEC	India
Olmi	Italy
Siirtec Nigi	Italy
Tecnofin	Italy
Chiyoda Protech	Japan
R W Holland	USA

2.18 Plate Exchangers

Gulf Sondex	Dubai
Alfa Laval	International
GEA Ecoflex	International
Hisaka Works	Japan
APV	USA
Koch Heat Transfer	USA
Graham Corporation	USA

2.19 Electric Heaters

Klöpper therm	Germany
Electromach B.V.	Netherlands
Chemtec	U.K.
Eltron	U.K.
Heatex	U.K.
Chromalox	USA
Wellman	USA

2.20 Steam-Vacuum Condensers

Balcke-Durr (SPX Corporation)	Germany
ISGEC	India
Olmi	Italy
Sumitomo Heavy Ind.	Japan
MES (Mitsui Engineering & Shipbuilding)	Japan
Hantech	South Korea
Wellman Hunt-Graham	U.K.
Nooter	USA
Graham Corporation	USA
Sigma Thermal	USA

3.0 FURNACES

3.1 Vertical Furnaces

As per licensor bidderslist and as recommended by CB&I:

Technip KTI	Europe
Heurtey Petrochem	France
JGC	Japan
Lummus Technology Heat Transfer	Netherlands / USA
Foster Wheeler	Italy, USA

3.2 Incinerators, Gas, Catalytic Process/Thermal Process (HS) Design

Airoil Flaregas	Italy
SICES	Italy
Siirtec Nigi	Italy
Lummus Technology Heat Transfer	Netherlands / USA
LD Duiker	Netherlands
HamWorthy	U.K.
John Zink International	U.K.
Zeeco	USA
Callidus	USA

3.3 Manufacturing Burners, etc.

Aecomtric Corporation	Canada
J.B.Systems Ltd. Iris	England
Durag Industrie Elektronik GmbH	Germany
Siirtec Nigi	Italy
LD Duiker B.V.	Netherlands
John Zink International	U.K.
HamWorthy	U.K.
Callidus	USA
Zeeco	USA

3.4 Reformer Furnace

Heurtey Petrochem	France
Lummus Technology Heat Transfer	Netherlands / USA
Technip KTI	USA / Netherlands

4.0 MECHANICAL HANDLING EQUIPMENT-CRANES

4.1 General

Stahl (X-P Electric Hoists)	Germany
Demag Cranes and Components	Germany
Okazaki	Japan
ASEA (Cranes) (X-P Electric Hoists)	Sweden
Stothert & Pit	U.K.
Ingersoll Rand (Air Hoists)	USA

4.2 OHT Cranes

Demag Cranes and Components	Germany
Italkrane	Italy
Shinko	Japan
Kanto Sangyo	Japan
Liebherr	International
Kone cranes	International
Van Leusden	Netherlands
Schippers	Netherlands
Hydralift	Norway
Hyundai (225 tons)	S. Korea
Carruthers (200 tons)	U.K.
Smith and Johnson (100 tons)	U.K.
Ansell Jones	U.K.
Morris Cranes	U.K.
J Barnsley Cranes Ltd	U.K.

5.0 MISCELLANEOUS PLANT EQUIPMENT

5.1 Instrument Air Dryers

Silicagel Berlin	Germany
Brembana	Italy
ISG (Impianti Systema Gel)	Italy
Shirakawa	Japan
Delair	Netherlands
Airpack	Netherlands
Cirmac	Netherlands
Burnett and Lewis	U.K.
Pall Filtration	U.K.
Compair	U.K.
Pneumatic Products	U.K./USA
CM Kemp	USA
Zurn	USA
Pneumatech	USA
Aaborg Keystone	USA

5.2 Loading Arms, Marine, LNG

Meyerinck	Germany
Wiese	Germany
Schwelm	Germany
Connex	Germany
Schwelm Verladetechnik (SVT)	Germany
Niigata (Chicksan)	Japan
Kanon	Netherlands
EMCO Wheaton	UK
Lifting Gears	UK
FMC (Chicksan)	USA/France
OPW Engineered Systems	USA

5.3 Nitrogen Production Units

Aker Process Solutions	France
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Air Liquide	France
Linde	Germany
Siad Machine Impianti / Praxair	Italy
Kobe Steel	Japan
Teikoku Sanso	Japan
Costain	UK
Chart Industries	USA
Air Products	USA / UK

5.4 Silencers

AAF	International/U.K.
Aboet	France
Sasakura	Japan
Shinwa Corporation	Japan
Fujii Kogyo	Japan
QE International	Netherlands
Burgess Manning	UK
Hopkinson, Ltd.	UK
Quietflo	UK
Peerless	USA

5.5 Steam Ejectors

Le Vide Industriel	France
GEA Wiegand	Germany
Korting Hannover	Germany
Edwards (Hich Hargreaves)	UK
Transvac System	UK
Schutte and Koerting	USA
Graham Corporation	USA
Penberthy	USA

5.6 Steam Desuperheaters (Variable Orifice)

Aker Process Solutions	France
Koerting	Germany
GEA Wiegand	Germany
Spirax Sarco	International
Tyco Valves & Controls	International
Imtech Kiekens	Netherlands
Al-Najim Saudi International	Saudi Arabia
INMA Steel Fabricators	Saudi Arabia
Olayan Descon Engineering	Saudi Arabia
Yarway	U.K./USA
Graham Corporation	USA

5.7 Filters, Process

Faudi Filter GmbH	Germany
Votech Filter	Germany
Bollfilter (Boll&Kirch)	Germany
Facet International	International
Fuji Filter	Japan
AMA Filter	Netherlands
Dahlman	Netherlands

Plenty (SPX Corporation)	U.K.
EATON	USA
EIMCO	USA-U.K.-Italy
Mahle Industrial Filtration (Nowata/ProGuard Filtrat)	USA
Peco (Perry Equipment)	USA/U.K.
Porous Media	USA
Fram	USA
Pall Filtration	USA/U.K.
Peerless	USA
King Tool	USA
UOP LLC	USA

5.8 Strainers/Screens

Bamag	Germany
Douglas (Italia)	Italy
Forain	Italy
Spirax Sarco	International
YAC Filter	Japan
Mitsubishi Kakoki	Japan
Nippon Benkan	Japan
UBE Ind.	Japan
Al-Najim Saudi International	Saudi Arabia
Auto-Klean	U.K.
Vee Bee	U.K.
Porous Media	USA
Tyco – Yarway	USA

5.9 Air Filters

Fuji Filter	Japan
IMI Norgren	U.K.
Farr	U.K.
ALTAIR	U.K.
Locker Airmaze	U.K. / Belgium
Plenty (SPX)	U.K./USA
AAF	USA
Donaldson	USA
Facet	USA
Farr	USA
Perry Equipment Corporation	USA
Porous Media	USA

Also refer to **9.3**.

5.10 Strainers, General Purpose (including Filters for Refrigerant Compressor)

Spirax Sarco	France/U.K.
Atlantik Geratebau	Germany
La Valvomeccanica	Italy
Douglas Italia	Italy
YAC Filter	Japan
Mitsubishi Kakoki	Japan
Nippon Benkan	Japan
Amafilter	Netherlands

Den Holder	Netherlands
Vee Bee	U.K.
Plenty (SPX)	U.K./USA
Facet	USA
Process Strainers	USA
EATON	USA
Porous Media	USA

5.11 Strainers, Feed Gas

YAC Filter	Japan
Mitsubishi Kakoki	Japan
Nippon Benkan	Japan
Vee Bee	U.K.
Plenty	U.K.
Porous Media	USA

5.12 Gear Units

Graffen Staden	France
Voith/BHS	Germany
Renke Tacke (*)	Germany
Voith (*)	Germany
MAAG	Switzerland
Allen	U.K.
Lufkin	U.K. / USA
David Brown Gears	U.K.
Philadelphia (*)	USA

Remarks: (*) means that these vendors can supply GEAR UNITS except for Main Ref. And Main Gear Box.

5.13 Couplings

Voith/BHS	Germany
Eagle Burgmann	Germany
Eagle-Bendix	Japan
Wellman Bibby	U.K.
Turbo Flex	U.K.
Koppers	USA
Lucas-Bendix	USA
Zurn	USA
Coupling Corporation	USA

5.14 Air Mixer

Pall Corporation	USA
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5.15 Material Handling Equipment

Fuller company	USA
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5.16 Ejectors

5.16.1 Water Heater (continuous Eductor type)

	Hantech	South Korea
	Ketema	USA
	Graham Corporation	USA
5.16.2	Eductor	
	Hantech	South Korea
	Ketema	USA
	Graham Corporation	USA
5.17	<u>Reactor filters</u>	
	Bayerische Wollfilz Fabriken K.G.	Germany
	Teflonfelt Filter cloth	USA
	Fibreglass filter cloth	USA
	Profile Wire Screen	USA
	Porous Media	USA
6.0	<u>STEEL STRUCTURES</u>	
6.1	<u>Steel Structures, heavy</u>	
	F. Fochi	Italy
	Toyo Kikai K.K.	Japan
	Nippon Kokan	Japan
	Daewood Shipbuilding	S. Korea
	Sum Sung Heavy Ind.	S. Korea
	Hanmaek Ind.	S. Korea
	Halla	S. Korea
	Hyundai Heavy Ind.	S. Korea
	Arabian Industries	Oman
	Oman Metal	Oman
	Bilad	Oman
	United Eng	Oman
	Special Technical Service	Oman
	Abdulla B. Al Khalifa and Partners	Saudi Arabia
	Al Zamil Steel	Saudi Arabia
	Hidada	Saudi Arabia
	INMA Steel	Saudi Arabia
	Safami	Saudi Arabia
	Zamil Steel	Saudi Arabia
	Nankai	Thailand
	STP&I	Thailand
	Motherwell Bridge	UAE
	NPCC	UAE
	William Hare	UAE
7.0	<u>PUMPS (ALL TYPES)</u>	
7.1	<u>Centrifugal pumps in accordance with API610 and/or fire water pumps as per NFPA20</u>	
	Ensival-Moret	Belgium / France
	Ruhr Pumpen	Germany

Flowserve	International
Clyde Union (incl. Girdlestone & David Brown)	International
KSB	International
Pompe Gabbioneta	Italy
GE Nuovo Pignone	Italy
Ebara	Japan
Pisco Japan	Japan
Shin Nippon (Pacific Licence)	Japan
Nijhuis	Netherlands
Sulzer	Switzerland/U.K.
SPP	U.K.
Weir (incl. Envirotech/Gabbioneta)	U.K. / Netherlands
Sundyne	USA
ITT Goulds	USA

7.2 High speed pumps

Nikkiso (Sundstrand Licence)	Japan
Sundstrand	USA/France

Note: The above vendors are both "Sundstrand". These pumps are single source. The geographical location of the sourcing entity will determine which vendors will be approached, all in accordance with Sundstrand company policy.

7.3 Vertical in-line pumps (BS 4082, class R)

Ensival-Moret	Belgium / France
Ruhr Pumpen	Germany
KSB/Guinard	Germany
Clyde Union	International
Flowserve	International
GE Nuovo Pignone	Italy
Ebara	Japan
Sulzer Pumps	Switzerland/U.K.
Weir/Envirotech Pumps	U.K./Netherlands

7.4 Vertical Sump pumps

Rheinhuette	Germany
Ruhr Pumpen	Germany
KSB	International
Flowserve	International
Clyde Union	International
Nikkiso	Japan
Ebara	Japan
Dengyosha	Japan
Shin Nippon	Japan
Sulzer	Switzerland
Process System	U.K.
Weir / Envirotech	U.K./NL
ITT Goulds	USA
Ingersoll-Dresser Pump	USA/U.K.

7.5 Self-priming pumps

	Ensival-Moret	Belgium/France
	Allweiler	Germany
	Friatec/Rheinhutte	Germany
	Flowserve	International
	KSB	International
	Ebara	Japan
	ITT Goulds	USA
	ITT Fluid Tech.	USA
7.6	<u>Sea Water pump (cooling water pump)</u>	
	Bergeron	France
	KSB	Germany/U.K.
	Ruhr Pumpen	Germany
	Flowserve	International
	Sulzer	International
	Nuovo Pignone	Italy
	Dengyousha	Japan
	DMW Corporation	Japan
	Ebara	Japan/USA
	Kubota	Japan
	Torishima Pump Manufacturing Co., Ltd.	Japan
	SPP	U.K.
	Weir	U.K.
	ITT Goulds	USA
7.7	<u>Reciprocating dosing pumps API675</u>	
	Dosapro Milton Roy	France
	Bran and Luebbe	Germany
	Lewa	Germany
	Prominent Orlita	Germany
	OBL Pompe Dosatrici	Italy
	Nikkiso	Japan
	Calder pumps	U.K.
	Macro Precision Pumps	U.K.
	Hills McCanna	USA
7.8	<u>Rotary positive displacement pumps</u>	
	D.C.M.	France
	Allweiler	Germany
	Borneman	Germany
	Leistritz	Germany
	Seepex	Germany
	Shimadzu Corporation	Japan
	Shin Nippon Machinery Co., Ltd.	Japan
	IMO	Sweden
	Mono	U.K.
	Viking	USA
7.9	<u>Cryogenic pumps – submerged</u>	
	Clyde Union	International
	Nikkiso (Cartel Licence)	Japan
	Cryostar/Airco (Low Tension Only)	Switzerland

	Cryodynamics (Ebara Group)	USA
7.10	<u>Subzero centrifugal pumps (below 25°C)</u>	
	KSB	Germany
	Ruhr Pumpen	Germany
	Clyde Union	International
	Flowserve	International
	Shin Nippon (Pacific Licence)	Japan
	Nikkiso	Japan
	Sulzer	Switzerland/U.K.
	Cryostar	Switzerland
7.11	<u>Vacuum pumps – liquid ring type</u>	
	Hibon	Canada
	Siemens	Germany
	GEA Weigand	Germany
	Garco	Italy
	Ebara	Japan
	Graham Corporation	USA
	Nash	USA
	Sihi	USA/U.K.
7.12	<u>Non-API Pump</u>	
	Sulzer Pumps	Finland
	Rheinhuetten	Germany
	Allweiler	Germany
	KSB	Germany
	Flowserve	International
	Gould	International
	Weir Pumps	International
	Arai	Japan
	Ebara Corp	Japan
	Kubota	Japan
	Torishima Pump	Japan
	Warren Pumps	USA
7.13	<u>Centrifugal Pump (non-seal)</u>	
	Hermetic	Germany
	Speck	Germany
	Nikkiso	Japan
	Teikoku Elec.	Japan
	Toko Sangyo	Japan
	Crane	Singapore
7.14	<u>Centrifugal Pump HP between bearings</u>	
	Ruhrpumpen	Germany
	Nuovo Pignone	Italy
	Ebara	Japan
	Nikkiso	Japan
	Flowserve	Netherlands
	Clyde Union	U.K.

	Sulzer	U.K.
	ITT Gould Pumps	USA
	Sundyne	USA
7.15	<u>Proportioning / Metering Pumps API 674</u>	
	Dosapro Milton Roy	France
	Bran and Luebbe	Germany
	Lewa	Germany
	Prominent Orlita	Germany
	Wepuko	Germany
	Clyde Union	International
	Peroni	Italy
	OBL Pompe Dosatrici	Italy
	Calder pumps	U.K.
	Macro Precision Pumps	U.K.
	Hills McCanna	USA
7.16	<u>Centrifugal Pumps – Sealless – Mag Drives</u>	
	Hermetic Pumpen GmbH	Germany
	Klaus Union	Germany
	Sulzer	Germany
	Flowserve	International
	Teikoku Electronic	Japan
	HMD	U.K.
	Hayworth Tyler	U.K.
	ITT Gould Pumps	USA
7.17	<u>Sulphur Pumps</u>	
	Hayward Gordon	Canada
	Rheinhuette	Germany
	Arai Pump Manufacturing Co., Ltd.	Japan
	PSI pumps	South Africa
	Weir (Lewis pumps)	U.K.
7.18	<u>Mechanical Seals and Systems</u>	
	AegleBurgmann	Germany
	Flowserve Seal Division	International
	John Crane	International
7.19	MSCP Pipeline Crude oil pumps (Main & Booster)	
	Flowserve	International
8.0	<u>COMPRESSORS</u>	
8.1	<u>Centrifugal compressor – Recycle Gas</u>	
	Siemens (Mannesmann Demag)	Germany
	Dresser-Rand	International
	GE Oil & Gas Nuovo Pignone	Italy
	MES (Mitsui Engineering & Shipbuilding)	Japan
	Kawasaki Heavy Industries	Japan

	Kobe Steel (Kobelco)	Japan
	Ebara (Elliot License)	Japan
8.2	<u>Centrifugal compressor API 617 - except main refrig. Type</u>	
	Siemens (Mannesmann Demag)	Germany
	Dresser-Rand	International
	GE Oil & Gas Nuovo Pignone	Italy
	MES (Mitsui Engineering & Shipbuilding)	Japan
	Kawasaki Heavy Industries	Japan
	Kobe Steel (Kobelco)	Japan
	Ebara (Elliot License)	Japan
8.3	<u>Small air compressors-reciprocating up to 200 kW</u>	
	Siemens Power Generation (Demag Delaval)	Germany
	Compair	U.K.
	Hamworthy	U.K.
	Atlas Copco	USA/U.K.
	Ingersoll-Rand	USA/U.K.
8.4	<u>Air compressors/blower integrally geared (API 672)</u>	
	Siemens Power Generation	Germany
	Man Turbo	Germany
	Aerzen Reliable	International
	Nuovo Pignone	Italy
	Compair	U.K.
	Hamworthy	U.K.
	Atlas Copco	USA/U.K.
	Ingersoll-Rand	USA
	Joy Cooper	USA
	FS-Elliott	USA
8.5	<u>Reciprocating compressors Make-up Hydrogen</u>	
	Neuman & Esser Group	Germany
	GE Oil & Gas Nuovo Pignone	Italy
	Kobe Steel	Japan
	MES (Mitsui Engineering & Shipbuilding)	Japan
	Thomassen International	Netherlands
	Bruckhardt Compression	Switzerland
	Dresser Rand	USA/U.K.
8.6	<u>Steam turbines (general purpose) API 611</u>	
	Man Turbo	Germany
	Siemens Power Generation (KKK)	Germany
	GE Oil & Gas (Nuovo Pignone)	Italy
	Mitsubishi Heavy Industries (MHI)	Japan
	Ebara (Elliott Licence)	Japan/USA
	Dresser-Rand (Coppus)	USA

8.6.1 Steam turbines (general purpose) API 612

Siemens Power Generation (KKK)	Germany
Man Turbo	Germany
GE Oil & Gas (Nuovo Pignone)	Italy
Mitsubishi Heavy Industries (MHI)	Japan
Dresser-Rand (Coppus)	USA

8.7 Screw compressor

Man Turbo	Germany
Atlas Copco	International
Ingersoll-Rand	International
Aerzener	International
Kobe steel	Japan
Howden Process Compressors	U.K.

8.8 Main air blower

Man Turbo	Germany
Siemens Power Generation (Demag Delaval)	Germany
Aerzener	International
Ebara	Japan
Hitachi	Japan
Mitsubishi Heavy Industries (MHI)	Japan
Howden Process Compressors	U.K.
Edwards (Hick Hargreaves)	U.K.
Dresser-Rand	USA

8.9 Blowers

Hibon (Ingersoll Rand)	Canada
Man Turbo	Germany
Aerzener	International
Hamda Blower	Japan
Showa Fuyoku	Japan
Howden Process Compressors	U.K.
Edwards (Hick Hargreaves)	U.K.
A-C Compressor	USA
Lamson	USA
Allen Stuart	USA
Dresser Roots	USA

8.10 Compressor anti-surge and Process Control Systems

Man Turbo	Germany
Voith	Germany
Dresser-Rand Control systems	USA
Triconex	USA
Compressor Controls Corp.	USA

	Woodward	USA
8.11	<u>Hot Gas Expanders</u>	
	Atlas Copco	Bahrein/UK/USA
	Cryostar	France
	GE Energy (Nuovo Pignone)	Italy
	Ebara/Elliott	Japan/USA
	Bandariyah Int. Company Ltd	Saudi Arabia
	Dresser-Rand	USA
8.12	<u>Dry Gas Seals and Systems</u>	
	AegleBurgmann	Germany
	Flowserve Seal Division	International
	John Crane	International
9.0	<u>GAS TURBINES</u>	
9.1	<u>Gas turbine generator package</u>	
	Siemens Power Generation	Germany
	GE Oil & Gas (Nuovo Pignone)	Italy
	Hitachi	Japan
	Mitsubishi Heavy Industries (MHI)	Japan
	Alstom Power	U.K.
	John Brown	U.K.
	GE	USA
	Solar	USA
9.2	<u>Small gas turbine generator less than 5 MW</u>	
	WEG Equipamentos Eletricos SA	Brazil
	Mitsui Zosen	Japan
	Kawasaki Heavy Ind.	Japan
	Ruston	U.K.
	Solar Turbines	USA
	Dresser Rand	USA
9.3	<u>Air filters for gas turbines</u>	
	Defitec	Belgium
	AAF	USA/U.K.
	Farr	USA
	Donaldson	USA
	Also refer to 5.9.	
10.0	<u>DIESEL ENGINES</u>	
10.1	<u>Diesel Engines up to 100 hp</u>	

Wartsila Diesel OY	Finland/Switzerland
Deutz	Germany
Man Diesel	Germany/U.K.
Mitsubishi Heavy	Japan
Daihatsu	Japan
Saudi Diesel	Saudi Arabia
Ruston	U.K.
Caterpillar	USA/UAE
Cummins (Southern Plains)	USA
Perkins	USA
Waukesha	USA

10.2 Diesel Engines 100 hp and over

Wartsila Diesel OY	Finland/Holland
Deutz	Germany
Man Diesel	Germany/U.K.
Mitsubishi Heavy	Japan
Saudi Diesel	Saudi Arabia
Allen (NEI)	U.K.
Ruston	U.K.
Caterpillar	USA
Cummins (Southern Plains)	USA
Waukesha	USA

11.0 TRANSITION JOINTS (FOR LOW PRESSURE AND LOW TEMP. SERVICE:
"DOWN TO – 196 C")

Asahi	Japan
Cape Contracts	U.K.
Barclad	USA
Tube Turns	USA

12.0 FLARE AND VENT STACKS

12.1 Flare Tips & Flame front generator

EET Flare Systems	France
Koch International	International
ITAS SPA	Italy
Escher	Netherlands
Birwelco	U.K.
GBA	U.K.
Kaldair	U.K./USA
John Zink International	U.K.
Callidus technologies	USA
Flaregas Corp	USA
National Air Oil (NAO)	USA
Zeeco	USA

13.0 EXTERNAL INSULATION (INCLUDING SOUND PROOFING)

13.1 Insulation materials for piping/equipment except for LNG tank insulation

13.1.1 Cold insulation materials

Pittsburgh Corning	Belgium/USA
Prezioso Technilor	France
Hertel	Germany
Kaefer	Germany
Meisei	Japan
SPI	USA

13.1.1.1 For cellular glass

Pittsburgh Corning	Belgium/USA
Prezioso Technilor	France
Hertel	Germany
Kaefer	Germany
Meisei	Japan
SPI	USA

13.1.1.2 For PIR

Pittsburgh Corning	Belgium
Tarec Insulation N.V.	Belgium
Celotex	UK
Kooltherm Insulation	UK

13.1.2 High density polyurethane pipe support

Willich	Germany
NHK Spring Co.	Japan
Nichiasu	Japan
Rilco	USA

13.1.3 Hot/acoustic insulation material

Pittsburgh Corning	Belgium/USA
Isover Saint Gobain	France
Prezioso Technilor	France
Hertel	Germany
Kaefer	Germany
RockWool Ltd.	International
Meisei	Japan
Lapinus	Netherlands
Pilkington	U.K.
Roxul	USA
SPI	USA

13.1.4 Sealer adhesive

Pittsburgh Corning	Belgium
Nichias	Japan
Meisei	Japan
Foster	USA
Pittsburgh Corning	USA

	Dow Corning	USA	
13.1.5	<u>Vapour barrier material</u>		
	Pittsburgh Corning	Belgium	
	Foster	USA	
	Childers Products Co. (Encacel)	USA	
	Polyguard Products Inc.	USA	
13.1.6	<u>Cladding</u>		
	Nisshin Steel Co.	Japan	
	Coated Metal Ltd.	U.K.	
	Armco Co.	USA	
	RPR Products	USA	
	Childers Products	USA	
13.1.7	<u>Accessory material</u>		
	Certain Teed Corp.	USA	
	Anco Products Inc.	USA	
	Lamtec Corp.	USA	
	Alpha Associates	USA	
	Childers Products Co.	USA	
	Gerrard Industries	USA	
	Denso	USA	
	Nelson	USA	
	Ancon	USA	
13.1.8	<u>Laminated wooden block</u>		
	Permali	International	
	Insulam	USA	
13.2	<u>Fireproofing coatings</u>		
	Carboline Co.	USA	
	PPG	USA	
	Textron	USA	
	Albi Manufacturing	USA	
14.0	<u>STORAGE TANKS, SPHERES AND ACCESSORIES (INCLUDING SITE ERECTION)</u>		
			Key
	Storage Tank, Floating Roof		1
	LPG/LNG Tanks (Cryogenic Services to be – 196.C)		2
	Spheres		3
	Miscellaneous Tanks		4
	Geldof	Belgium	1234
	Granges Graver	Belgium	134
	DWE	Germany	14
	CB&I - Chicago Bridge & Iron	International	1234
	Larsen & Tubro	India/Oman	
	Belleli	Italy	134

Hitachi Zosen Tank System	Japan	134
Toyo Kanetsu	Japan	1234
Ishi Iron works	Japan	
TKK	Japan	
Bilfal	Saudi Arabia	
Samsung	S. Korea	
Indian OilTanking	India/Oman	14
Vijay Tank	Oman	14
Rotary	Thailand	
Rubbaglas Ltd	U.K.	14
Whessoe	U.K.	1234
Motherwell Bridge	U.K.	1234
HMT Rubba Glas	U.K.	14
Enardo Intrnational	USA	14

15.0 GENERATORS, ELECTRIC MOTORS

15.1 Motors/generators

		Key
High Voltage Motors above 3 MW		0
High Voltage Motors below 3 MW		1
Low Voltage Motors		2
Synchronous Motors		3
Generators		5
Alstom	France	01235
Jeumont Schneider	France	0135
AEG (specially for low speed reciprocating compressor motors)-LDW	Germany	013
Loher	Germany	01235
Siemens	Germany	01235
GEC Alsthom	International	01235
ABB	International	01235
Fuji	Japan	01235
Mitsubishi Elec.	Japan	01235
Toshiba	Japan	01235
Brook Hansen	U.K.	2
Brush	U.K.	01
Lawrence Scott	UK	01
Parsons Peebles	U.K.	135
Allen-Brandley	USA	01235
General Electric	USA	5
Westinghouse	USA	5

For combination Electric Motor & Variable Speed Drive, reference is made to section 54.

15.2 Diesel Engine Generators

Wartsila	Finland/Sweden
Man	Germany
Caterpillar	International
Interger	International
Denyo Co. Ltd	Japan
Mitsubishi Heavy Ind.	Japan

Taiyo	Japan
Saudi Diesel Generator	Saudi Arabia
Hyundai Heavy Industries	S. Korea
F.G.Wilson Ltd	U.K.
Elequipu	U.K.
Dale Electric	U.K.
F.G. Wilson	U.K.
Finning (UK) Ltd.	U.K.
W.H. Allen	U.K.
Petbow	U.K.
S.P.P.	U.K.
.	
Cummins	USA/Switzerland

15.3 Power transformers

		Key
Up to and including 1600 kVA, Oil immersed hermetically sealed		1
Above 1600 kVA, Oil immersed breathing type		2
Pauwels	Belgium	12
WEG Equipamentos Eletricos SA	Brazil	
GEC Alstom	France	12
AEG-LDW	Germany	12
Crompton Greaves *	India	12
Schneider Electric	International	12
ABB	International	
Siemens	International	
Fuji	Japan	12
Melco	Japan	12
Toshiba	Japan	12
Voltamp	Oman	1
Hyundai Heavy Industry	S. Korea	12
Hyosung	S. Korea	12
Brush	U.K.	12
Parson Peebles	U.K.	12

* With MR (Germany) type OLTC only.

16.0 INSTRUMENT POWER SUPPLY

16.1 Uninterruptable power supply (UPS)

Schneider Electric SA	France
Merlin Gerin	France
Benning	Germany
ABB	International
Siemens	International
Liebert	Italy
Invertomatic Victron Energy System	Netherlands
Gutor	Switzerland
Chloride Power	U.K./France
AEG	U.K./Germany

Emerson	U.K.
Erskine System Ltd	U.K.

16.2 Regulated DC Power supply

Merlin Gerin	France
Schneider Electric SA	France
Varta	Germany
Benning	Germany
ABB	International
Siemens	International
Liebert	Italy
Fuji	Japan
Invertomatic Victron Energy System	Netherlands
Gutor	Switzerland
AEG	U.K./Germany
Chloride Power	U.K./France
Emerson	U.K.
Erskine System Ltd	U.K.

16.3 DC Power Supplies Instrument Cabinets

Nemil-Lambda	Germany
Phoenix Contact	Germany
Delta Electronics	Netherlands
Electromach	Netherlands

17.0 SUBSTATION EQUIPMENT

17.1 Switchgear and motor control centre

		Key
High Voltage 33 kV		0
High Voltage 6.6 kV		1
Low Voltage 415 V M.C.C.'s		2
Low Voltage Light and Instr. Distr.		3
145 kV Gas Insulated Switchgear		4
Schneider Electric	France	23
Siemens	Germany	01234
ABB	International	01234
GEC Alsthom	International	01234
Schneider Electric	International	0123
Fuji	Japan	01
Melco	Japan	12
Mitsubishi	Japan	2
Toshiba	Japan	014
Voltamp	Oman	23
NEI	Oman	3
Al Hassan / L & T	Oman	123
LS Indust.	S. Korea	3
Hyundai Heavy Ind..	S. Korea	3
Switchgear & Instruments (S & I)	U.K.	123

	Westinghouse	USA	01
17.2	<u>Battery charger</u>		
	Benning	Germany	
	Varta	Germany	
	ABB	International	
	Siemens	International	
	Fuji	Japan	
	Invertomatic Victron Energy System	Netherlands	
	Gutor	Switzerland	
	AEG	U.K./Germany	
	Chloride Power	U.K./France	
	Emerson	U.K.	
	Erskine System Ltd	U.K.	
17.3	<u>Batteries</u>		
	GNB	Canada	
	Saft	France	
	Varta	Germany	
	Hoppecke	Germany	
	FIAMM	Italy	
	Nife	Sweden	
	Alcad	UK	
	Chloride	UK	
	Exide	USA	
17.4	<u>Electrical distributed control system</u>		
	Schneider Electric SA	France	
	AEG-LDW	Germany	
	Siemens	Germany	
	ABB	International	
	Fuji	Japan	
	Melco	Japan	
	Toshiba	Japan	
	Yokogawa Electric	Japan	
	GE	USA	
	Foxboro	USA	
17.5	<u>Electric Heat Tracing system</u>		
	Abu Dhabi Oilfield Services (ADOS)	Abu Dhabi	
	Thermon	Netherland/USA	
	Mohammad Al-Mojil Group (MMG)	Saudi Arabia	
	Jubai Industrial Maintenance & construction (JOMAC)	Saudi Arabia	
	Tyco Thermal Control (Raychem)	USA	
	3M	USA	
18.0	<u>TELECOMMUNICATIONS SYSTEM/EQUIPMENT</u>		

Note: All telecommunication systems and equipment are controlled and licensed by the Oman Telecommunication Company OMANTEL. The selection and operation of such equipment will require their approval. This applies to all items in Group 18.

18.1 Plant radio system: base station VHF, UHF (simple and talk through)

Northern Telecom	Canada
Sorno	Denmark
Sailor	Denmark
Bosch	Germany
TAIT	New Zealand
GE	USA
Motorola	USA
AE	USA

18.2 Portables, two way (intrinsically safe)

Northern Telecom	Canada
Sorno	Denmark
Bosch	Germany
TAIT	New Zealand
GE	USA
Motorola	USA

18.3 Plant communication system (2 way)

Northern Telecom	Canada
Industronics	Germany
Neumann	Germany
Philips	Netherlands
3M Peltor	Oman
GAI tronics	UK
Motorola	USA

18.4 Closed circuit TV system

Bosch	Germany
Siemens	Germany
Philips	Netherlands

18.5 Intrinsically safe telephone sets

Nokia	Finland
Siemens	Germany
Neuman	Germany
Harris	U.K.

18.6 Conventional telephone sets

Australian	Australia
Northern Telecom	Canada
Alcatel	France

Matra Comm	France
Siemens	Germany
Iwatsu Electric	Japan
Philips	Netherlands
Ericsson	Oman
NEC	Saudi Arabia
CISCO	USA

18.6.1 VOIP Telephone Sets

Cisco	USA
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18.7 UHF radio links

Northern Telecom	Canada
Alcatel	France
Plessey	U.K.
Marconi	U.K.
Commtech	USA
TAIT	New Zealand

18.8 Telephone Systems

Single source vendor appointed by CLIENT. Refer to S-000-5370-006 for details.

18.9 Telecom System Integrator

ABB	International
Cisco	International
Siemens	International
Radio Holland Electronics	Netherlands
Transtel Engineering	Singapore
CapRock	UK

19.0 CHEMICAL TREATING AND PURIFICATION EQUIPMENT

19.1 Chemical injection packages

Anderson Water Sys.	Canada
Ecodyne Ltd.	Canada
Gaco Systems	Canada
Check Point	Dubai
Aker Process Solutions	France
Dosapro Milton Roy	France
Site	France
Lewa	Germany
Degremont	International
Metito	International
Peroni Pompe	Italy
Thermokimik	Italy
Nikkiso	Japan
Sakura	Japan
Kurita	Japan
Delta Eng.	Netherlands

Frames	Netherlands
Geveke	Netherlands
GE	UAE
Satec	U.K.
Bran and Lubbe	U.K.
Milton Roy	U.K.
PWT Projects	U.K.
Jiskoot	U.K.
Macro	U.K.
Gee & Co.	U.K.
Palpro	U.K.
Emco Engineering	USA
Aquatech	USA

19.2 De-alkalysers

Dewplan	U.K.
Kennicott	U.K.
Memcore	U.K.
Berkfeld	U.K.
Meco	USA

20.0 FIRED STEAM GENERATORS

20.1 Boilers

Cokerill	Belgium
Stein Fasel	France
Deutsche Babcock	Germany
Thermax	India
Babcock & Wilcox	International
Foster Wheeler	International
ABB	International
Macchi	Italy
Galleri	Italy
Linde Impianti	Italy
Sices srl	Italy
Babcock Hitachi	Japan
Mitsubishi Heavy Industries (MHI)	Japan
Mitsui Engineering	Japan
Ishikawajima Harima	Japan
Sumitomo	Japan
Cerrey S.A.	Mexico
NEM	Netherlands
Black Sivals & Bryson	U.K.
Cochran	U.K.
Combustion/NEI	U.K.
Hamworthy	U.K.
Abco	USA
Zurin Industries	USA

Boiler licensees must obtain the written backing of the Licensor for their design, fabrication, erection and performance guarantees.

20.2 De-aerators

KTI	Belgium
Ecodyne Ltd.	Canada
Aker Process Solutions	France
Degremont	France
Kurita Water Industries	Japan
Seo-Koatsu	Japan
Stork Thermeq	Netherlands
Edwards (Hick Hargreaves)	U.K.
NEI	U.K.
Crane/Cochrane	USA
Graver Water	USA/Singapore
LA Water	USA
Sterling Deaerator	USA
Kansas City Heater	USA
Serck Baker	USA/U.K.

20.3 Auxiliary water heater

Stein	France
Solivent Ventec	France
Standard Fasel	Netherlands
Stork Thermeq	Netherlands
K.C.C.	U.K.

20.4 Combustion air fans

Hamon D'hondt	Belgium
Novenco	Canada
Solivent Ventec	France
B.T.T.	France
FBM Hudson Italiana	Italy
Nuovo Pignone	Italy
De Cardenas	Italy
Ebara	Japan
Dengyosha	Japan
Stork	Netherlands
Aircrew Howden	U.K.
Woods Fan	U.K.
Alldays and Peacock	U.K.
Buffalo Forge	USA
Garden City	USA

20.5 Direct Fired Air Heaters

LD Duiker	Netherlands
Boustead International Heaters	U.K.
Callidus	USA
Sigma Thermal	USA
John Zink company	USA
Peabody Engineering Corporation	USA

21.0 AIR CONDITIONING AND SPACE HEATING INSTALLATION

Carrier	International
York	International
Trane	International
Hitachi	Japan
Daikin	Japan
Zamil Air Conditioning	Saudi Arabia

22.0 FIREFIGHTING AND SAFETY EQUIPMENT

22.1 Water systems

	Key
Fire Fighting Equipment	1
Elevated Water Monitor	2
Water Spray/Water Sprinkler System	3
Deluge Valves in Water Spray System	4
Remotely Operated Monitors	5
Fixed and Portable Monitors	A
Hydrants	B

22.2 Foam Systems

High Ex. Foam System and Compound	6
Low Ex. Foam System and Compound	7

22.3 Clean agent to CO₂ extinguishing system

For Buildings	8
For Gas Turbines/Compressors	9

22.4 Miscellaneous equipment

Portable Fire Extinguishers	10
Portable Safety Equipment	11
Mobil Equipment including Tenders	12
Ambulances (* must qualify vendors)	C

22.5 Dry chemical fixed systems

Saval / Kronenberg	Netherlands
Tyco Fire & Buildings	Netherlands
Amerex	USA
Ansul	USA
Preussag	UK
Wormald	UK

22.6 Fire fighting and Gas detection system

Rosenbauer	Austria	12
Sides	France	12
Serberus	France	14
Honeywell	International	
Saval B.V.	Netherlands	1, 2, 4, 5, 6, 7, 8, 9, 10, 14
Kronenburg	Netherlands	12
Skum	Sweden	2
Angus	U.K.	1, 3, 4, 5, 6, 7, 10

Wormald	U.K.	14
Chubb National Foam	U.K.	5, 6, 7, 12
Knowsley	U.K.	1, 2, 4, 5, 6, 7
Crowcon	U.K./USA	
Siebe Gorman	U.K.	11
Salem	U.K.	14
Preussag	U.K.	8, 9, 14
Akron Brass	USA	A
Elkhart Brass	USA	A
Mueller	USA	B
Pierce Manufacturing	USA	12
Grinnell	USA	3
Ansul	USA	8, 9, 10
Viking	USA	4
Dooley Tackaberry	USA	1, 2, 8, 9, 10
Automatic Sprinkler	USA	3
Stang	USA	2, A
Scott	USA	11
Halprin	USA	11
MSA	USA/Japan	11
Kennedy Valve	USA	B

Note: Plant main FGS system as per category 29.1.

23.0 PAINT AND COATING

	Key
Conventional Paints	1
Epoxy Ester Paints	2
Epoxy Paints	3
Epoxy Coaltar Paints	4
Zinc Silicate Paints	5
Silicone Aluminium Paints	6
Zinc Rich Epoxy	7
Polyurethane	8
Silicone Acrylic	9
Modified Silicone	10
Epoxy Phenolic	11
Inorganic Topcoat	12
Modified Inorganic	13
Full Range Approved	A
Restricted Range Approved	R
Formerly Sikkens	(1)
Approved for Oil-Based Priming Paints Only	(2)
Approved for Zinc-Rich Epoxy Primer and Amine-Adduct-Cured Epoxy Paint Only	(3)
Products are to be manufactured according to former Mobile formulate and be unidentifiable as such	(4)
Approved for Tank Coatings Only	(5)

Ameron USA 1-A, 2-A, 3-A, 4-A, 5-A, 6-A, 7~11-A, 12-A, 13-A

Carboline	USA	1-A, 2-A, 3-A, 4-A, 5-A, 6-A, 7~11-A
Chugoku	Japan	1-A, 2-A, 3-A
Dai Nippon Toryo	Japan	1-A, 2-A, 3-A, 4-A, 5-A, 6-A, 7~9-A, 10-R
Devoe Coatings	Netherlands	1-A(4), 2-A(4), 3-A(4), 4-A, 6-A, 7~11-A
Hempel	Denmark	1-A, 2-A, 3-A, 4-A, 5-A, 6-A, 7~10-A
ICI	Netherlands	1-A, 2-A, 3-A, 4-A, 5-A, 6-A
International Paint	Netherlands	1-A, 2-A, 3-A, 4-A, 5-A, 7~11-A
Jotun	Norway	1-A, 2-A, 3-A, 4-A, 5-R, 6-A, 7~11-A
Kansai	Japan	1-A, 2-A, 3-A, 4-A, 5-R, 6-A, 7~9-A, 10-R
AW & J Leigh	UK	1-A, 2-A, 3-A, 4-A, 5-R, 6-A, 7~10-A
Nippon Paint	Japan	1-R, 2-A, 3-A, 4-A, 5-R, 6-A, 7~9-A, 10-R
Sigma Coatings	Netherlands	1-A, 2-A, 3-A, 4-A, 5-A, 6-A, 7~11-A, 12-A
Valspar	USA	1~9-A, 10-R, 11-A

24.0 CATHODIC PROTECTION

Dulam International	Dubai
Cathodic Protection Services	India
Nippon Boshoku	Japan
Cathodic Protection Technology	Singapore
Corrosion Control Services	UK
Hockway	UK
Impalloy	U.K.
Wilson Walton	U.K.
Basco	U.K.
ACEL	U.K.
Harco	USA/Saudi Arabia
Corrpro	USA

25.0 PIPING AND FITTINGS

Voestalpine	Austria
Confab	Brazil
Vallourec	France
DMV Stainless	France
Starval	France
Interfit	France
Delcorte	France
M.G.I	France
Benteler	Germany
Bergrohr Siegen	Germany
Butting	Germany
Eisenbau/Kramer	Germany
Europ / Thyssen Stahlunion	Germany/France
Fuchs	Germany
Van Leeuwen N.V.	International
Corus	International
Dalmine	Italy
IML Industria	Italy
Bassi Luigi	Italy
Bonney Forge	Italy
Mega	Italy
Sideco	Italy
Techtubi	Italy

Coprosider	Italy
Metalferr SPA	Italy
Galperti	Italy
Inoxtec	Italy
Technoforge	Italy
Petrol raccord	Italy
Chero Piping	Italy
Nicolagalperti & Figlio	Italy
Benkan Corporation	Japan
ASK	Japan
Sumitomo	Japan
Kyoei	Japan
Fuji Special	Japan
Shimoda Iron Works	Japan
Yahata Machine Mfg.	Japan
Tadokoro Tech.	Japan
Toyo Rasenkan	Japan
Okuda Sogabe	Japan
Tokyo Rasenkan	Japan
NasToa Co. Ltd.	Japan
Stainless Pipe Ind.	Japan
NKK / Mitsubishi	Japan
NSC / Itochu	Japan
Kawaski steel	Japan
Tubacex	Spain
Enara	Spain
Heerbaart (spectacle blind spade spacers)	Netherlands
PFF Europe	Netherlands
Dylan Staal	Netherlands
MAN Ferro Piping Supply	Netherlands
Future Pipes Industries L.L.C.	Oman
BKL Fitting Limited	U.K.
British Steel plc	U.K.
IMI Yorkshire Alloys	U.K.
SSE Pipework Fittings	U.K.
AW Alloy	U.K.
Promat	U.K.
Spromak	U.K.
Burton Delingpole	U.K.
Munro & Miller	U.K.
Wyman Gordon	U.K.
Bentham International	U.K.
Wash Eng.	U.K.
Bonney Forge Int.	U.K.
Flo-Bend	USA
Hackney Ladish	USA
Custom Alloy	USA
Taylor Forge	USA
Anvil	USA
Penn Machine	USA
Flowline	USA
Core-Pipe (Formerly Gerlin)	USA
Bonney Forge	USA
WFI	USA
Crane	USA
Coffer	USA

Goodall Rubber (hoses)	USA
Wyman Gordon	USA

25.1 GRE / GRP Piping

Sarplast	Italy
Plasticon	Netherlands
Saudi Arabian Amiantit	Saudi Arabia/Middle East
Future Pipe	Saudi Arabia/Middle East

26.0 VALVES (LOW TEMPERATURE SERVICE)

26.1 Ball valves, API 6D, flanged and butt, weld ends, split body design, low temp. service down to minus 50 C

Metso	Finland
Sud Robinetterie Industrial	France
Argus	Germany
ABV s.r.l.	Italy
Grove (Cameron)	Italy
PBVS (Pibiviesse)	Italy
Ringo (Cameron)	Italy
Dafran S.p.A	Italy
PCC Ball Valve	Italy
Star Line Spa	Italy
Perar	Italy
Valvometal	Italy
PetrolValves	Italy
OMS Saleri	Italy
KTM (Tyco)	Japan
Kitamura Valve	Japan
Kitz	Japan
Walthon Weir	Spain
T.K. Valve (Cameron)	U.K.
Cort	U.K.
Hindle (Tyco)	U.K.
Hopkinson	U.K.
DHV Industries	USA
Orbit (Cameron)	USA
Cameron	USA/Scotland

26.2 Ball valves, API 6D, flanged and butt, weld ends, split body design, low temp. service down to minus 196 C

Metso	Finland
Sud Robinetterie Industrial	France
ABV s.r.l.	Italy
PBVS (Pibiviesse)	Italy
Grove (Cameron)	Italy
Dafran S.p.A	Italy
PCC Ball Valve	Italy
Star Line Spa	Italy
Valvometal	Italy
PetrolValves	Italy
OMS Saleri	Italy

Perar	Italy
Kitamura Valve	Japan
Kitz	Japan
Walthon Weir	Spain
T.K. Valve (Cameron)	U.K.
Hopkinson	U.K.
Cameron	USA/Scotland
DHV Industries	USA
Orbit	USA

26.3 Ball valves, flanged, stainless steel 316, low temp. minus 80 C

Velan	Canada
Metso	Finland
Dresser Masoneilan	International
ABV s.r.l.	Italy
Petrolvalves	Italy
Perar	Italy
Grove (Cameron)	Italy
PBVS (Pibiviesse)	Italy
Kitamura (Reduced Bore Only)	Japan
Kitz	Japan
BAC	Spain
Walthon Weir	Spain
Worcester	U.K.
Serk Audco	U.K.
Hindle	U.K.
TK	U.K.
Orbit	USA

26.4 Ball valves, flanged, stainless steel 316, low temp. minus 196 C

Velan	Canada
Metso	Finland
I.V.C.	France
ABV s.r.l.	Italy
PBVS (Pibiviesse)	Italy
Perar	Italy
Petrolvalves	Italy
Kitamura	Japan
Kitz	Japan
Walthon Weir	Spain
Worcester	U.K.
Serk Audco	U.K.
Hindle	U.K.
TK (Cameron)	U.K.

26.5 Ball valves, flanged, SS 316 and SS 316 nace, low temp. minus 196 C

Metso	Finland
ABV s.r.l.	Italy
Petrolvalves	Italy
Kitamura	Japan
Walthon Weir	Spain
TK (Cameron)	U.K.
Worcester	U.K.

Serk Audco	U.K.
Hindle	U.K.
Orbit	USA

26.6 Check, gate, globe valves, flanged, SS 316, for low temp. service down to minus 80°C and down to minus 196°C

Velan	Canada
Tyco	Europe
Sapag	France
Serck Audco	International
Dresser Masoneilan	International
ABV s.r.l.	Italy
Petrolvalves	Italy
Raimondi (Tyco)	Italy
Vitas (Valvitalia)	Italy
Calobri	Italy
Bonney Forge	Italy
OMB	Italy
Douglas Chero	Italy
Ringo	Italy
Yoneki	Japan
Takamizawa	Japan
Kinka	Japan
Kitz	Japan
Bestobell	U.K.
Crane	U.K.
Newman Hattersley	U.K.
Hindle	U.K.
DHV Industries	USA
Cooper	USA

26.7 Pilot operated type, for cyrogenic service down to minus 196°C

Sarazin	France
Tormene	Italy
ABV s.r.l.	Italy
FU.K.ui (PSL-MB, RPS 131)	Japan
Birkett (WB 400 Safeset)	U.K.
Crosby (Style JPV)	U.K. / USA
Anderson Greenwood	USA
(Series 20/3070/90/220/230/270/320/330/370)	

26.8 Conventional type, API STD 526, for cyro service down to minus 196°C

Sarazin	France
ABV s.r.l.	Italy
Tormene	Italy
FU.K.ui (Type RC, REC, LT)	Japan
Motoyama Seisakusho	Japan
Birkett (Series WB 400)	U.K.

Crosby (Styles JOS, JLT) U.K. / USA

26.9 Low temperature butterfly valves down to minus 80 and minus 196°C

Metso (Metal Seated)	Finland
Amri (Metal Seated)	France
Adams (Metal Seated)	Germany
Linde Mapag	Germany
Advance Valves	India
Keystone (Vanessa) (Metal Seated) (Tyco)	Italy
Orton	Italy
Sasakura (Soft Seated)	Japan
Solent & Pratt	U.K.
Flowseal (Crane)	USA

26.10 Special check valves

Kubota Corporation	Japan
Mokveld	Netherlands
Fluid Process Control Corporation	USA
Burr Ridge, IL	USA
Circle Seal controls	USA
Atwood and Morrilli co.Inc	USA

26.11 Slide Valves

Zimmermann and Jansen	International
ABV s.r.l.	Italy
Remosa	International
Kubota Corporation	Japan
TAPCO International	USA
Trans-Valve Inc	USA
AES Inc	USA
Crane	USA/Canada/U.K.

27.0 VALVES (NON CYROGENIC)

27.1 Cast bronze valves (Gate/Globe/Check/Ball)

Raimondi	Italy
ABV s.r.l.	Italy
Fasani	Italy
Toyo Valve	Japan
Kitz Corporation	Japan
Shipham	U.K.
Hattersley Newman	U.K.
Durco (Flowseve)	USA
Stockham	USA
Crane	USA/Canada/U.K.

27.2 Cast iron valves (Gate/Globe/Check)

Raimondi (Tyco)	Italy
ABV s.r.l.	Italy
Bonney Forge	Italy
Calobri	Italy
Fasani	Italy
Toyo Valve	Japan
Kitz Corporation	Japan
Hattersley Newman	U.K.
Hindle	U.K.
Durco (Flowseve)	USA
Stockham	USA
Crane	USA
American-Darling	USA

27.3 Forged steel valves (Gate/Globe/Check) (Carbon/Alloy/Stainless Steel)

Velan	Canada
Tyco	Europe
Audco	India
KSB	India
ABV s.r.l.	Italy
Calobri	Italy
OMB S.P.A.	Italy
Douglas Chero	Italy
Bonney Forge	Italy
3Z Corporation	Japan
Kitz Corporation	Japan
Shoritsu Seisakusho	Japan
Takamisawa Valve (Except Class 800#)	Japan
Yoneki Valve (Except Class 800#)	Japan
SWI	S. Korea
Heaton	U.K.
Vogt	USA

27.4 Cast carbon steel valves (Gate/Globe/Check)

Velan	Canada
Raimondi	Italy
ABV s.r.l.	Italy
Vitas (Valvitalia)	Italy
Bonney Forge	Italy
Valvosider	Italy
Takamisawa Valve	Japan
Yoneki Valve	Japan
Toyo Valve (Up to Class 800#)	Japan
Kitz Corporation (Up to Class 800#)	Japan
Hitachi	Japan
Pan Korea	S. Korea
Poyam	Spain
Hattersley Heaton	U.K.
Hindle	U.K.
Newco	USA

27.5 Cast alloy steel valves (Gate/Globe/Check)

Velan	Canada
Truflo Rona	Belgium
APV	Germany
Vitas	Italy
ABV s.r.l.	Italy
Raimondi (Tyco)	Italy
OMB	Italy
Douglas Chero	Italy
PetrolValves	Italy
Takamisawa Valve	Japan
Yoneki Valve	Japan
Hitachi	Japan
Kinka	Japan
Kitz	Japan
Merwede	Netherlands
Pacific	USA
Cooper	USA

27.6 Cast stainless steel valves (Gate/Globe/Check)

Truflo Rona	Belgium
Velan	Canada
APV	Germany
Raimondi	Italy
Valvosider	Italy
ABV s.r.l.	Italy
Vitas	Italy
OMB	Italy
Douglas Chero	Italy
Perolvalves	Italy
Kitz	Japan
Takamisawa Valve	Japan
Hitachi	Japan
Kinka	Japan
Yoneki Valve	Japan
Merwede	Netherlands
Poyam	Spain
Cooper	USA

27.7 Forged C.S. Alloy S.S

Velan	Canada
G.R.I.Sapag	France
Saccap	France
APV	Germany
Audco	India
KSB	India
Douglas Chero S.p.A	Italy
OMB S.p.A	Italy
BFE S.p.A	Italy
ABV s.r.l.	Italy
Alco	Italy
Bonney Forge	Italy
Petrol Valves	Italy
LVF	Italy
Merwede	Netherlands

27.8	SWI <u>Cast C.S Alloy S.S</u>	S. Korea
	Velvan	Canada
	Sapag	France
	APV	Germany
	AVA Armaturen Vertrieb Alms	Germany
	Strack	Germany
	Audco	India
	KSB	India
	LVF	Italy
	Bonney Forge	Italy
	PetrolValves	Italy
	Fasani S.P.A	Italy
	Alco	Italy
	ABV s.r.l.	Italy
	Raimondi Valvole	Italy
	Kitz Corp.	Japan
	Toyo Valve	Japan
	Ishida Valve	Japan
	Yoneki Valve	Japan
	Takamisawa valve	Japan
	Merwede	Netherlands
	Pan Korea Valve	S. Korea
	Tong Yang Metal	S. Korea
	Lazaro Ituarte	Spain
	Poyam Valve	Spain
	Crane Ltd	U.K.
	Goodwin International	U.K.
	Stockham Triangle	U.K.
	Newman Hattersley	U.K.
27.9	<u>Butterfly valves</u>	
	Delta Valve	Canada
	Velan	Canada
	Metso	Finland
	SAPAG (Tyco)	France
	AMRI (KSB)	France
	Adams	Germany
	Emerson Process Management	International
	ABV s.r.l.	Italy
	Vanessa (Metal seat) (Tyco)	Italy
	Tomoe Valve	Japan
	Duvalco	Netherlands
	Wouter Witzel Eurovalve	Netherlands
	Korea Unicom Valve Co., Ltd.	S. Korea
	Walton Weir Pacific	Spain
	BAC	Spain
	Serk Audco	U.K.
	Charles Winn	U.K.
	Hindle Cockburns	U.K.
	Dezurik	USA
	Xomox	USA
	Keystone	USA/Italy

DHV Industries USA

27.10 Ball valves

Velan	Canada
Metso (Split/Top Entry)	Finland
SDT	France
Sud Robinetterie Industrial	France
Borsig	Germany
Argus (Split Body)	Germany
Audco	India
Raimondi (Tyco)	Italy
Grove (Cameron)	Italy
PBVS (Pibiviesse)	Italy
Dafran S.p.A	Italy
PCC Ball Valve	Italy
Star Line Spa	Italy
Perar	Italy
ABV s.r.l.	Italy
Valvometal	Italy
Petrol Valves	Italy
OMB Valve	Italy
Tormene	Italy
OMS Saleri	Italy
Dresser Masoneilan	International
Kitamura Valve (Split Body)	Japan
Kitz Corporation (Split Body)	Japan
Walton Weir	Spain
TK Valve	U.K.
Cameron	U.K.
DHV Industries	USA
Orbit Valve (Top Entry)	USA
WKM	USA

27.11 Through-conduit gate valves & ball valves (API 6A & 6D) for Linepipe

Dresser Masoneilan	International
PBVS (Pibiviesse)	Italy
Petrol Valves	Italy
ABV s.r.l.	Italy
Valvitalia	Italy
Takamisawa Valve (Gate Valve Only)	Japan
I.K.S. (Gate/Ball)	Japan
Lazaro Ituarte	Spain
Bel Valves	U.K.
Cooper (Gate/Ball) Cameron	USA
Orbit Valve (Ball Valve) Cameron	USA
Grove (Gate/Ball) Cameron	USA
Daniel Emerson	USA
WKM Cameron	USA

27.12 Plug valves

Durco	Belgium
Christensen	Denmark

Tuflin (Non-Lubricated)	Germany/USA
AZ	Germany
ABV s.r.l.	Italy
Poyam (Eriks)	Sweden
Serk Audco	U.K.
Hattersley Newman Hender	U.K.
Hindle Cockburns	U.K.
Duriron (Non-Lubricated)	USA
Stockham (Wedge Plug Type)	USA
General (Twin Seal) Cameron	USA
Orbit (Truseal)	USA
RockWell	USA

27.13 Wafer check valves

Hoerbiger	Germany
ABV s.r.l.	Italy
Takamisawa Valves	Japan
Mokveld	Netherlands
Keystone (Tyco)	Netherlands
Stockham	U.K./USA
Goodwin	U.K.
Hygrade	USA

27.14 Diaphragm Valve

ABV s.r.l.	Italy
Nippon Dia Valve	Japan
Saunders Valve (Crane)	U.K.
ITT Grinnell (Tyco)	USA/Canada
Hills McManna	USA

27.15 Y-pattern valves & blow down valves

Velan	Canada
Saccap	France
Gestra	Germany
Flowserve (Edward Vogt Valve Co.)	International
ABV s.r.l.	Italy
Vitas	Italy
Douglas Chero	Italy
Yoneki Valve	Japan
Lazaro Ituarte	Spain
Yarway (Tyco)	USA

27.16 FCC Slide Valve

Zimmermann & Jansen	Germany
ABV s.r.l.	Italy
Kubota	Japan
Tapco International	USA
Remosa Valves	USA
Empro	USA
Bafco (Slide Valve Actuator Systems	USA
Crane	USA/UK

28.0 SAFETY RELIEF VALVE

28.1 Conventional type safety relief valves

Metso	Finland
Sapag	France
Bopp & Reuter	Germany
Protego	Germany
Dresser Masoneilan	International
Crosby (Tyco)	International
Emerson Process Management	International
ABV s.r.l.	Italy
Pignone	Italy
TAI Milano	Italy
Econosto	Netherlands
Emba Techniek (breathervalves)	Netherlands
ODS	Netherlands
Koso Kent	U.K.
Broady	U.K.
IMI Bailey Birkett	U.K.
Triangle	U.K.
Anderson Greenwood	USA
CCI	USA
Farris	USA
Keystone	USA

28.2 Pilot operated safety relief valves

Sapag	France
Dresser/Masoneilan	International
Tyco Flow control	International
Emerson Process Management	International
ABV s.r.l.	Italy
Spirax Sarco	Italy
Keystone	Netherlands
Mechanica (thermal expansion)	Netherlands
Birkett	U.K.
Crosby	U.K./USA
Anderson Greenwood/Crosby	USA

28.3 Steam traps/vacuum traps

Spirax Sarco	France/U.K.
TLV	Japan
Keystone	USA
Armstrong	USA
Yarway (Tyco)	USA/NL

29.0 INSTRUMENTATION

29.1 Integrated Control Systems (DCS, SIS, FGS)

Honeywell	International
Invensys	International

	Yokogawa	International
29.2	<u>Control valves</u>	
29.2.1	<u>General control valves</u>	
	Metso	Finland
	ABB (Kent)	International
	Emerson Process Management	International
	Dresser/Masoneilan	International
	Flowserve	International
	Tyco	International
	CCI	USA
29.2.2	<u>Special trim LO-DB valve</u>	
	Metso	Finland
	ABB (Kent)	International
	Dresser/Masoneilan	International
	KSB Amri	Netherlands
	Flowserve	U.K.
	CCI	USA
	Emerson Process Management	USA
29.2.3	<u>Emergency block valve</u>	
	Metso	Finland
	Tyco	International
	Dresser Masoneilan	International
	Rotork	International
	Kitz Corporation	International
	Mokveld	Netherlands
	KPC Corporation	S. Korea
	Hindle	U.K.
	Orbit	U.K.
	TK Valve	U.K.
	Fisher Controls	USA
	Leden MHD	UK
	Vilmax	UK
	Power Mechanical	UK
29.2.4	<u>Cryogenic butterfly control valve</u>	
	Metso	Finland
	Amri	France
	Adams	Germany
	Tyco	Italy
29.2.5.	<u>Pressure regulators</u>	
	Dresser/Masoneilan	International
	Emerson Process Management	International
	Flowserve	International
29.2.6	<u>Instrument Accessories</u>	

29.2.6.1 Solenoid valves

Econosto	International
Metso	Finland
Herion	Germany
Asco Redhat/Jocumatic	International
Skinner	USA
Max Seal	USA

29.2.6.2 Limit switches (Proximity type)

Stahl	Germany
Desser-Masoneilan	International
Telemecanic (Schneider)	International
Pepperl & Fuchs	Germany

29.2.6.3 Valve positioners

Metso	Finland
Flowserve-Valtek	Germany
ABB	International
Yokogawa	International
Invensys	International
Dresser / Masoneilan	International
Flowserve	International
Emerson Process Management	International
Honeywell	International

29.2.6.4 On/OFF valve controllers

Metso	Finland
Emerson Process Management	International

29.2.6.5 I/P and P/I transducers (rack mounted)

Invensys	International
Yokogawa	International
Honeywell	International
ABB	International
Dresser / Masoneilan	International
Emerson Process Management	International
Moore Products	U.K.

29.3 Flow instruments

29.3.1 Variable area meters (Rotameters)

Krohne Persenaire	Germany/U.K./NL
Endress & Hauser	Germany
Emerson Process Management	International
ABB	International
Fisher-Porter	USA

29.3.2 Averaging pitot flow elements

Dieterich (Annubar)	France
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	ABB	International
	Emerson Process Management	International
	Invensys	International
	Hydril	U.K.
	Torbar	U.K.
	Fluidic Techniques Incorporated	USA
29.3.3	<u>DP Flow transmitters (electronic)</u>	
	ABB	International
	Emerson Process Management	International
	Honeywell	International
	Invensys	International
	Yokogawa	International
29.3.4	<u>Orifice flanges and plates</u>	
	Dosch	Germany
	ABB	International
	Invensys	International
	Yokogawa	International
	Euromisure	Italy
	Officine Nicola Galperti & Figilo S.P.A	Italy
	Den Holder	Netherlands
	Mechanica Delft	Netherlands
	Samil	S.Korea
	Doyoung Precision	S.Korea
	ISA Controls	U.K.
	Daniel Industries (Emerson)	USA/U.K.
	Fluidic Techniques Incorporated	USA
	Peco (Perry Equip.)	USA
	FMC Technologies (Smith)	USA
29.3.5	<u>Integral orifices</u>	
	ABB	International
	Emerson Process Management	International
	Honeywell	International
	Invensys	International
	Yokogawa	International
	Daniel Measurement & Control	USA
29.3.6	<u>Positive displacement meters</u>	
	Bopp & Reuter	Germany
	ABB	International
	Emerson Process Management	International
	Invensys	International
	Yokogawa	International
	Badger Meter Inc.	USA
	FMC Technologies (Smith)	USA
	Daniel Flow Products	USA
29.3.7	<u>Sight flow gauges</u>	

Eckardt	Germany
Gestra	Germany
Richter	Germany
Emerson Process Management	International
Douglas Italia S.P.A	Italy
Eriks	Netherlands
Samil	S. Korea
Simco	U.K.
Clark Reliance Corp. (Jacoby Tarbox / Jerguson)	USA

29.3.8 Turbine meters

Faure-Herman	France
Bopp and Reuther	Germany
ABB	International
Emerson Process Management	International
Honeywell (Enraf)	International
Invensys	International
Krohne	International
Yokogawa	International
KDG Mobrey	U.K.
Badger Meter Inc.	USA
FMC Technologies (Smith)	USA
Daniel Flow Products	USA

29.3.9 Vortex shedding meters

Endress & Hauser	Germany
Emerson Process Management	International
Invensys	International
Yokogawa	International
ABB Automation	International
Emco	USA

29.3.10 Venturi tubes

Dosch	Germany
ABB	International
Yokogawa	International
Euromisure	Italy
Den Holder	Netherlands
Mechanica Delft	Netherlands
Samil	S.Korea
ISA Controls	U.K.
Daniel Industries (Emerson)	USA/U.K.
Badger Meter Inc.	USA
Fluidic Techniques Incorporated	USA
Peco (Perry Equipment)	USA
FMC Technologies (Smith)	USA

29.3.11 Magnetic flow meters

Endress & Hauser	Germany
Emerson Process Management	International
Invensys	International

	Yokogawa	International
	ABB	International
29.3.12	<u>Mass flow meters (Coriolis & Thermal Mass)</u>	
	ABB	International
	Emerson Process Management	International
	Endress & Hauser	International
	Invensys	International
	Krohne Persenaire	International
	Yokogawa	International
	Moore/Smith	USA
29.3.13	<u>Flare Flow Monitoring (Ultrasonic Flow)</u>	
	SMAR	Brazil
	ABB	International
	Endress & Hauser	International
	GE Sensing Ltd. (Panametrics)	International
	Invensys	International
	Krohne Persenaire	International
	Yokogawa	International
	Instromet	Netherlands
	Krohne Persenaire	Netherlands
	Able Instruments Ltd.	U.K.
	Bush Beach Engineering	U.K.
	Daniel Flow Products (Emerson)	USA
	FMC Technologies (Smith)	USA
	Sick Maihak	USA
29.4	<u>Level instruments</u>	
29.4.1	<u>Level transmitters delta P type</u>	
	ABB	International
	Invensys	International
	Yokogawa	International
	Honeywell	International
	Emerson Process Management	International
29.4.2	<u>Displacer type level transmitters</u>	
	ABB	International
	Emerson Process Management	International
	Dresser / Masoneilan	International
	Magnetrol	International
	Honeywell	International
	Invensys	International
	Vega	Netherlands
	Krohne Persenaire	Netherlands
29.4.3	<u>Gauge glasses</u>	
	Klinger	International
	Bonetti	Italy

	Samil	S.Korea
	Weka	Switzerland
	Simco	U.K.
	Clark-Reliance	USA
	Ernst Gage	USA
29.4.3.1	Level Gauges Magnetic	
	Bopp & Reuther	Germany
	Intra Automation	Germany
	Bonetti	Italy
	Krohne Persenaire	Netherlands
	KSR/Kuebler	Singapore
	Samil	S. Korea
	Weka	Switzerland
	Simco Engineers Ltd	UK
29.4.4	<u>Tank Radar Gauges</u>	
	Magnetrol International	Belgium
	Emerson Process Management	International
	Endress & Hauser	International
	Invensys	International
	Honeywell (Enraf)	Netherlands
	Krohne Persenaire	Netherlands
29.4.5	<u>Tank gauging systems</u>	
	Included in DCS	
29.4.6	<u>Non contact radiation</u>	
	Berthold	Germany
	Enraf Delft Instruments (Honeywell)	Netherlands
	SAAB Controls	Sweden
	Kay-Ray	USA
	Ohmart	USA
29.4.7	<u>Level detectors (capacitance type)</u>	
	Endress & Hauser	Germany
	Meridian Instruments	Netherlands
	Vega	Netherlands
	Drexelbrook Eng. Inc.	USA
	Texas Nuclear	USA
	K-Ray	USA
29.4.8	<u>Level switches</u>	
	Magnetrol	International
	KDG Mobrey	U.K.
	Able	U.K.
	Static O-Ring (SOR)	USA

	Prexel Brook	USA
29.4.9	Radar (Free wave & Guided wave)	
	Endress & Hauser	Germany
	Emerson Process Management	International
	Vega	Netherlands
	Krohne Persenaire	Netherlands
29.4.10	Level Transmitters (ultrasonic type)	
	Endress & Hauser	Germany
	Emerson Process Management	International
	Magnetrol	International
	Vega	Netherlands
	Milltronics	U.K.
	Drexelbrook Eng. Inc.	USA
29.5	<u>Pressure instruments</u>	
29.5.1	<u>Draught gauges</u>	
	Invensys	International
	Ashcroft	USA
	Dwyer	USA
	Hays Republic	USA
29.5.2	<u>Pressure gauge</u>	
	Bourdon	France
	Budenberg	Germany
	ABB	International
	Badotherm	Netherlands
	Manotherm	Netherlands
	Observer	Netherlands
	Wika	Netherlands
	Woojin	S. Korea
	Hypsung	S. Korea
	Ashcroft	USA
29.5.3	<u>Pneumatic receiver gauges</u>	
	Allesco	France
	ABB	International
	Invensys	International
	Yokogawa	International
	Ashcroft	USA
	ITT Barton	USA
	Orange Research	USA
29.5.4	<u>Pressure switches</u>	
	Bourdon	France
	Budenberg	Germany

	Barksdale Control Products	Germany	
	ABB	International	
	Beta	Netherlands	
	Delta Controls	USA	
	United Electric Controls	USA	
	ITT Barton	USA	
	Static O-Ring (SOR)	USA	
29.5.5	<u>Differential pressure switches (direct connected)</u>		
	ABB	International	
	Delta	U.K.	
	Orange Research	USA	
	ITT Barton	USA	
29.5.6	<u>Pressure transmitters (electronic)</u>		
	Invensys	International	
	Yokogawa	International	
	Honeywell	International	
	Emerson Process Management	International	
	ABB	International	
29.5.7	<u>Pulsation dampers</u>)	
)	
	ABB	International)	These items
	Chemequip	USA)	best
	Anderson Greenwood	USA)	purchased
	Ashcroft	USA)	
)	from the
29.5.8	<u>Syphons</u>)	gauge
)	manufacturer
	Anderson Greenwood	USA)	
29.6	<u>Temperature instruments</u>		
29.6.1	<u>Dial thermometers (bimetal)</u>		
	Bourdon	France	
	Budenberg	Germany	
	ABB	International	
	Econosto	Netherlands	
	Badotherm	Netherlands	
	WIKA	Netherlands	
	Woojin	S. Korea	
	Hypsung	S. Korea	
	Rototherm	U.K.	
	Ashcroft	USA	
	Ametek	USA	
	Weksler	USA	
	Tel-Tru	USA	
29.6.2	<u>Resistance temperature detectors & thermowells</u>		
	STI	France	
	Bourdon	France	

	ABB	International
	Emerson Process Management	International
	Yokogawa	International
	Thermo Electric	Netherlands
	Wika	Netherlands
	Thermocouple Product	USA
	Woojin	S. Korea
	Hypsung	S. Korea
	Wisetech Controls	S. Korea
29.6.3	<u>Thermocouples</u>	
	ABB	International
	Emerson Process Management	International
	Yokogawa	International
	Thermo Electric	Netherlands
	Woojin	S. Korea
	Hypsung	S. Korea
	Wisetech Controls	S. Korea
	Thermocouple Product	USA
29.6.4	<u>Temperature transmitters</u>	
	ABB	International
	Invensys	International
	Yokogawa	International
	Emerson Process Management	International
	Honeywell	International
29.6.5	<u>Temperature switches</u>	
	Bourdon	France
	ABB	International
	Static O-Ring (SOR)	USA
	CCS	USA
	Acromag	USA
	ITT Barton	USA
29.6.6	<u>Pyrometers</u>	
	Mikron Infrared Inc	Canada
	Dyas Infrared	Germany
	Raytech	Germany
	Lumasense Technologies	Netherlands
29.7	<u>Analysers</u>	
29.7.1	<u>Analyser package system integrator</u>	
	ABB	International
	Emerson Process Management	International
	Yokogawa	International
	Hobre Instruments	Netherlands
	Computer System Protection Chamber & Integrated Communication Co. Ltd. (CPIC)	Saudi Arabia
	Control and Applications (ASIA) PTE	Singapore

	Axis Engineering PTE LTD. Siemens Applied Automation (H & B) Cegelec Englobal Systems Inc.	Singapore USA/Germany USA USA
29.7.2	<u>Area monitors (CO)</u>	
	Sieger/Zellweger Draeger Sick Maihak General Monitors MSA Sierra	France Germany Germany U.K. U.K. USA
29.7.3	<u>Area monitors (hydrocarbons)</u>	
	Sieger/Zellweger Draeger General Monitors Sierra Delphian	France Germany U.K. USA USA
29.7.4	<u>Area monitors (H₂S)</u>	
	Sieger/Zellweger Draeger Detcon Sierra General Monitors	France Germany International International U.K.
29.7.5	<u>Viscosity Index Monitors</u>	
	Bartec Benke ATAC Precision scientific Solartron (Mobrey)	Germany U.K. USA USA.
29.7.6	<u>Chromatographs/mass spectrographs</u>	
	ABB Emerson Process Management Invensys Siemens Daniel	International International International USA/Germany USA
29.7.7	<u>Continuous emission monitors</u>	
	Sick Siemens Emerson Process Management Anarad ABB Yokogawa	Germany Germany International International International International
29.7.8	<u>CO control</u>	

	Siemens	Germany
	ABB	International
	Yokogawa	International
	Emerson Process Management	International
29.7.9	<u>O₂ control (paramagnetic)</u>	
	Sick Maihak	Germany
	Emerson Process Management	International
	Servomex	International
	ABB	International
	Teledyne	USA
29.7.10	<u>Conductivity</u>	
	Emerson Process Management	International
	Endress Hauser	International
	Yokogawa	International
29.7.11	<u>Distillation</u>	
	Bartec Benke	Germany
	ABB	International
	Endress Hauser	International
	ATAC	U.K.
	Siemens	USA
29.7.12	<u>Flame scanners (ultra violet and infra-red)</u>	
	Honeywell	USA
	Fireye	USA
	Forney	USA
29.7.13	<u>Infra-red</u>	
	Sick Maihak	Germany
	Siemens	Germany
	ABB	International
	Emerson Process Management	International
29.7.14	<u>Moisture in vapour</u>	
	Michel Instruments	U.K.
	GE Sensing / Panametrics Ltd.	USA/U.K./NL
	Ametek	USA
	Spectra Sensors	USA
29.7.15	<u>Oil in water</u>	
	Fluid Data	Germany
	Monitek	Netherlands
	Agar	USA
	AWA	USA
29.7.16	<u>Oxygen/combustibles (Zirconium)</u>	

	Enotec	Germany
	Emerson Process Management	USA
	Thermox	USA
	Servomex	USA
29.7.17	<u>pH</u>	
	ABB	International
	Emerson Process Management	International
	Endress Hauser	International
	Yokogawa	International
29.7.18	<u>Specified Ion</u>	
	Yokogawa	International
	Emerson Process Management	USA
	Endress Hauser	International
29.7.19	<u>Total organics (TOC)</u>	
	LAR	Germany
	Sick Maihak	Germany
	Endress Hauser	International
	Ionics	USA
	Hach	USA
29.7.20	<u>Dissolved oxygen</u>	
	Emerson Process Management	International
	Endress Hauser	International
	Orbisphere	International
	Yokogawa	International
29.7.21	<u>Density Instruments</u>	
	Bopp & Reuther	Germany
	Berthold	International
	Solartron	U.K.
	Sarasota	USA
29.7.22	<u>Silica</u>	
	Bran & Luebbe	Germany
	Applikon	Netherlands
	Polymetron	U.K.
	Hach	USA
29.7.23	<u>NIR</u>	
	ABB	Canada

	OceanOptics	USA
29.7.24	<u>SO2/SOx</u>	
	Ametek	Germany
	Siemens	Germany
	Sick Maihak	Germany
	ABB	International
29.7.25	<u>Opacity</u>	
	Sick Maihak	Germany
	Siemens	Germany
	ABB	International
	Yokogawa	International
	Opal Environmental	USA
29.7.26	<u>NO/NO2/NOx</u>	
	Ametek	Germany
	Servomex	Germany
	Sick Maihak	Germany
	ABB	International
	Emerson Process Management	International
29.7.27	<u>Chlorine</u>	
	Ametek	Germany
	Emerson Process Management	International
	Endress Hauser	International
	Yokogawa	International
	Hach	USA
29.7.28	<u>LPG Monitor</u>	
	Sysco Analytics	U.K.
	U E Systems	USA
29.8	<u>Miscellaneous bulk materials</u>	
29.8.1	<u>Tube fittings</u>	
	Swagelok	USA
29.8.2	<u>Manifold for transmitters</u>	
	Unit Controls	International
	Astava	Netherlands
	Multi Instruments	Netherlands
	Kenmac	U.K.
	Oliver valves	UK

Anderson Greenwood	USA
Hoke	USA
Swagelok	USA

29.8.3 Cable Glands / Lugs / Cable Assessories

Govan Industries	Australia
CEAG	Germany
Capri	Italy
Stahl	Germany
Hawke International	U.K.
CMP	U.K.
Pepper of Working	U.K.
Thomas & Betts	USA
Pohl	International

Industrial plugs / Sockets / Switches

CEAG	Germany
Legrand	France
Stahl	Germany

Earthing materials and Accessories

Metal deploye	France
Standard Cressal	UK
A.n.Wallis	UK
Picc components	UK
Furse	UK
Unitech	Singapore

29.8.4 Tubing

Sostu Edelstahl	Germany
Mannesmann	Germany
Avesta Sandvik Tube	Sweden
Multi Instruments	Netherlands
Fine Tubes	U.K.
DMV Stainless	USA/NL
Dehoron	USA
Parker Hannifin	USA
Swagelok	USA

29.8.5 Tubing pre-insulated traced bundles

Samuel Moore	Belgium
Thermon	International
Gommers	Netherlands
Multi Instruments	Netherlands
Swagelok	USA
Tyco Thermal Controls / Raychem	USA

29.8.6 E/I Interface Relays

Phoenix	Germany
Weidmueller	Germany
Omron	International
Nieaff Smitt	Netherlands

29.8.7 Safety Barriers

Pepperl & Fuchs	Germany
Stahl	Germany
ABB	International
Camille Bauer	International
MTL Instruments	Netherlands
Phoenix Contact	Netherlands

29.8.8 Cable Ladder / Tray

Cavotec Middle East	Dubai
Puk	Germany
Cope	International
Oglaend System	International
Van Geel	Netherlands
Gouda Holland	Netherlands
Boele	Netherlands
Al-Suwaidi	Saudi Arabia
Saudi Electric Industries	Saudi Arabia
Waha Electric Supply Company	Saudi Arabia
Unistrut	U.K.

29.8.9 Instrument Air (filter) Reducers

Dresser / Masoneilan	International
Emerson Process Management	International
Imi Norgren	Netherlands
Controlair Inc.	USA
Fairchild Ind Products	USA
Spirax Sarco	USA

29.8.10 Cabinets

Rittal TS series	International
Syntax TS Series	Singapore
Electromach	Netherlands
Vonk	Netherlands

29.8.11 Junction Boxes

Legrand	France
Bartec	Germany

	Phoenix Contact/Rittal	Germany
	Stahl	Germany
	Weidmueller	Germany
	Electromach	Netherlands
	Hawke	U.K.
	Rose	U.K.
29.8.12	<u>Instrument Cable</u>	
	LEONI Kerpen	Germany
	Prysmian / Draka	International
	TKF	Netherlands
	Oman Cables	Oman
	Riyadh Cables	Saudi Arabia
	DUCAB	Saudi Arabia
	Saudi Cable Company	Saudi Arabia
	Jeddah Cables	Saudi Arabia
	MESC	Saudi Arabia
	Raqtan	Saudi Arabia
29.8.13	<u>Optical fibre cable</u>	
	Alcatel	France
	Nexans	France
	LEONI Kerpen	Germany
	Prysmian / Draka	International
	TKF	Netherlands
	AT & T	USA
29.8.14	<u>Terminals</u>	
	Phoenix Contact	Germany
	Weidmueller	Germany
	Entrelec	Netherlands
29.9	<u>Electronic governors and speed controllers</u>	
	Compressor Control Corporation (C.C.C.)	USA
	Tri-Sen	USA
	Woodward	USA
29.10	<u>Vibration / Acceleration / Speed / Displacement Monitors & Systems</u>	
	Bently-Nevada	USA
	Brueel & Kjaer	Netherlands
	Vibro Meter SA	Switzerland
29.10.1	<u>Probes</u>	
	Rototherm	Ireland
	Rotronic	Switzerland
	Bently-Nevada	USA
	Davis	USA

	Woodward	USA
29.11	<u>Compressor Surge Controllers</u>	
	Man Turbo	Germany
	Voith	Germany
	Dresser-Rand Control systems	USA
	Invensys / Triconex	USA
	Compressor Controls Corp.	USA
	Woodward	USA
29.12	<u>Programmable Logic controllers (PLC)</u>	
	ABB	International
	HIMA	International
	Modicon	International
	Siemens	International
	Yokogawa	International
	AEG	USA
	Allen Bradley	USA
	Honeywell	USA
29.13	<u>Rupture disc burst sensor</u>	
	BS & B	U.K.
	Fike	Belgium
	Hitma	Netherlands
	Rembe	Germany
29.14	<u>Metering systems</u>	
	Isystems	Belgium
	Endress & Hauser	Germany
	Imtech Systems	Netherlands
	OMNI Flow Computers	Netherlands
	Krohne Oil & Gas	Netherlands
	ODS	Netherlands
	Petrogas Systems	Netherlands
	Jiskoot	U.K.
	Jordan Kent Metering System	U.K.
	Spectra-Tek	U.K.
	Smith Meter	USA
	Peco	USA
	Emerson Process Management	USA
29.15	<u>Fire and gas detectors</u>	
29.15.1	<u>Fire detectors flame</u>	
	Polygon	Canada
	Hima	Germany
	SIE Sensorik	Germany
	ABB	International
	COE & Clerici	Italy
	Smits Vonk	Netherlands

	Silvertech	U.K.
	General Monitors (UV/IR)	USA
	Det-tronics (UV/IR)	USA
	Omniguard	USA
29.15.2	<u>Fire detectors (heat/rate of rise/rate compensated)</u>	
	Cerberus	France
	Kidde (Fenwal)	U.K.
	Thorn	U.K.
	Apollo	U.K.
	Fireye	U.K.
	Honeywell	USA
29.15.3	<u>Fire detectors (smoke optical)</u>	
	Cerberus	France
	ABB	International
	Ajax de Boer	Netherlands
	Apollo	U.K.
	Kidde (Fenwal)	U.K.
	Thorn	U.K.
	Zellwegen Analytics	U.K.
	Det-tronics	USA
29.15.4	<u>Fire detectors (fusible plug)</u>	
	Kidde (Eutectic Alloy)	U.K.
	Automatic Sprinkler	USA
	Grinnell	USA
29.15.5	<u>Manual Alarm Call Points</u>	
	C.N.A.	France
	Stahl	Germany
	MEDC	U.K.
	Wormald	U.K.
	Chubb	U.K.
	KAC	U.K.
29.15.6	<u>Combustible gas detectors</u>	
	Sieger	France
	Autochim	France
	Sick	Germany
	General Monitors	U.K.
	Detector Elements	
	Crowcon Detection Instruments	U.K. / USA
	Teledyne	USA
	Baccarach	USA
	Sensidyne	USA
29.15.7	<u>Toxic gas detectors (H₂S)</u>	
	Draeger	Germany
	Sick	Germany

	Autochim	France
	Sieger	France
	Detector Elements	U.K./USA
	Crowcon Detection Instrument	U.K./USA
	General Monitors	U.K.
	MSA	U.K.
	Det-tronics	USA
	Sensidyne	USA
29.15.8	<u>Panel equipment and systems</u>	
	Refer to 29.1	
29.15.9	<u>Portable gas detection</u>	
	Selection of portable gas detection equipment must be approved and endorsed by SRP Safety/Technical Department.	
29.15.10	<u>Field combustible gas point IR detectors</u>	
	Sieger	France
	Draeger	Germany
	General Monitors	U.K.
	MSA	U.K.
29.15.11	<u>Duct gas detector (probe)</u>	
	Sieger	France
	Det-Tronics	International
	ABB	International
	Siemens	International
	Ajax-Chubb	International
	Eaton	International
	Tyco Fire & Integrated Solutions	International
	General Monitors	U.K.
29.15.12	<u>Open path IR gas detector</u>	
	Sieger	France
	Det-Tronics	International
	General Monitors	U.K.
	Precision Light Measurement Systems	U.K.
	Sierra Monitors	USA/Dubai
29.15.13	<u>Very early smoke detection system (VESDA)</u>	
	Tyco	International
	Ajax de Boer	Netherlands
	IEI U.K. Ltd.	U.K.
	Wormald	U.K.
	Chubb	U.K.
29.15.14	<u>Audible alarms</u>	

	Minerva	Netherlands
	MEDC	U.K.
	Wormald	U.K.
	Chubb	U.K.
29.15.15	<u>Visual alarms</u>	
	MEDC	U.K.
	Wormald	U.K.
	Chubb	U.K.
29.15.16	<u>Fire and gas status lights</u>	
	MEDC	U.K.
	Wormald	U.K.
	Chubb	U.K.
29.16	<u>Flame Safety Monitoring System</u>	
	Honeywell	International
	Siemens	International
	Emerson Process Management	International
	Yokogawa	International
	Armtec Industries	USA
29.17	<u>Control Room Interior design</u>	
	Ataro DUP	Netherlands
	Brand Control Rooms	Netherlands
	DALI	Netherlands
	Evans Consoles	Canada
	CGM AB	Sweden
	CCD Design	UK
	Scott James Control room Design	UK
	Lund Halsey Console Systems Ltd.	UK
	Control Room Design LLC	USA
29.18	<u>Foundation Fieldbus Components</u>	
	Phoenix Contact	Germany
	Pepperl & Fuchs	Germany
	MTL/Relcom	UK
29.19	<u>Large screen displays</u>	
	Panasonic	International
	Cyviz	Norway
	or equivalent	
29.20	<u>Laboratory Equipment</u>	
	AC Analytical Controls	International
	Alcor	International
	Antek	International
	Anton Paar	International
	Bruker International	

Cannon	International
Dionex	International
EMCEE	International
Grabner	International
Hach	International
Herzorg	International
Horiba International	
HP Agilent	International
IROX	International
LECO	International
Metrohm	International
Mettler Toledo	International
Mitsubishi	International
Nicolet	International
Perkin Elmer	International
Phase technology	International
Stanhope Seta	International
Testo	International
Thermo Scientific	International
PAC	International
Pananalytical	International
Waters	International

29.21 Equipment in hazardous area certification organizations

LCIE	International
INERIS	International
TIIS	International
EECS	International
FM	International
UL	International
PTB	International
BASEEFA	International
KEMA	International

29.22 Smart Plant Instrumentation Database

Intergraph	International
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30.0 SLUG CATCHER MATERIALS (PIPE MATL:AP 5L-X60)

Mannesmann	Germany
Veekay Vikram Co.	India
NKK Corporation	Japan
Osaka Tokkushu KoU.K.an	Japan
Nippon Steel Corp.	Japan
Sumitomo Metal Ind. Ltd.	Japan
Kawasaki Steel Corp.	Japan
SICES	Italy
Dalmine	Italy
Bassi Luigi	Italy
British Steel Corp.	U.K.

31.0 LOADING ARM

Meyerinck	Germany
Wiese	Germany
Schwelm	Germany
Connex	Germany
Schwelm Verladetechnik (SVT)	Germany
Niigata (Chicksan)	Japan
Kanon	Netherlands
EMCO Wheaton	UK
Lifting Gears	UK
FMC (Chicksan)	USA/France
OPW Engineered Systems	USA

32.0 HEAT RECOVERY STEAM GENERATOR (HRSG)

Cockerill	Belgium
Stein Fasel	France
Deutsche Babcock	Germany
Thermax	India
Babcock & Wilcox	International
Foster Wheeler	International
Macchi	Italy
Galleri	Italy
Mitsubishi Heavy Industries (MHI)	Japan
Mitsui Engineering	Japan
Ishikawajima Harima	Japan
Babcock Hitachi	Japan
NEM	Netherlands
Boustead International Steam Generators	U.K.
Combustion/NEI	U.K.
Deltak	USA
Vogt	USA

Remarks: Boiler licensees must obtain the written backing of the licenser for their design, fabrication, erection and performance guarantees.

33.0 WATER TREATMENT EQUIPMENT

33.1 Sanitary treatment package

Anderson Water Sys.	Canada
Ecodyne	Canada
Degremont / Ondeo	International
Metito	International
Idroconsulting	Italy
Italba	Italy
Kurita	Japan
Delta Eng.	Netherlands
Esmil	Netherlands
Rossmark (Veolia)	Netherlands
Babcock Wanson	UK
Ovivo	UK
Portals Water Treatment (Permutit/Boby)	U.K.

	Satec	U.K.
	Aqua Tech	USA
	Emco Eng.	USA
	Siemens Water Technologies (US Filter)	USA
33.2	<u>Air flotation package</u>	
	Keppel Seghers	Belgium
	Veolia	France
	Bamag	Germany
	Ionics Italba	Italy
	Sumitomo Heavy Ind.	Japan
	Satec	U.K.
	Wemco Products	USA
	Natco	USA
33.3	<u>Water Maker Reverse Osmosis Type</u>	
	Aker Process Solutions	France
	Ondeo	France
	Grunbeck	Germany
	Salcon	Germany
	Kurita	Japan
	Christ Holland	Netherlands
	Weir Westgarth	U.K.
	PCI Membrane Systems	U.K.
	US Filter	USA
33.4	<u>Desalination units</u>	
	Elegg Water	Canada
	Aker Process Solutions	France
	Entropie (Veolia)	France
	Sidem (Veolia)	France
	Siemens Water Technologies	Germany
	GE Ionics Italba	Italy
	Fisia Italimpianti (Impregilo)	Italy
	Sasakura	Japan
	Salcon	Singapore
	Doosan Water Plants	S. Korea
	IDE Technologies Ltd.	U.K.
	Paterson Candy	U.K.
	Veolia Water Solutions & Technologies	U.K.
	Weir Techna	U.K.
	Aqua Chem	USA
	Aquatech	USA
	Beaird	USA
	Meco	USA
33.5	<u>Mixers, top entry incl. process duty</u>	

Aker Process Solutions	France
Milton Roy Mixing (Robins & Myers)	France
Ekato	Germany
Lightnin (SPX)	International
Mitsubishi Kakoki	Japan
Satake	Japan
Shimazaki	Japan
Plenty (SPX)	U.K.
Palpro	U.K.
Burhans-Sharpe Mixers	USA
Chemineer (Robins & Myers)	USA
Proquip	USA

33.6 Demineralized water package

Thames Water Asi/Pacific	Australia
Ecodyne	Canada
Aker Process Solutions	France
Degremont / Ondeo	France
Entropie (Veolia)	France
Siemens Water Technologies	Germany
Thermax	India
GE Ionics Italba	Italy
DHV	Netherlands
Rossmark	Netherlands
Veolia Water Solutions & Technologies	U.K.
Aquatech	USA

33.7 Waste Water Treatment Unit

Thames water Asia/Pacific	Australia
Aker Process Solutions	France
Degremont / Ondeo	France
Entropie (Veolia)	France
Lurgi Bamag	Germany
Siemens Water Technologies	Germany
GE Ionics Italba	Italy
Veolia Water Solutions & Technologies	U.K.
U.S.Filter	USA

33.8 Sea Water Electronic Chlorination Unit

Daiki Engineering	Japan
De Nora Far East	Singapore
Petresco	U.K.
Eltech International	USA

34.0 PIPE SUPPORTS

Binder Group	Australia
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Lisega	Germany
Sanwa Tekki Corp	Japan
Pipe Supports Group Limited	U.K.
Carpenter & Paterson	U.K.
ANVIL International Inc.	USA
Piping Technology & Products	USA

35.0 SPRING HANGER

Binder Group	Australia
Lisega	Germany
Sanwa Tekki Corp	Japan
Carpenter & Paterson Ltd.	U.K.
Pipe Supports Group Limited	U.K.
ANVIL International Inc.	USA
Piping Technology & Products	USA

36.0 TEFLON SLIDE PLATES

Binder Group	Australia
Lisega	Germany
Sanwa Tekki Corp	Japan
Carpenter & Paterson Ltd.	UK
Pipe Supports Group Limited	UK
ANVIL International Inc.	USA
Piping Technology & Products	USA

37.0 REINFORCED CONCRETE PIPE

Societe des Tuyaux Bonna	France
Nippon Hume Pipe Ltd.	Japan
Sumitomo Metal Industries Ltd.	Japan
Bonna	Netherlands
Al-qahtani Pipe Coating Terminal	Saudi Arabia
Ameron	Saudi Arabia
Ameron Concrete & Steel Pipe Group	USA

38.0 SOLID SULPHUR HANDLING SYSTEM

38.1 Sulphur Granulation Package

Enersul technologies	Canada
Aker Process Solutions	France
Sandvik Process systems	Germany
Devco Overseas	USA

38.2 Solid Sulphur Package and Palletizing Package

Enersul technologies	Canada
Aker Process Solutions	France
Beumer	France
Maschinen Fabrik Moellers	Germany

Sandvik Process systems	Germany
Newlong Machine Works	Japan
Shinsho	Japan
Clyde Richard Simon	U.K.
Devco Overseas	USA

39.0 SHIP LOADER

Tenova SEMF	Australia
Koch Transporttechnik	Denmark
FLSmidth	Denmark/Germany
Takraf GmbH	Germany
ThyssenKrupp	Germany
KoneCranes	International

40.0 EXPANSION BELLOWS

BOA (IWKA)	Germany
Stenflex	Germany
Bird	U.K.
Teddington Bellows	U.K.
Munro Miller	U.K.
Pathway Bellows	USA
Flexonics	USA
Hyspan	USA
Garlock	USA
General Rubber	USA
Holtz Rubber	USA
Unaflex	USA

41.0 CYCLONES

Aker Process Solutions	France
Van Tongeren	Netherlands/U.K.
Marsulex Environmental Technologies	USA
Emtrol Corporation	USA

42.0 ACTUATORS

42.1 Electrohydraulic Actuators

Bafco Inc.	USA
M.E.A. Inc.	USA
BLAC Inc.	USA
TAPCO Inc.	USA

42.2 Actuator (Electric Motor)

Abu Dhabi Oilfield Services (ADOS)	Abu Dhabi
AEG	Germany
Auma	Germany

Tyco / Biffi	International
Doedijns	Netherlands
Eriks BV	Netherlands
Keystone	Netherlands
Rotork	U.K.
Limatorque	U.K.

42.3 Pneumatic Actuators

Abu Dhabi Oilfield Services (ADOS)	Abu Dhabi
Klinger	Denmark
Metso	Finland
Emerson Process Management	International
Tyco / Biffi	International
BTR Controls	Netherlands
Eriks BV	Netherlands
Tyco Valves	Netherlands
Bettis	U.K.
Rotork	U.K.

43.0 STATIC MIXERS

Kenics Europe	Belgium
Canadian Kenics Ltd	Canada
Balcke Durr (SPX Corporation)	Germany
Statiflo	Germany / U.K.
Koch International	Germany / Italy
Kenics Japan Corporation	Japan
Sulzer Chemtech	Switzerland
Chemineer	USA / U.K.
Kenics Corporation	USA
Koch Engineering	USA

44.0 SPRAY NOZZLES

UTC Fire & Security (Angus/Kidde())	Italy/U.K.
Wormald	U.K.
Angus Fire	U.K.
Tyco Fire & Security (Grinell)	USA
National AirOil Burner company, Inc.	USA
John Zink company	USA
Spraying systems company	USA

45.0 CRITICAL FLOW NOZZLE

Duraloy electroalloys	USA
Oil systems, Inc	USA

46.0 ELECTROSTATIC PRECIPITATORS

IVO International	Finland
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Alstom Power	France
MHI	Japan
Elex AG	Germany
Hamon Research – Cottrell, Inc.	USA
PPC Industries	USA

47.0 TOWER PACKING

47.1 Carbon Raschig Rings

Koch Glitsch	International
Sulzer Chemtech	International
Norton company	USA
Metaullics systems company L.P	USA

47.2 Ceramic Raschig Rings

Koch Glitsch	International
Sulzer Chemtech	International
Norton chemical	U.K.
Norton company	USA
Maurice A.Knight	USA

47.3 Carbon Steel Raschig Rings

Koch Glitsch	International
Sulzer Chemtech	International
Norton Chemical Process Products Ltd	U.K.
Norton company	USA

47.4 Anthracite Coal

Koch Glitsch	International
Sulzer Chemtech	International
A.T.Mace, Esq	U.K.
Reading Anthracite company	USA

48.0 FLAME ARRESTORS

Brauschweiger Flammenfilter	Germany
ITAS	Italy
Metalino	Netherlands
Barton Firtop	UK
IMI Amal	U.K.
Oceco Inc.	USA

49.0 CHEMICALS

49.1 Silicone based anti-foams

Dow chemical	Canada
Travis chemicals	Canada

Rhone-Poulenc	France
Bayer	Germany
Connoco Phillips Sepecialty Products	International
Dow corning	International
GE Betz	International
Nalco	International
Shinetsu Chemical	Japan

49.2 Activated Charcoal

Industrias Quimicas carbomafra S.A.	Brazil
CECA S.A.	France
Nalco	International
Norit	International
Elf atochem North America, Inc	USA
Calgon Carbon corporation	USA

50.0 REACTOR

50.1 Reactor

As per licensor bidderslist:

ATB Riva Calzoni	Italy
Belleli Energy	Italy
GE Oil & Gas (Nuovo Pignone)	Italy
Japan Steel Works (JSW)	Japan
Kobe Steel	Japan

Additional bidders for non-licensed equipment:

Pörner	Austria
Th. Winkels	Germany
Neuman	Germany
De Plaatijzer	Netherlands
KNM	Malaysia
BILFAL	Saudi Arabia
Maritime Industrial Services Arabia Co. Ltd.	Saudi Arabia
Doosan	South Korea
Duro Felguera	Spain

50.2 RFCC Reactor / Regenerator

As per licensor bidderslist:

ATB Riva Calzoni	Italy
Belleli Energy	Italy
GE Oil & Gas (Nuovo Pignone)	Italy
Japan Steel Works (JSW)	Japan
Kobe Steel	Japan

50.3 DHDS Reactor

As per licensor bidderslist:

ATB Riva Calzoni	Italy
Belleli Energy	Italy
GE Oil & Gas (Nuovo Pignone)	Italy
Japan Steel Works (JSW)	Japan
Kobe Steel	Japan

51.0 POWER & CONTROL CABLES

Nexans	France
Prysmian / Draka	International
Gulf Cable	Kuwait
TKF	Netherlands
Oman Cable	Oman
Saudi Cable	Saudi Arabia
Jeddah Cable	Saudi Arabia
Riyadh Cable	Saudi Arabia
DUCAB	UAE

For Control Cable, reference is also made to category 29.8.12 (Instrument Cables)

52.0 PROTECTION RELAYS

Siemens	Germany
Schneider	France
ABB	Switzerland
Ariva /ALSTOM	UK/France
GE	USA

53.0 LIGHTING FITTINGS & ACCESSORIES

Cortem	France
Legrand	France
CEAG	Germany
Rittal	Germany
Stahl	Germany
Philips	Netherland
Victor	UK
Chalmit	UK
Thorn	UK
GE	USA

54.0 ELECTRIC MOTOR & VARIABLE SPEED DRIVE

WEG Equipamentos Eletricos SA	Brazil
Alstom	France
Loher	Germany
Siemens	Germany
ABB	International
Fuji-electric	Japan
Mitsubishi	Japan

Toshiba	Japan
Brook Hansen	U.K.
Brush	U.K.
Laurence Scott	U.K.
Allen-Brandley	USA

55.0 PSA UNIT

Halder Topsoe	Denmark
Air Liquide	France
Linde AG	Germany
Lummus Technology Heat Transfer	USA / Netherlands
UOP	USA
Air Products	USA

56.0 DESALTER

Aker Process Solutions	France
Prosernat	France
Veolia	France
Nalco	International
Axsia Howmar	U.K.
Petresco (Cameron/KCC)	U.K.
Petrolite Equipment	USA
Natco	USA
Howe Baker	USA

57.0 COALESCER/FILTER/SEPARATOR

Aker Process Solutions	France
Prosernat	France
Faudi Filter GmbH	Germany
Central Filter	Japan
Fuji Filter	Japan
Frames	Netherlands
Natco	USA
Perry Equipment Group	USA
Facet	USA/U.K.
Lani Corporation	USA
Winston Manufacturing	USA
Petresco (Cameron/KCC)	U.K.
Howe Baker	USA
Pall Filtration	USA/U.K.

58.0 REFRACTORY LINING

Plibrico	International
NV Gouda Vuuvast	Netherlands
Harbison-Walker refractors	USA
A.P.Green Industries, Inc.	USA
Premier refractories	USA

Unifrax USA

59.0 LICENSOR APPROVED LIST

59.1 Reactor

As per licensor bidderslist:

ATB Riva Calzoni	Italy
Belleli Energy	Italy
GE Oil & Gas (Nuovo Pignone)	Italy
Japan Steel Works (JSW)	Japan
Kobe Steel	Japan

59.2 Hydrocracker High Pressure Centrifugal Pumps / Hydraulic Turbines

Ebara	Japan
Nikisso	Japan
Flowserve	International
Sulzer	International
Clyde Union	USA
Sundyne	USA

59.3 Hydrocracker Recycle Gas compressor (Centrifugal)

Siemens (Mannesmann Demag)	Germany
Dresser-Rand	International
GE Oil & Gas (Nuovo Pignone)	Italy
Ebara (Elliot License)	Japan
Kawasaki Heavy Industries	Japan
Kobe Steel (Kobelco)	Japan
Mitsui Engineering and Shipbuilding	Japan

59.4 Hydrocracker Make up Hydrogen Compressors (Reciprocating)

Dresser Rand	USA / UK
GE Oil & Gas (Nuovo Pignone)	Italy
Burckhardt Compression	Switzerland
Neuman & Esser Group	Germany
Thomassen	Netherlands
Kobe Steel (Kobelco)	Japan
Mitsui Engineering and Shipbuilding	Japan

59.5 Delayed Cooker Furnaces

Lummus Heat Transfer	Netherlands/USA
JNK	South Korea

59.6 Heat Exchangers

Belleli Energy CPE	Italy
FBM Hudson	Italy
Koch Heat Transfer (formerly IMB)	Italy

	Officine Luigi Resta	Italy
	Hitachi – Zosen	Japan
	Japan Steel Works	Japan
	Mitsubishi H.I.	Japan
	Lummus Technology Heat Transfer	Netherlands/USA
59.7	<u>High Pressure Air Exchangers</u>	
	Chiyoda	Japan
	Hitachi – Zosen	Japan
	Hudson	USA
	GEA Rainey Corp.	USA
	Ecodyne MRM	USA
	MARFAB (Marley Cooling Tower Company)	USA
59.8	<u>Feed Filter (Automatic Backwash Type)</u>	
	Chiyoda	Japan
	RPA/Ronningen-Petter (Eaton)	Worldwide
	Fuji Filter	Japan
	Nowata/ProGuard Filtration Systems (Mahle Industrial Filtration)	USA
59.9	<u>HP Centrifugal Separator</u>	
	Natco	USA
	Fuji Filter	Japan
	Perry Equipment Group	UK
59.10	<u>Y-Pattern TSO Globe Valve with high pressure drop</u>	
	Flowserve Edward (formerly Edward Vogt Valve Co.)	Worldwide
59.11	<u>Ball TSO Valve (ORBIT) in HP and LP Gas and Clean Light Liquid services (Operating temperature < 205°C)</u>	
	Orbit Valve International	Worldwide
59.12	<u>High Pressure Drop Valve in high pressure loop (angle valves)</u>	
	Dresser Masoneilan	USA
59.13	<u>Metal-seated Ball Valves in severe service (Emergency depressuring valves)</u>	
	Mogas	USA
	ValvTechnologies	USA
59.14	<u>Fixed Bed Reactor Thermometry</u>	
	Gayesco Flex-R	USA

Note: Any additional vendors not mentioned above but are in licensor's design packages should be considered as per Licensor design packages.

APPENDIX

APPROVED SUBCONTRACTORS

APPROVED SUBCONTRACTORS

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1.0 SUBCONTRACTOR

1.1 Catering and Camp Operation

Al Athnaun Company llc	Oman
Catering & Supply	Oman
Marketing & Services Enterprises	Oman
Renaissance Hosp. Services	Oman
Sahara Hospitality Co.	Oman
SOCAT	Oman
Tawoos	Oman
WACASCO	Oman
Al reef special food llc -(khana khazana)	Oman
Jibal al aq trading & cont.	Oman
Damac	Oman

1.2 Camp Construction

A & P (Oman) llc	Oman
Al Ansari Trading	Oman
Al Hassan Engineering Co.	Oman
Al Nahdha Al Omaniah Co.	Oman
Al Turki Enterprises llc	Oman
Arabian Industries	Oman
Bahwan Engineering Co. llc	Oman
Civil Contracting Co. (CIVILCO)	Oman
Consolidated Contractors Co.	Oman
Desertline	Oman
Galfar Engineering & Contracting Co.	Oman
International Sanitation Co.	Oman
National Electrical Contractors	Oman
Qurm Contractors	Oman
Special Technical Services llc.	Oman
Target llc	Oman
Tarmac Alawi llc.	Oman
Telfen Constructing & Installation Co. Inc.	Oman
The Oman Constr. Co. llc. (TOCO)	Oman
Yahya Costain llc.	Oman
Zubair Kilpatrick llc.	Oman

1.3 Jobsite Temporary Facilities

Al Seeb Carpentry	Oman
Al Ghubiara Projects & Development	Oman
Arabian Caravans	Oman
Arabian Industries	Oman
ELCO	Oman
Maintenance ltd.Oman	
Oman Steel	Oman

1.4 Supply and Installation of Furniture and Equipment (Jobsite Temporary and Camp)

Alasfoor Furnishing llc	Oman
Al Seeb Carpentry	Oman

Fuhmy FurnitureOman	
Furniture Makers	Oman
International Golden Furniture	Oman
Khimji Furniture Oman	
Omanian Carpentry & Steel Co.	Oman
Rawabi Oman	Oman
SADEN Ilc	Oman
SARCO	Oman
SFO	Oman
Yahya Costain Ilc	Oman
Zubair Furnishing	Oman

1.5 Site Investigation

Al Turki Enterprises	Oman
ARA Geological Consultancy	Oman
Fugro ME & Partners Ilc	Oman
Galfar Engineering	Oman
Laboratory of Oman	Oman
Oman Drilling & Soil Technology Co. Ilc	Oman
Swissboring	Oman
Tarmac Alawi Ilc.	Oman
Yhya Costain	Oman

1.6 Civil / Building Work and Road Works

1.6.1 Local Civil / Building Contractors

Al Hassan Engineering Co.	Oman
Al Turki Enterprises Ilc	Oman
Bahwan Engineering Co. Ilc	Oman
Consolidated Contractors Co.	Oman
Desertline	Oman
Douglas OHI Ilc	Oman
Galfar Engineering & Contracting Co.	Oman
Larsen & Toubro (OMAN)	Oman
National Const. & Trading Co.	Oman
National Eng. & Const. Co.	Oman
Shanfari Trading & Contracting Co.	Oman
Special Technical Services Ilc.	Oman
Teejan Trading & Contracting	Oman
The Oman Constr. Co. Ilc. (TOCO)	Oman
Al-Batina Int. Engg. & Services	Oman
Al Qaem Petroleum	Oman
Arabian Oil & Gasfield Services	Oman
UNITED INDUSTRIAL SERVICES CO. LLC	Oman
Larsen & Toubro Limited	Oman
Bishara Establishment	Oman

1.6.2 Local Roadworks Contractors

Al Ansari Trading	Oman
Al Ez Trading Transport & Cont. Co.	Oman
Al Mashiria-Travo Ilc	Oman
Al Nahdha Al Omaniah Co.	Oman
A & P (Oman) LLC	Oman

Consolidated Contractors Co.	Oman
Desertline LLC	Oman
Engineering Const. Contracting Co.	Oman
Galfar Engineering & Contracting Co.	Oman
Larsen & Toubro OMAN	Oman
Qurm Contractors	Oman
Shanfari Trading & Contracting	Oman
Strabag Oman	Oman
Tarmac Alawi	Oman
Sai international enterprises llc	Oman

1.6.3 Local Earth Transportation Works Contractor

The National Transport Office is a mandatory subcontractor for the transport of earthwork from its original sites to project site; i.e. the subcontractor is not allowed any other subcontractor for execution of the above mentioned works.

1.7 Instrumentation Work

1.7.1 Local Contractors

Al Hassan	Oman
Bahwan Engineering Co.	Oman
Galfar Engineering	Oman
Honeywell & Co. Oman	Oman
L & T Limited Oman	
Special Technical Services llc.	Oman
The Oman Constr. & Co (TOCO)	Oman
Wormald Engineering & Contracting	Oman
United Engineering Services	Oman
Arabian Industries	Oman
Orbital Projects	Oman
Shooka International LLC	Oman

1.8 Electrical Work

1.8.1 Local Contractors

Al Ansari Trading	Oman
Al Hassan Electrical	Oman
Arabian Engineering Services	Oman
Bahwan Engineering Co.	Oman
Desertline	Oman
Galfar Engineering	Oman
L & T Limited	Oman
ONEC	Oman
Sogex Oman	Oman
Special Technical Services llc.	Oman
ALSUBHI	Oman
ALFALAH	Oman
United Engineering Project (UEP)	Oman
Al Zubair	Oman

1.8.2 Foreign Contractors (Electrical & Instrument)

Clemessy	France
Spie Batignolles	France
Kentz	Ireland
ABB SAE Sadelmi	Italy
Fillipo Fochi	Italy
Jacorrosi	Italy
Soimi	Italy
Carlo Gavazzi	Italy
Chiyoda Keiso	Japan
Showa Astec	Japan
SANKO	Japan
Wescon	Netherlands
EEI	Saudi Arabia
M S Al-Suwaidi	Saudi Arabia
Daelim Industrial	S. Korea
Lucky Engineering Co. Ltd	S. Korea
POSCO Engineering Co	S. Korea
Shinwa Engineering & Construction	S. Korea
Dragados	Spain
Gama Endustri Tesisleri	Turkey
ETA – Ascon	UAE
Comsip	UAE
Control and Applications	UAE
Dodsai	UAE
Costain	U.K.
James Scott	U.K.
Power Transmission	U.K.
Rockwell Automation	Dubai

1.9 Freight Forwarder / Customs / Distribution

Transera International Logistics Ltd	Canada
Abdullatif Trading & Transpory	Oman
Alsahil Fright	Oman
Bahwan Travel Agency	Oman
Circle Fright	Oman
Dacotrans	Germany
Daher	France
Danzas	Netherlands
Duegro	United Kingdom
Gava	Italy
Gulf Agency	Oman
Inchcape Shipping	Oman
Kuehne & Nagel	Germany
Majan Shipping & Transport	Oman
MG International	Germany
Middle East Shipping & Transport	Oman
Nippon Express	Japan
Oman United Agency	Oman
Panalpina	Switzerland
Saga	France
Sagami Warehouse	Japan
Sankyu	Japan
SCAC Delmas Vieljeux (SDV)	France

Schenker	Germany
United Shipping & Trading Agency	Oman
Van Ommeren	France
Yusuf Bin Ahmed Kanoo	Oman

1.10 Heavy Equipment Installation

Buzzincelli	France
Ponticelli	France
ABB SAE Sadelmi	Italy
Filippo Fochi	Italy
Reggiane Efimpianti	Italy
Soimi	Italy
Nippon Express	Japan
Sanko Engineering Corporation	Japan
Sankyu	Japan
Al-Hassan	Oman
Al Khalij Heavy Equipment	Oman
Ajib Trading	Oman
Sharikat Hani	Oman
Galfar Engineering	Oman
L&T	Oman
L & T Electromech	Oman
Rajab & Aidi	Oman
Shanfari Trading	Oman
Desert Line	Oman
Truckoman	Oman
Consolidated Contractors-International (CCC)	Oman
The Oman Constr. & Co (TOCO)	Oman
MB Petroleum Services	Oman
OFSAT Ilc.	Oman
Hisham H. Al Jamali Transport Est.	Oman
Daelim Industrial	S. Korea
POSCO Engineering Co	S. Korea
Shinwa Engineering Const.	S. Korea
Dragados	Spain
Mecanica de la Pena SA	Spain
Al-Jaber Transport & General Contracting Est.	UAE
Dodsal Pte	UAE
Mammoth Gulf	UAE
Freyssinet	United Kingdom
Graystone White & Sparrow	United Kingdom

1.11 Insulation Work

1.11.1 Insulation

Bains Harding Industries	Australia
SNIFI	France
Wanner Isofi	France
Kaefer Isolier	Germany
Willich	Germany

ABB SAE Sadelmi	Italy
Filippo Fochi	Italy
Riva & Mariani Sud SpA	Italy
Meisei Industrial	Japan
Nichias Corporation	Japan
Tawoos Waterproofing & Insulation	Oman
Fairdeal Trading & Contracting Est.	Oman
Bahwan Engineering Co.	Oman
Zawawi Trading	Oman
AH Rawahi	Oman
Consolidated Contractors-International Co. (CCC)	Oman
Binzagr	Saudi Arabia
Daelim Industrial	S. Korea
Shinwa Engineering & Construction	S. Korea
Dragados	Spain
Cape Contractors	United Kingdom
Darlington Insulation	United Kingdom
Hertel	United Kingdom
Petroleum Technology	UAE
Oman steel co. Llc	Oman

1.11.2 Painting Work

Al Turki Enterprises	Oman
Ansari Trading	Oman
Arabian Industries	Oman
Bahwan Engineering	Oman
Galfar Engineering	Oman
Maritime Industrial Svcs.	Oman
Special Technical Services	Oman
Dohat al khaleej	Oman
Oman Al ansari contractors Ilc	Oman

1.12 Mechanical Works

1.12.1 Local Contractors

Al Hassan Engineering	Oman
Al Nadha United	Oman
Arabian Industries & Projects	Oman
Bahwan Engineering Co.	Oman
Consolidated Contracting Co.	Oman
Dodsal & Co.	Oman
Galfar Engineering	Oman
Gulf Petrochemicals Svcs.(GPS)	Oman
Special Technical Services Ilc.	Oman

Towell Engg. Services Co. Oman

United Engineering Services Oman

L&T Electromech Oman

IWI Engineering & Construction Oman

Petron Gulf LLC Oman

Al Qaem Petro Projects & Services Oman

R. D. Engineering Oman

1.12.2 Foreign Contractors

Shaw-Nass Bahrain

Chicago Bridge & Iron Company (CB&I) Dubai

Ponticelli France

Spie Batingnolles France

Filippo Fochi Italy

Soimi Italy

Hitachi Zosen Tank & Systems Japan

Sanko Engineering Corporation Japan

Wescon Netherlands

MMG Saudi Arabia

M S Al-Suwaidi Saudi Arabia

Daelim Industrial S. Korea

Lucky Engineering Co. Ltd S. Korea

POSCO Engineering Co S. Korea

Dragados Spain

STP & I Thailand

Gama Endustri Tesisleri Turkey

Dodsal Pte UAE

EEI UAE

Saipem UAE

Capper Neill United Kingdom

Press United Kingdom

1.13 Ocean Transportation

Consolidated Pool Carriers Germany

MG International Germany

Hinode Kisen Japan

NYK Japan

Mammoet Shipping Netherlands

Al Fayha Shipping Agencies Oman

Badar Shipping Oman

Bhacker Haji Abdullatiff Oman

Gulf Agency Oman

Gulf Marine Maint. & Offsh. Services Oman

Inchcape Shipping Oman

Modern Shipping Oman

Oman United Agencies Oman

Towell Barwill Oman

Transera International Logistics Ltd Oman

United Shipping & Trading Agency Oman

Yusuf Bin Ahmed Kanoo & Co. Oman

National Shipping Saudi Arabia

Jumbo Shipping	Switzerland
Oman freight corporation llc	Oman

1.14 Third Party Inspection Agencies

1.14.1 Welding Inspection

CDS Research Ltd	Canada
Ceten Apave International	France
Institut de Soudure	France
TUV	Germany
ABS Services (Oman)	Oman
AEA Sonomatic	Oman
AIB Vincotte Int'l Oman	Oman
Det Norske Veritas	Oman
Electrowatt Engineering Oman	Oman
Lloyd's Reg'r of Shipping	Oman
Oilfield Inspection Services	Oman
Velosi Certification Services	Oman
Americian Bureau of Shipping	UAE
Apave	UAE
Bureau Veritas	UAE
Germanisher Lloyd	UAE
TWI	United Kingdom

1.14.2 Concrete Testing Laboratories

Bureau Veritas	France
Det Norske Veritas	Norway
Bahwan Engineering Co.	Oman
Galfar Engineering	Oman
Oman Drilling & Soil Technology Co. LLC	Oman
Tarmac Alawi llc.	Oman
Yhya Costain	Oman
Dames & Moore	UAE
Foundation Engineering	UAE
Fugro Middle East	UAE
Noteby	UAE
British Cement Association	U.K.

1.15 SIL Study

TUV	Germany
EXIDA	USA

2.0 Local Contractors and Subcontractors

2.1 Local Training Services

Polyglot institute	Oman
Rwtuv	Oman
National training institute	Oman

2.2 Local Maintenance Services

Daebong industrial	Oman
Hidada company	Oman
Oman steel co. Llc	Oman
Development services	Oman
Vijay tanks & company llc	Oman
Seeh al-sarya trading	Oman
Dohat al khaleej	Oman
Rwtuv	Oman
Arabian industries	Oman
Bahwan engineering company llc	Oman
Geo-chem middle east	Oman
Oman industrial coating center	Oman
International centre for oil&energy	Oman
Amran hitech engineering llc	Oman
Al raid oil & gas technical services llc	Oman
Sai international enterprises llc	Oman
National electrical contractors	Oman
Mustafa sultan electronics co. Llc.	Oman
Electromek bin omeir llc	Oman
Alstom power	Oman

2.3 Local Suppliers

Bahwan engineering company llc	Oman
Al bilad catalyst co.ltd	Oman
Kukil inntot co.ltd	Oman
Assrain telecommunications llc	Oman
Hindustan platinum pvt.ltd	Oman
Al raid oil & gas technical services llc	Oman
Salutary avenue international llc	Oman
Sohar industrial supplies & trading	Oman
Global gas services llc	Oman
National petroleum technologies llc	Oman
Fluid systems corporation llc	Oman
Middle east oilfield services llc	Oman
Ray international llc	Oman
Al madina logistic services	Oman
Oman marketing and services company	Oman
Ebara corporation (japan)	Oman
Ebara elliott turbomachinery corporation	Oman
Mustafa sultan electronics co. Llc.	Oman
Flowserve corporation	Oman
Flw - fluid tech sales	Oman
Gulf scientific corp.	Oman
Modern petrotech llc	Oman

2.4 Other Local Services

Mideast data system (mds) llc	Oman
Apex international technollgies & projects llc (apex mobile telecommunications llc)	Oman
Modern colour printers llc	Oman
Arabian printing press	Oman
German formwork technology llc	Oman
International centre for oil&energy	Oman
Silver focus llc	Oman
Arthur d.little middle east ltd.	Oman
Advanced power switchgear co.llc	Oman
Engineering innovation design & consulting	Oman
Assrain telecommunications llc	Oman
National mechanical engineering services	Oman
Arabian industires projects llc	Oman
Al madina logistic services	Oman
Global technical gate llc	Oman
National engineering office	Oman
Al mutahidha transport	Oman
Parsons group oman engineering	Oman
Abi (AL-BATINA INTERNATIONAL ENGINEERING & SERVICES LLC	Oman
Al- Durah Al-Baidha	Oman
ALQADRAH LOGISTIC LLC	Oman
Bahar Al Suwihara Trading	Oman
Thuraya Integrated Solutions	Oman
Reema Trading	Oman
Sohar Potential Co.LLC	Oman