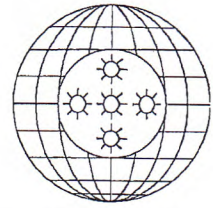


Heat Exchanger Design, Inc.

P. O. Box 524

Indianapolis, IN 46206-0524 USA

Phone: (317)686-9000 • Fax: (317)686-9100



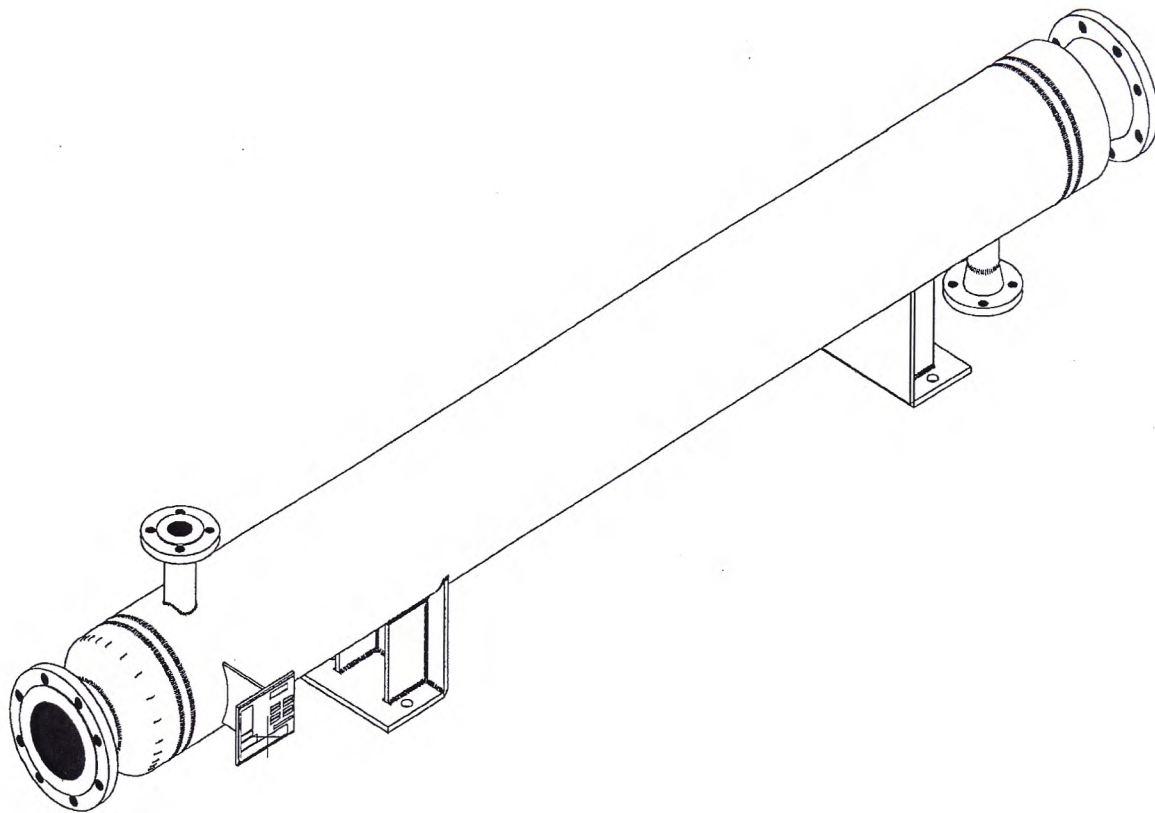
Manufacturer's Equipment Record Book

Customer: Range Fuels Soperton Plant, LLC

Purchase Order #: SOP10605

Item #: 31-E-188

Work Order #: 4015



*Serving
Petroleum, Petrochemical, Power, Food, and Industrial on Heat Transfer Equipment*

901 East Beecher Street
Indianapolis, IN 46203 USA

FORM U-1 MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

1. Manufactured and certified by Heat Exchanger Design, Inc. 901 E. Beecher Street, Indianapolis, IN 46203
(Name and address of Manufacturer)
2. Manufactured for Range Fuels Soperton Plant, LLC, 11101 W. 120th Avenue, Suite 200, Broomfield, CO 80021
(Name and address of Purchaser)
3. Location of installation Unknown
(Name and address)
4. Type: Horizontal Heat Exchanger 4015 -- 4015 Rev.3 2891 2009
(Horiz., vert., or sphere) (Tank, separator, jkt. vessel, heat exh., etc.) (Mfg's serial No.) (CRN) (Drawing No.) (Nat'l. Bd. No.) (Year built)
5. ASME Code, Section VIII, Div. 1 2007, A08 -- --
Edition and Addenda (date) Code Case No. Special Service per UG-120(d)
- Items 6 - 11 Incl. to be completed for single wall vessels, jackets of jacketed vessels, shell of heat exchangers, or chamber of multi-chamber vessels.
6. Shell (a) No. of course(s): (3) (b) Overall length (ft & in.): 23'-9"

Course(s)			Material		Thickness		Long Joint (Cat. A)			Circum. Joint (Cat. A, B & C)			Heat Treatment	
No.	Diameter, In.	Length (ft. & In.)	Spec./Grade or Type		Nom.	Corr.	Type	Full, Spot, None	Eff.	Type	Full, Spot, None	Eff.	Temp.	Time
(3)	38" OD	7'-11"	SA-516Gr.70		.500"	.0625"	1	Full	100%	1	Full	100%	None	--
--	--	--	--		--	--	--	--	--	--	--	--	--	--
--	--	--	--		--	--	--	--	--	--	--	--	--	--

7. Heads: (a) SA-516Gr.70N (b) --
(Mat'l Spec. No., Grade or Type) H.T.-Time & Temp (Mat'l Spec. No., Grade or Type) H.T.-Time & Temp

	Location (Top, Bottom, Ends)	Thickness		Radius		Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure		Category A		
		Min.	Corr.	Crown	Knuckle					Convex	Concave	Type	Full, Spot, None	Eff.
(a)	End	.500"	.0625"	--	--	2:1	--	--	--	Yes	Yes	--	--	--
(b)	--	--	--	--	--	--	--	--	--	--	--	--	--	--

If removable, bolts used (describe other fastening) --
(Mat'l Spec. No., Grade, size, No.)

Type of jacket None Jacket closure --
(Describe as ogee & weld, bar, etc.)

If bar, give dimensions -- If bolted, describe or sketch

9. MAWP 350 F.V. psi at max. temp. 250 350 °F Min. design metal temp. 20 °F at 350/F.V. psi.
(internal) (external) (internal) (external)

10. Impact test No, exempt per UG-20(f).
(Indicate yes or no and the component(s) Impact tested)

11. Hydro., pneu., or comb. test press. 455 Proof test --
Items 12 and 13 to be completed for tube sections.

12. Tubesheet: SA-350Gr.LF2 Cl.2 37" 4.25" .0625" Bolted
Stationary (Mat'l Spec. No.) Dia., In. (subject to press.) Nom. thk., In. Corr. Allow., In. Attachment (welded or bolted)

None -- -- --
Floating (Mat'l Spec. No.) Dia., In. Nom. thk., In. Corr. Allow., In. Attachment

13. Tubes: SA-179 3/4" .083" (611) "U"
Mat'l Spec. No., Grade or Type O.D., In. Nom. thk., In. or gauge Number Type (Straight or U)

Items 14 - 18 Incl. to be completed for inner chambers of jacketed vessels or channels of heat exchangers.

14. Shell (a) No. of course(s): (1) (b) Overall length (ft & in.): 1'-5"

Course(s)			Material		Thickness		Long Joint (Cat. A)			Circum. Joint (Cat. A, B & C)			Heat Treatment	
No.	Diameter, In.	Length (ft. & In.)	Spec./Grade or Type		Nom.	Corr.	Type	Full, Spot, None	Eff.	Type	Full, Spot, None	Eff.	Temp.	Time
(1)	38" OD	1'-5"	SA516Gr.70		.500"	.0625"	1	Full	100%	1	Full	100%	None	--
--	--	--	--		--	--	--	--	--	--	--	--	--	--
--	--	--	--		--	--	--	--	--	--	--	--	--	--

15. Heads: (a) SA-516Gr.70N (b) --
(Mat'l Spec. No., Grade or Type) H.T.-Time & Temp (Mat'l Spec. No., Grade or Type) H.T.-Time & Temp

	Location (Top, Bottom, Ends)	Thickness		Radius		Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure		Category A		
		Min.	Corr.	Crown	Knuckle					Convex	Concave	Type	Full, Spot, None	Eff.
(a)	End	.500"	.0625"	--	--	2:1	--	--	--	Yes	Yes	--	--	--
(b)	--	--	--	--	--	--	--	--	--	--	--	--	--	--

If removable, bolts used (describe other fastening) (52) 1"-8 x 15.5" long studs SA-193Gr.B7 / (104) nuts SA-194Gr.2H
(Mat'l Spec. No., Grade, Size, No.) RR 1026.10

16. MAWP 450 F.V. psi at max. temp. 250 350 °F Min. design metal temp. 20 °F at 450/F.V. psi.
(internal) (external) (internal) (external)

17. Impact test No, exempt per UG-20(f).

(Indicate yes or no and the component(s) Impact tested)

/dro., pneu., or comb. test press. 585

Proof test --

Nozzles, inspection, and safety valve openings:

Purpose (Inlet, Outlet, Drain, etc.)	No.	Diameter or Size	Flange Type	Material		Nozzle Thickness		Reinforcement Material	How Attached		Location (Insp. Open)
				Nozzle	Flange	Nom.	Corr.		Nozzle	Flange	
Shell Inlet	(1)	6"	Cl.300 rfwn	SA-106Gr.B	SA-105	.562"	.0625"	Not Required	UW-16.1(c)	Fig.2-4(6)	Bottom
Shell Outlet	(1)	6"	Cl.300 rfwn	SA-106Gr.B	SA-105	.562"	.0625"	Not Required	UW-16.1(c)	Fig.2-4(6)	Top
Tube Inlet	(1)	6"	Cl.300 rflwn	SA-105	SA-105	1.0625"	.0625"	Not Required	UW-16.1(c)	Integral	Top
Tube Outlet	(1)	6"	Cl.300 rflwn	SA-105	SA-105	1.0625"	.0625"	Not Required	UW-16.1(c)	Integral	Bottom
Shell Vent	(1)	1"	Cl.300 rflwn	SA-105	SA-105	.5625"	.0625"	Not Required	UW-16.1(c)	Integral	Top
Shell Drain	(1)	1"	Cl.300 rflwn	SA-105	SA-105	.5625"	.0625"	Not Required	UW-16.1(c)	Integral	Bottom
--	--	--	--	--	--	--	--	--	--	--	--

20. Supports: Skirt No Lugs -- Legs -- Others Saddle sppts-2 btm, 2 top Attached Welded to shell btm/top
(Yes or No) (No.) (No.) (Describe) (Where and How)

21. Manufacturer's Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report:

(List the name of part, item number, mfg's. name and identifying number)

Shell cylinder Serial # 09-6596-3 and channel cylinder Serial # 09-6596-4 manufactured by Wagner Plate Works, LLC. Cylinders purchased with 100% radiography performed.

22. Remarks: 1) Relief valving to be supplied in customers piping. 2) No radiography performed on nozzles, 100% Eff. 3) Channel, tubesheet and shell bolted together as described on line 15. 4) Shell head to cylinder seam subjected to Spot RT.

CERTIFICATE OF SHOP COMPLIANCE

We certify that the statements made in this report are correct and that all details of design, material, construction, and workmanship of this vessel conform to the ASME Code for Pressure Vessels, Section VIII, Division 1,

U Certificate of Authorization No. 23,740 Expires 9/27 20 11

Date 8-17-09 Name Heat Exchanger Design, Inc. Signed B. L. Z. Shury
(Manufacturer) (Representative)

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by The National Board of Boiler and Pressure Vessel Inspectors and the State or Province of IN. and employed by HSB CT of Hartford, CT. have inspected the pressure vessel described in this Manufacturer's Data Report on 8/17 20 09, and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel in accordance with ASME Code Section VIII, Division 1. By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 8/17/09 Signed M. A. Man... .. Commissions NB 10006 (A, B) IN1418
(Authorized Inspector) (Nat'l Board Incl. endorsement, State, Province and No.)

CERTIFICATE OF FIELD ASSEMBLY COMPLIANCE

We certify that the statements on this report are correct and that the field assembly construction of all parts of this vessel conforms with the requirements of ASME Code, Section VIII, Division 1,

U Certificate of Authorization No. Expires 20

Date Name Signed
(Assembler) (Representative)

CERTIFICATE OF FIELD ASSEMBLY INSPECTION

I, the undersigned, holding a valid commission issued by The National Board of Boiler and Pressure Vessel Inspectors and the State or Province of and employed by of have compared the statements in this Manufacturer's Data Report with the described pressure vessel and state that parts referred to as data items , not included in the certificate of shop inspection, have been inspected by me and to the best of my knowledge and belief, the Manufacturer has constructed and assembled this pressure vessel in accordance with ASME Code, Section VIII, Division 1. The described vessel as inspected and subjected to a hydrostatic test of psi. By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date Signed Commissions
(Authorized Inspector) (Nat'l Board Incl. endorsement, State, Province and No.)

NB 2891



W-RT4

Manufactured & Certified by
SOPERTON EXCHANGER DESIGN, INC.
U.S.A.

Shell Side 350 PSI @ 250 °F

Tube Side 450 PSI @ 250 °F

Maximum Allowable Working Pressure

Shell Side FV PSI @ 350 °F

Tube Side FV PSI @ 350 °F

Maximum Allowable External Working Pressure

Shell Side 20 °F @ 350/FV PSI

Tube Side 20 °F @ 450/FV PSI

Minimum Design Metal Temperature

Hydro Test Pressure

455 / 585

Shell Side / Tube Side

Customer RANGE FUELS SOPERTON PLANT LLC

P.O. # SOP10605

Service SOLVENT/HP LIQUID EXCHANGER

Item 31-E-188

Year Built 2009