

## FORM U-1 MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS

# 103949

As Required by the Provisions of the ASME Boiler and Pressure Vessel Code Rules, Section VIII, Division 1

1. Manufactured and certified by Bendel Corporation, 4823 N. Graham St., Charlotte, North Carolina, 28269, USA

(Name and address of Manufacturer)

2. Manufactured for Invista, Wilmington Plant, 4600 Highway 421 North, Wilmington, North Carolina, 28401, USA

(Name and address of Purchaser)

3. Location of installation Invista, Wilmington Plant, 4600 Highway 421 North, Wilmington, North Carolina, 28401, USA

(Name and address)

4. Type Vertical

(Horizontal, vertical, or sphere)

Tank

(Tank, separator, jkt. vessel, heat exh., etc.)

13497-3/6

(Manufacturer's serial number)

N/A

(CRN)

011349708; Rev. 5

(Drawing number)

680

(National Board number)

2008

(Year built)

5. ASME Code, Section VIII, Div. 1

2007/ N/A

Edition and Addenda (date)

2547

Code Case number

N/A

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 multichamber vessels.

6. Shell (a) Number of course(s): 2

(b) Overall length

10' 9.0"

Course(s)			Material Spec./Grade or Type	Thickness		Long. Joint (Cat. A)			Circum. Joint (Cat. A, B, & C)			Heat Treatment	
No.	Diameter	Length		Nom.	Corr.	Type	Full, Spot, None	Eff.	Type	Full, Spot, None	Eff.	Temp.	Time
1	60.0" OD	2' 9.0"	SA516-70	5/8"	0"	1	Spot	85%	1	Spot	85%	N/A	N/A
1	60.0" OD	8' 0.0"	SA516-70	5/8"	0"	1	Spot	85%	1	Spot	85%	N/A	N/A

7. Heads: (a)

SA516-70; H.T.: None

(Material spec. number, grade or type) (H.T. - Time &amp; Temp.)

(b)

SA516-70; H.T.: None

(Material spec. number, grade or type) (H.T. - Time &amp; 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)	TOP	.437"	0"	60.0"	3.75"	N/A	N/A	N/A	N/A		X	S	N/A	N/A
(b)	BOTTOM	.437"	0"	60.0"	3.75"	N/A	N/A	N/A	N/A		X	S	N/A	N/A

If removable, bolts used (describe other fastening)

N/A

(Material, spec. number, grade, size, number)

8. Type of jacket

N/A

Jacket closure

N/A

(Describe as ogee &amp; weld, bar, etc.)

If bar, give dimensions

N/A

If bolted, describe or sketch.

9. MAWP

100 psi

(internal)

N/A

(external)

at max. temp.

340 °F

(internal)

N/A

(external)

Min. design metal temp.

-20 °F

at

100 psi

10. Impact test

No; Exempt per UCS-66 and UG-20at test temperature of N/A

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

11. Hydro., pneu., or comb. test press.

Hydro. at 150 psi

Proof test

N/A

Items 12 and 13 to be completed for tube sections.

12. Tubesheet:

N/A

(Stationary (material spec. no.))

N/A

(Diameter, (subject to press.))

N/A

(Nominal thickness)

N/A

(Corr. allow.)

N/A

Attachment (welded or bolted)

N/A

(Floating (material spec. no.))

N/A

(Diameter)

N/A

(Nominal thickness)

N/A

(Corr. allow.)

N/A

(Attachment)

13. Tubes:

N/A

(Material spec. no., grade or type)

N/A

(O. D.)

N/A

(Nominal thickness)

N/A

(Number)

N/A

(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): N/A

(b) Overall length

N/A

Course(s)			Material Spec./Grade or Type	Thickness		Long. Joint (Cat. A)			Circum. Joint (Cat. A, B, & C)			Heat Treatment	
No.	Diameter	Length		Nom.	Corr.	Type	Full, Spot, None	Eff.	Type	Full, Spot, None	Eff.	Temp.	Time
	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

15. Heads: (a)

N/A

(Material spec. number, grade or type) (H.T. - Time &amp; Temp.)

(b)

N/A

(Material spec. number, grade or type) (H.T. - Time &amp; 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)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			N/A	N/A	N/A

If removable, bolts used (describe other fastening)

N/A

(Material, spec. number, grade, size, number)



16. MAWP N/A N/A at max. temp. N/A N/A Min. design metal temp. N/A at N/A  
 (internal) (external) (internal) (external)

17. Impact test N/A at test temperature of N/A  
 (Indicate yes or no and the component(s) impact tested)

18. Hydro., pneu., or comb. test press. N/A Proof test N/A

19. Nozzles, inspection, and safety valve openings:

Purpose (Inlet, Outlet, Drain, etc.)	No.	Diam. or Size	Flange Type	Material		Nozzle Thickness		Reinforcement Material	How Attached		Location (Insp. Open.)
				Nozzle	Flange	Nom.	Corr.		Nozzle	Flange	
Steam Inlet	1	30"	App.2 Ring	SA516-70	SA516-70	5/8"	0"	n/a	UW16.1(d)	Fig.2-4(1)	
Water Outlet	1	18"	CL150 LJ	SA53B	SA105	Sch.40	0"	n/a	UW16.1(d)	Fig.2-4(1)	
Steam Outlet	1	12"	CL150 SO	SA53B	SA105	Sch.40	0"	n/a	UW16.1(d)	Fig.2-4(3)	
Inspection	1	8"	CL150 Pad	SA516-70	n/a	2-3/4"	0"	n/a	UW16.1(d)	n/a	Shell
Drain	1	2"	CL150 SO	SA312TP304L	SA182F304L	Sch.80	0"	n/a	UW16.1(d)	Fig.2-4(3)	
Spare/Relief	2	6"	CL150 SO	SA53B	SA105	Sch.40	0"	n/a	UW16.1(d)	Fig.2-4(3)	
Level	1	3"	CL150 SO	SA53B	SA105	Sch.40	0"	n/a	UW16.1(d)	Fig.2-4(3)	
Pressure	1	1"	CL150 SO	SA53B	SA105	Sch.40	0"	n/a	UW16.1(d)	Fig.2-4(3)	

20. Supports: Skirt No Lugs N/A Legs 4 Others N/A Attached Welded to shell  
 (Yes or no) (Number) (Number) (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:

N/A

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

22. Remarks:

Vessel tested in vertical position; Vessel contents unknown; Vessel not designed for lethal service; Pressure relief devices are responsibility of the owner

### 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 BOILER AND PRESSURE VESSEL CODE, Section VIII, Division 1. U Certificate of Authorization Number 28314 Expires 03/18/2010

Date 01/14/2009 Name Bendel Corporation Signed [Signature]  
 (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/or the State or Province of NC and employed by HSB CT of Hartford, CT have inspected the pressure vessel described in this Manufacturer's Data Report on January 22, 2009, and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel in accordance with ASME BOILER AND PRESSURE VESSEL CODE, Section VIII, Division 1. By signing this certificate neither the Inspector nor his/her employer makes any warranty, expressed or implied, concerning the pressure vessel described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his/her 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 01/22/2009 Signed [Signature] Commissions 10652AB, NC1206  
 (Authorized Inspector) (National Board incl. endorsements, State, Province and number)

### CERTIFICATE OF FIELD ASSEMBLY COMPLIANCE

We certify that the statements made in this report are correct and that the field assembly construction of all parts of this vessel conforms with the requirements of ASME BOILER AND PRESSURE VESSEL CODE, Section VIII, Division 1. U Certificate of Authorization No. \_\_\_\_\_ Expires \_\_\_\_\_

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/or 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 the ASME BOILER AND PRESSURE VESSEL CODE, Section VIII, Division 1. The described vessel was inspected and subjected to a hydrostatic test of \_\_\_\_\_. By signing this certificate neither the Inspector nor his/her employer makes any warranty, expressed or implied, concerning the pressure vessel described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his/her 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) (National Board incl. endorsements, State, Province and number)