

# Engineering Standard

SAES-E-101

31 May, 2003

## Regulated Vendors List for Heat Transfer Equipment

### Heat Transfer Equipment Standards Committee Members

*Al-Anizi, S.S., Chairman*

*Al-Bagawi, J.J.*

*Al-Anezi, M.A.*

*Al-Dossary, M.A.*

*Al-Gahtani, M.S.*

*Al-Hamam, I.H.*

*Al-Rumaih, A.M.*

*Fernandez, G.T.*

*Moore, M.A.*

## Saudi Aramco DeskTop Standards

### Table of Contents

1	Scope.....	2
2	Conflicts and Deviations.....	2
3	References.....	2
4	Definitions.....	2
5	General.....	3
6	Acceptable Manufacturers' Listing.....	4

## 1 Scope

This standard identifies acceptable manufacturers for heat transfer equipment (Boilers, Process Fired Heaters and Heat Exchangers) included in SAMSS Class 32 materials.

## 2 Conflicts and Deviations

- 2.1 Any conflicts between this standard and other applicable Saudi Aramco Engineering Standards (SAESs), Materials System Specifications (SAMSSs), Standard Drawings (SASDs), or industry standards, codes, and forms shall be resolved in writing by the company or buyer representative through the Manager, Consulting Services Department of Saudi Aramco, Dhahran.
- 2.2 Direct all requests to deviate from this standard in writing to the Company or Buyer representative, who shall forward such requests to the Manager, Consulting Services Department of Saudi Aramco, Dhahran. The CSD Manager shall follow internal Company procedure [SAEP-133](#) to process the request.

## 3 References

The following is a summary of the Saudi Aramco documents and industrial standards that have been mentioned within this standard:

Saudi Aramco Engineering Procedure

[SAEP-133](#)

*Instructions for the Development of a "Regulated Vendors List" Engineering Standard*

## 4 Definitions

Terms shown in **bold** font within this document are defined below:

**Approval:** Written authorization by the Manager, Consulting Services Department, Saudi Aramco, Dhahran.

**Acceptable:** **Approval** is not required to place a purchase order for the product. After the order has been placed, the **supplier** of this product must ensure that he complies with all aspects of the purchasing contract (e.g., must meet the Saudi Aramco Materials System Specification).

**9COM:** "Commodity Classification Code".

**License Agreement:** A contract between a **supplier** and an owner of rights to an equipment design, allowing a **supplier** to either (1) assemble the equipment using all the pieces provided by the design owner or (2) assemble the equipment using a combination of pieces provided by the design owner and pieces manufactured by the

licensee to the design owner's detailed drawings/specifications. The contract between the licensor and licensee would (1) require the licensee to follow the licensor manufacturing procedures and be routinely audited by the licensor for compliance and (2) require the equipment to be marketed and labeled using the licensor's brand name.

**Made:** Created from raw materials and/or assembled by the manufacturer.

**Manufacturer:** Can be either (1) the owner of the brand name of the equipment or (2) a licensee that has a **license agreement**.

**SAMSS:** "Saudi Aramco Materials System Specification".

**Supplier:** The person/company etc. who is responsible to provide the equipment to Saudi Aramco.

## 5 General

5.1 Procurement of a product **made** by a **manufacturer** not listed in Section 6 of this Standard is not allowed without **approval**. Requests for **approval** of an alternate **manufacturer** must be supported by documentation identifying how the alternate **manufacturer** would better serve Saudi Aramco over the **manufacturers** listed in this standard.

*Commentary Note:*

*If the request to procure from an alternate **manufacturer** is not approved, the **approval** authority is under no obligation to present the reasons for the refusal.*

5.2 The **manufacturer** listings within Section 6 shall be interpreted in the following manner:

5.2.1 **Manufacturer** is listed with the word "None" as a "Limitation". All products from the **manufacturer** in the given category (**9COM** and, if applicable, **SAMSS**) are **acceptable**.

5.2.2 **Manufacturer** is listed with a "Limitation": Only the product that meets the "Limitation" is **acceptable**. If noted as being manufactured "Under License", only products **made** under the terms of the **license agreement** are **acceptable**.

5.2.3 **Manufacturer** is listed with a specific "Location": Only products made in the specific Location or area(s) are **acceptable**.

## 6 Acceptable Manufacturers' Listing

**Equipment:** Industrial Boilers: **SAMSS: 32-SAMSS-021**  
**9COM: 600002393: Fire Tube Boiler and Components**

Name of Manufacturer	Vendor/Plant ID	Location	Limitations
BELLELI SAUDI HEAVY INDUSTRIES LIMI	DB6290-01	Jubail, KSA	None
AALBORG CISERV INTERNATIONAL A/S	HA0527	AALBORG, DE	Max. Duty 5 ton/hr. Max. pressure 270 psig
WELLMAN ROBEY, LTD.	HF0535-01	OLDBVRY, GB	None
mitsui BABCOCK	HP5153-01	RENFREW	None
SANTAZ-CENSA S.A.	HS1050-01	PORRINO-PONTEVEDRA, ES	None
TECHNOTHERM CORPORATION	NT0920-01	TULSA, US	None
KOREA HEAVY INDUSTRIES AND CONSTRUCCION	TK6035-02	KYUNGYAM, KR	None
MITSUI SHIPBUILDING	TM6780-01	OKAYAMA, JP	None

**Equipment:** Industrial Boilers: **SAMSS: 32-SAMSS-021**  
**9COM: 600002394: Water Tube Boiler**

Name of Manufacturer	Vendor/Plant ID	Location	Limitations
BELLELI SAUDI HEAVY INDUSTRIES LIMI	DB6290-01	Jubail, KSA	None
AALBORG CISERV INTERNATIONAL A/S	HA0527	AALBORG, DE	Max. Duty 100 ton/hr Max pressure 650 psig.
WELLMAN ROBEY, LTD.	HF0535-01	OLDBVRY, GB	None
MITSUI BABCOCK	HP5153-01	RENFREW	None
ABB ALSTOM POWER	HR1532	KASSEL, DE	None
STORK ENERGY	HS7610-01	HENGEL, NL	None
CERREY, S.A. DE C.V.	NC2990-01	MON TEXRENY, MX	Max. Duty 550,000-pph
TECHNOTHERM CORPORATION	NT0920-01	TULSA, US	None
KAWASAKI HEAVY IND., LTD.	TK1275-02	CHIBA PREF, JP	None
KOREA HEAVY INDUSTRIES AND CONSTRUCTION	TK6035-02	KYUNGYAM, KR	None
MITSUBISHI HEAVY INDUSTRIES, LTD.	TM6570-03	YOKOHAMA, JP	None
MITSUI SHIPBUILDING	TM6780-01	OKAYAMA, JP	None

**Equipment: Industrial Boilers: SAMSS: 32-SAMSS-021**  
**9COM: 6000002395: Portable and Mobile Boilers**

Name of Manufacturer	Vendor/Plant ID	Location	Limitations
MITSUI BABCOCK	HP5153-01	RENFREW, GB	None

**Equipment: Fired Heaters**  
**9COM Number: 6000002430: Direct Fire Furnace: SAMSS: 32-SAMSS-029**

Name of Manufacturer	Vendor/Plant ID	Location	Limitations
FOSTER WHEELER ITALIANA SPA	HF4975-01	CORSICA, IT	Manufacturer's sub-contracted shops are subject to approval by VID/CSD
G.C. BROACH COMPANY	NB5721-01	TULSA, US	None
TAKAHASHI IRON WORKS CO., LTD.	TC3083-01	EHIME, JP	None
KOREA HEAVY INDUSTRIES AND CONSTRUC	TK6035-02	KYUNGYAM, KR	None
MITSUBISHI HEAVY INDUSTRIES, LTD.	TM6570	Yokohama, Japan---	None

**Equipment: Fired Heaters: SAMSS: 32-SAMSS-029**  
**9COM:6000002431: Furnace: Indirect Fired**

Name of Manufacturer	Vendor/Plant ID	Location	Limitations
FOSTER WHEELER ITALIANA SPA	HF4975-01	CORSICA, IT	Manufacturer's sub-contracted shops are subject to approval by VID/CSD
KCC PROCESS EQUIPMENT, LTD.	HK0020-01	SUNBVRY-ON-THAMES	Sub-Suppliers of Auxiliary equipment are subject to approval by VID/CSD
G.C. BROACH COMPANY	NB5721-01	TULSA, US	None
KOREA HEAVY INDUSTRIES AND CONSTRUC	TK6035-02	KYUNGYAM, KR	None
MITSUBISHI HEAVY INDUSTRIES, LTD.	TM6570	Yokohama, Japan	None

**Equipment: Heat Exchangers: 32-SAMSS-011**  
**9COM:600002433: Air Cooled Heat Exchangers**

Name of Manufacturer	Vendor/Plant ID	Location	Limitations
GULF ENGINEERING COMPANY FOR HEAT	DG9841-01	JUBAIL, KSA	None
OLYAN DESCON ENGINEERING COMPANY	DO1025-01	Jubail, KSA	None
BATIGNOLLES TECHNOLOGIES THERMIQUES	HB1132-01	NANTES, FR	None
BRONSWERK HEAT TRANSFER B.V.	HB6317-01	NIJKERK, NL	None
FBM - HUDSON ITALIANA SPA	HF0120-01	TERNO DISOLA, IT	None
GEA LUFTKUEHLER	HG0600-01	HERNE, DE	None
OLMI	HO2030-01	SUISIO, IT	None
GEA RAINEY CORP.	NG0010-01	PORT OF CATOOSA, US	None
HUDSON PRODUCTS CORPORATION	NH4162-02	BEASLEY, US	For supply of only large industrial exchangers.
TAKAHASHI IRON WORKS CO., LTD.	TC3083-01	EHIME, JP	None
KAWASAKI HEAVY IND., LTD.	TK1275-02	CHIBA PREF, JP	None
KOREA HEAT EXCHANGER INDUSTRIAL COM	TK6033-01	KYOUNGKI-DO, KR	None
mitsubishi heavy industries, LTD.	TM6570	Yokohama, Japan	None
SASAKURA ENGINEERING CO., LTD.	TS1165-01	Japan	None

**Equipment: Heat Exchangers: SAMSS: 32-SAMSS-028**  
**9COM:600002434: Multi-Pipe Heat Exchangers**

Name of Manufacturer	Vendor/Plant ID	Location	Limitations
GULF ENGINEERING COMPANY FOR HEAT	DG9841-01	JUBAIL, KSA	None
BROWN FINTUBE FRANCE SA	HB6555-01	THONON-LT3-BAINS, FR	None
BROWN FINTUBE COMPANY	NK1994-07	HOUSTON, US	None
BURGESS-MANNING INC./NITRAM ENERGY	NN2143-01	WICKITA FALLS, US	None
JAPAN STEEL WORKS, LTD.	TJ1140-02	HOKALDO, JP	None
KAWASAKI HEAVY IND., LTD.	TK1275-02	CHIBA PREF, JP	None
KOREA HEAVY INDUSTRIES AND CONSTRUC	TK6035-02	KYUNGYAM, KR	None
MITSUBISHI HEAVY INDUSTRIES, LTD.	TM6570	Yokohama, Japan--	None
SUNGJIN GEOTEC COMPANY, LTD.	TS4465-01	ULSAN CITY, KR	None

**Equipment: Heat Exchangers: SAMSS: 32-SAMSS-019**  
**9COM:600002435: Plate Type Heat Exchangers**

Name of Manufacturer	Vendor/Plant ID	Location	Limitations
ALFA-LAVAL THERMAL AB	HA3350-01	Maarsse, NL	None
LINDE A.G. PROCESS ENG. & CONTRACTI	HL5046-01	TECHTERTING, DE	None
ALFA-LAVAL THERMAL, INC.	NA1914-02	RICHMOND, US	None
TRANTER INC./TEXAS DIV/DOVER DIVERS	NT1236-01	WICHITA FALLS, US	None
HISAKA WORKS, LTD.	TH9011-01	OSAKA, JP	None
mitsubishi heavy industries, LTD.	TM6570-05	HIROSHIMA, JP	None

**Equipment: Heat Exchangers: 32-SAMSS-027**  
**9COM: 600002436: Electrical Heat Exchangers**

Name of Manufacturer	Vendor/Plant ID	Location	Limitations
ELTRON CHROMALOX	HE2735-01	CROYDON, GB	None
WELLMAN THERMAL SYSTEMS	NW1806-01	SHELBYVILLE, US	None
KAWASAKI HEAVY IND., LTD.	TK1275-02	CHIBA PREF, US	None

**Equipment: Soot Blower System: SAMSS: 32-SAMSS-029**  
**9COM: 600002475**

Name of Manufacturer	Vendor/Plant ID	Location	Limitations
KAWASAKI HEAVY IND., LTD.	TK1275-02	CHIBA PREF, JP	None
mitsubishi heavy industries, LTD.	TM6570-01	TAKASAGO, JP	None
mitsubishi heavy industries, LTD.	TM6570--03	YOKOHAMA, JP	None
mitsubishi heavy industries, LTD.	TM6570-05	HIROSHIMA, JP	None

**Equipment: Heat Exchangers: SAMSS: 32-SAMSS-007**  
**9COM:600002487: Tube bundle: any metal**

Name of Manufacturer	Vendor/Plant ID	Location	Limitations
BELLELI SAUDI HEAVY INDUSTRIES LIMI	DB6290-0	JUBAIL, KSA	None
GULF ENGINEERING COMPANY FOR HEAT	DG9841-01	JUBAIL, KSA	None
BATIGNOLLES TECHNOLOGIES THERMIQUES	HB1132-01	NANTES, FR	None
BELLELI ENERGY SRL	HB1960-01	MANTOVA, IT	None
BROWN FINTUBE FRANCE SA	HB6555-01	THONAN-LES-BAINS, FR	None
OLMI	HO2030-01	SUIISO, IT	None
OFFICINE LUIGI-RESTA S.P.A.	HR2565	SCANZOROSCIATE, IT	Max. Weight 200 tons Max. Wall thickness 140 mm, Max Diameter 5 m.
UNIT SUPERHEATER ENGINEERING, LTD.	HU8150-01	SWANSEA, GB	None
HUDSON PRODUCTS CORPORATION	NH4162-02	BEASLEY, US	For only air-cooled heat exchangers applications.
HUGHES-ANDERSON HEAT EXCHANGERS, IN	NH4200-01	TULSA, US	None
OHMSTEDE, INC.	NO0333-02	SANGABRIES, US	None
OHMSTEDE, INC.	NO0333-03	SULFUR, US	None
SHELL AND TUBE INCORPORATED	NS2658-01	TULSA, US	None
TAKAHASHI IRON WORKS CO., LTD.	TC3083-01	EHIME, JP	None
HITACHI, LTD.	TH4920-01	YAMAGUCHI PREF, JP	None
HITACHI KASADO JYUKOGYO	TH4920-03	YAMAGUCHI PREF, JP	None
HITACHI ZOSEN	TH4935-04	MAIZURU -SHI, JP	None
HITACHI ZOSEN	TH4935-01	OSAKA, JP	None
HYUNDAI HEAVY INDUSTRIES CO., LTD.	TH9017-01	ULSANKYVNGNAM, KR	None
JAPAN STEEL WORKS, LTD.	TJ1140-02	HOKKAIDO, JP	None
KAWASAKI HEAVY IND., LTD.	TK1275-02	CHIBA PREF, JP	None
KOBE STEEL LIMITED	TK4447-01	HYOGO-KEN, JP	
MITSUBISHI HEAVY INDUSTRIES, LTD.	TM6570	YOKOHAMA, JP	None
NIIGATA ENGINEERING CO., LTD.	TN5518-01	YOKOHAMA, JP	None
SASAKURA ENGINEERING CO., LTD.	TS1165-01	OSAKA, JP	None
SUNGJIN GEOTEC COMPANY, LTD.	TS4465-01	ULSAN CITY, KR	None
SUMITOMO HEAVY INDUSTRIES, LTD.	TS8228-01	EHIME PREF, JP	None



**Equipment: Tubesheet: any metal: SAMSS: 32-SAMSS-007**  
**9COM: 320128/9COM: 6000002488**

Name of Manufacturer	Vendor/Plant ID	Location	Limitations
BELLELI SAUDI HEAVY INDUSTRIES LIMI	DB6290-01	JUBAIL, KSA	None
GULF ENGINEERING COMPANY FOR HEAT	DG9841-01	JUBAIL, KSA	None
BELLELI ENERGY SRL	HB1960-01	MANTOVA, IT	None
OFFICINE LUIGI-RESTA S.P.A.	HR2565-01	SCANZORDSCIATE, IT	Max. Weight 200 tons. Max. Wall thickness 140 mm, Max Diameter 5 m.
UNIT SUPERHEATER ENGINEERING, LTD.	HU8150-01	SWANSEA, GB	None
HUDSON PRODUCTS CORPORATION	NH4162-02	BLEASLEY, US	For only air-cooled heat exchangers applications.
HUGHES-ANDERSON HEAT EXCHANGERS, IN	NH4200-01	TULSA, US	None
OHMSTEDE, INC.	NO0333-02	SANGABRIEL, US	None
OHMSTEDE, INC.	NO0333-03	SULFUR, US	
SHELL AND TUBE INCORPORATED	NS2658-01	TULSA, US	None
TAKAHASHI IRON WORKS CO., LTD.	TC3083-01	EHIME, JP	None
HITACHI, LTD. KASADO WORKS	TH4920-01	YAMAGULMI PREF, JP	None
HITACHI KASADO JYUKOGYO	TH4920-03	YAMAGULMI, JP	None
HITACHI ZOSEN	TH4935-04	MAIZURU-SHI, JP	None
HITACHI ZOSEN	TH4935		None
HYUNDAI HEAVY INDUSTRIES CO., LTD.	TH9017-01	ULSAN KYUNGNAM, JP	None
JAPAN STEEL WORKS, LTD.	TJ1140-02	HOKKAIOO, JP	None
KAWASAKI HEAVY IND., LTD.	TK1275-02	CHIBA PREF, JP	None
KOBE STEEL LIMITED	TK4447-01	HYOGO-KEN, JP	None
MITSUBISHI HEAVY INDUSTRIES, LTD.	TM6570	YOKOHAMA, JP	None
NIIGATA ENGINEERING CO., LTD.	TN5518-01	YOKOHAMA, JP	None
SASAKURA ENGINEERING CO., LTD.	TS1165-01	OSAKA, JP	None
SUNGJIN GEOTEC COMPANY, LTD.	TS4465-01	ULSAN CITY, KR	None
SUMITOMO HEAVY INDUSTRIES, LTD.	TS8228-01	EHIME PREF, JP	None

**Equipment: Fired Heaters: SAMSS: 32-SAMSS-029**  
**9COM: 6000002511: Fired heaters: Box type Furnace**

Name of Manufacturer	Vendor/Plant ID	Location	Limitations
COOPERHEAT UK, LTD.	HC6335-01	SKELMERSDALE, GB	None
FOSTER WHEELER ITALIANA SPA	HF4975-01	SORSICA, IT	Manufacturer's sub-contracted shops are subject to approval by VID/CSD
SITICEM MONTAGGI-E MANUTENZIONI SPA	HS4337-01	PISA, IT	None
G.C. BROACH COMPANY	NB5721-01	TULSA, US	None
KOREA HEAVY INDUSTRIES AND CONSTRUC	TK6035-02	KYUNGYAM, KR	None
MITSUBISHI HEAVY INDUSTRIES, LTD.	TM6570	Yokohama, Japan	None
NIIGATA ENGINEERING CO., LTD.	TN5518-01	YOKOHAMA, JP	None

**Equipment: HEAT EXCHANGER: 32-SAMSS-007**  
**9COM: 600002528: SHELL AND TUBE HEAT EXCHANGER; CARBON STEEL OR**  
**LOW ALLOY AND MAX. WALL THICKNESS OF 38 MM (1.5 IN.)**

Name of Manufacturer	Vendor/Plant ID	Location	Limitations
OLYAN DESCON ENGINEERING COMPANY	DO1025-01	JUBAIL, KSA	None
AL-GASWA SUPPORT COMPANY, LIMITED	DG0310-01	JUBAIL, KSA	None
GULF ENGINEERING COMPANY FOR HEAT	DG9841-01	JUBAIL, KSA	None
LARSEN AND TOUBRO LIMITED	DL0270-01	BOMBAY, IN	None
OLYAN DESCON ENGINEERING COMPANY	DO1025-01	JUBAIL, KSA	None
R. E. ENGINEERING	DR4783-01	ASKAR, BM	None
INDUSTRIE MECCANICHE DI BAGNOLO	HB0400	BAGNOLO CREMASCO, IT	None
BELLELI ENERGY SRL	HB1960-01	MANTOVA, IT	None
BRONSWERK HEAT TRANSFER B.V.	HB6317-01	NIJKERK-NL	None
FBM - HUDSON ITALIANA SPA	HF0120-01	TERNO D'ISOLA, IT	None
STAHL-UND APPARATEBAU HANS LEFFER G	HL2835-01	SAARBUEZKEN-DVOWEILER, DE	None
OLMI	HO2030-01	SVISIO, IT	None
mitsui BABCOCK	HP5153-01	RENFREW, GB	None
ABB ALSTOM POWER	HR1532-01	KASSEL, DE	None
OFFICINE LUIGI-RESTA S.P.A.	HR2565-01	SCANZOROSCIATE	None
SANTAZ-CENSA S.A.	HS1050-01	PORRINO-PONTEVEDRA, ES	None
HUGHES-ANDERSON HEAT EXCHANGERS, IN	NH4200-01	TULSA, US	None
OHMSTEDE, INC.	NO0333-02	SAN GABRIEZ, US	None
OHMSTEDE, INC.	NO0333-03	SULFUR, US	None
SHELL AND TUBE INCORPORATED	NS2658-01	TULSA, US	None
TAKAHASHI IRON WORKS CO., LTD.	TC3083-01	EHIME, JP	None
HITACHI, LTD. KASADO WORKS	TH4920-01	YAMAGUCHI PREF, JP	None
HITACHI KASADO JYUKOGYO	TH4920-03	YAMAGUCHI, JP	None
HITACHI Zosen	TH4935-04	MAIZURU-SHI, JP	None
HYUNDAI HEAVY INDUSTRIES CO., LTD.	TH9017-01	ULSAN KYUNGNAM, KR	None
KAWASAKI HEAVY IND.	TK1275-01	HYOGO, JP	None
KAWASAKI HEAVY IND., LTD.	TK1275-02	CHIBA PREF, JP	None
KOREA HEAT EXCHANGER INDUSTRIAL COM	TK6033-01	KYOUNGKI-DO, KR	None
KOREA HEAVY INDUSTRIES AND CONSTRUC	TK6035-02	KYUNGNAM, KR	None
mitsubishi HEAVY INDUSTRIES, LTD.	TM6570-03	YOKOHAMA, JP	None
mitsubishi HEAVY INDUSTRIES, LTD.	TM6570-04	MIMAXA, JP	None
NANKAI CHEMICAL ENGINEERING CO., LTD.	TN0815-01	OSAKA, JP	None

**Equipment: HEAT EXCHANGERS: 32-SAMSS-007**  
**9COM: 600002529: SHELL-AND-TUBE HEAT EXCHANGER: SHELL AND TUBE**  
**TYPE; ALL MAT'L OTHER THAN CARBON STEEL & LOW ALLOY, OR WALL**  
**THK GREATER THAN 38 MM (1.5 IN)**

Name of Manufacturer	Vendor/Plant ID	Location	Limitations
BELLELI SAUDI HEAVY INDUSTRIES LIMI	DB6290-01	JUBAIL, KSA	None
GULF ENGINEERING COMPANY FOR HEAT	DG9841-01	JUBAIL, KSA	None
LARSEN AND TOUBRO, LIMITED	DL0270-01	BOMBAY, IN	None
INDUSTRIE MECCANICHE DI BAGNOLO	HB0400	BAGNOLO CREMASCO, IT	None
BELLELI ENERGY SRL	HB1960-01	MANTOVA, IT	None
BRONSWERK HEAT TRANSFER B.V.	HB6317-01	NIJKERK, NL	None
FBM - HUDSON ITALIANA SPA	HF0120-01	TERND D'ISOLA, IT	None
STAHL-UND APPARATEBAU HANS LEFFER G	HL2835-01	SAARBRUEZKEN-DVOWEILER, DE	None
OLMI	HO2030-01	SVISIO, IT	None
mitsui BABCOCK	HP5153-01	RENFREW, GB	None
OFFICINE LUIGI-RESTA S.P.A.	HR2565-01	SCANZOROSCIAT E, IT	Max. Weight 200 tons. Max. Wall thickness 140 mm, Max Diameter 5 m.
SANTAZ-CENSA S.A.	HS1050-01	PORRINO-PONTEVEDRA, ES	None
OHMSTEDE, INC.	NO0333-02	SANGABRIES, US	None
SHELL AND TUBE INCORPORATED	NS2658-01	TULSA, US	None
TAKAHASHI IRON WORKS CO., LTD.	TC3083-01	EHIME, JP	None
HITACHI, LTD.	TH4920-01	YAMAGUCHI PREF, JP	None
HITACHI KASADO JYUKOGYO	TH4920-03	YAMAGUCHI, JP	None
HITACHI ZOSEN	TH4935-04	MAIZURU-SHI, JP	None
HYUNDAI HEAVY INDUSTRIES CO., LTD.	TH9017-01	ULSAN KYUNGNAM, JP	None
ISHIKAWAJIMA-HARIMA HEAVY INDUSTRIE	TI6750-01	YOKOHAMA, JP	None
JAPAN STEEL WORKS, LTD.	TJ1140-02	HOKKAIDO, JP	None
KAWASAKI HEAVY IND.	TK1275-01	HYOGO, JP	None
KAWASAKI HEAVY IND., LTD.	TK1275-02	CHIBA PREF, JP	None
KOBE STEEL, LIMITED	TK4447-01	HYOGO-KEN, JP	None
KOREA HEAVY INDUSTRIES AND CONSTRUC	TK6035-02	KYUNGNAM, KR	None
mitsubishi HEAVY INDUSTRIES, LTD.	TM6570-03	YOKOHAMA, JP	None
mitsubishi HEAVY INDUSTRIES, LTD.	TM6570-04	MIHAKA, JP	None
NANKAI CHEMICAL ENGINEERING CO., LTD.	TN0815-01	OSAKA, JP	None
SUMITOMO HEAVY INDUSTRIES, LTD.	TS8228-01	EHIME PREF, JP	None

**Equipment:** Heat Exchanger: **32-SAMSS-007**  
**9COM: 6000002534:** Heat Exchanger: **SURFACE STEAM CONDENSER SYSTEM:  
COMPLETE WITH EJECTORS & CONDENSER EXCHANGER**

Name of Manufacturer	Vendor/Plant ID	Location	Limitations
TECHNOTHERM CORPORATION	NT0920-01	TULSA, US	None

**Revision Summary**

30 November, 2002  
31 May, 2003

New RVL document.  
Editorial revision to change the Document Responsibility from Vessels to newly formed Heat Transfer Equipment Standards Committee per CSD-L-305/03 dated May 11, 2003.