

BOILER TECHNICAL GRAM

Number: 2015-01

Date: 12/17/15

To: Authorized Inspectors
Authorized Inspection Agencies

From: Office of the Chief Inspector
TDLR, Compliance Division, Boiler Program

Subj: Boiler Technical Grams

Re: Superior Boiler - Creek Model Condensing Boiler Inspection Openings

Ref: Texas Boiler Law 755.025 and Administrative Rule: 65.2 (12)

The referenced rule requires the certificate boiler inspection include both the internal and external inspections.

TDLR has obtained technical data for the Creek condensing boiler from the boiler manufacturer, Superior Boiler Works. These boilers are equipped with two (2" SA-106B threaded) inspection openings at the bottom of the boiler, one on each side at the burner end. To gain access, the boiler owner/operator must remove exterior casing material/ insulation and remove the 2" threaded plug to facilitate the internal inspection. Photos and the data report are included as exhibits to this Technical Gram for clarification.

Any questions regarding this Technical Gram should be addressed to the Chief Boiler Inspector or an Inspection Specialist.

**FORM H-2 MANUFACTURER'S DATA REPORT FOR ALL TYPES OF BOILERS
EXCEPT WATERTUBE AND THOSE MADE OF CAST IRON
As Required by the Provisions of the ASME Code Rules, Section IV**

1. Manufactured and certified by _____
(name and address of manufacturer)

2. Manufactured for _____
(name and address of purchaser)

3. Location of installation: _____
(name and address)

4. Unit identification: Boiler type C3 100020821 N.A. CRKXL300600 125 2014
(complete boiler: superheater, waterwall, economiser, etc.) (manufacturer's serial no.) (CRN) (drawing no.) (National Bd. no.) (year built)

5. The chemical and physical properties of all parts meet the requirements of material specifications of the ASME BOILER AND PRESSURE VESSEL CODE. The design, construction, and workmanship conform to ASME Code, Section IV, 2010 2011 N.A.
(year) (addenda (as applicable)(date)) (Code Case no.)

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

6. Shells or drums: 1 SA516 Gr.60 6mm 1264mm 1968mm N.A. N.A.
(no.) (material spec., gr.) (thickness) (inside diameter) (length (overall)) (inside diameter) (length (overall))

7. Joints: longitudinal welded 0.85 circumferential welded 1
(long. (seamless, welded)) (left. (compared to seamless)) (right (seamless, welded)) (no. of shell courses)

8. Tubesheet: SA240 316Ti 2/5mm Tube holes: 80 - 201,4 x 14,7mm / 3 - 170 x 3,4
(material spec., grade) (thickness) (number and diameter)

9. Tubes: No. see note straight Diameter: 200,4x14,4/166,3x3,4 Length: 1040/1683mm Gauge: 1,2/3,4mm
(material spec., grade) (straight or bent) (if various, give max. and min.) (for thickness)

10. Heads: SA516 Gr.60 10mm front - 13mm rear flat/flat N.A.
(material spec. no.) (thickness) (flat, dished, ellipsoidal) (radius of dish)

11. Furnace: SA240-316Ti 8mm 1 870x1910mm N.A. 1910 corrugated Seams welded
(material spec. gr.) (thickness) (no.) (size (O.D. or W x H)) (length (each section)) (total) (type (plain, corrugated, etc.)) (type (seamless, welded))

12. Staybolts: N.A. N.A. N.A. N.A. N.A. N.A. N.A. N.A.
(no.) (size (diameter)) (material spec., gr.) (size) (height) (net area) (pitch (horizontal and vertical)) (MAWP)

13. Stays or braces:

Location	Material Spec.	Type	Number and Size	Pitch	Total Net Area	Fig. HG-343 L/I	Dist. Tubes to Shell	MAWP
(a) F.H. above tubes	N.A.							
(b) R.H. above tubes	N.A.							
(c) F.H. below tubes	N.A.							
(d) R.H. below tubes	N.A.							
(e) Through stays	N.A.							

14. Other parts: 1. Lower rear tubesheet 2. furnace support pipe & plate 3. lower shell
(brief description, i.e. dome, boiler piping)

1. SA240 Gr.316Ti; th. 5mm; 0,55MPa - No.1

2. Welded Pipe SA516 Gr 60; O.D. 400 x 135mm; th 8mm; Plate SA516 Gr.60; th 13mm; 0,55MPa - No.1

3. SA516 Gr.60; O.D. 1269mm; th. 8mm; 0,55MPa - No.1
(material spec., grade, size, material thickness, MAWP)

15. Nozzles, inspection, and safety valve openings:

Purpose (inlet, outlet, drain, etc.)	No.	Diameter or Size	Type	How Attached	Material	Nominal Thickness	Reinforcement Material	Location
Handhole	N.A.				NA		NA	
Manhole	N.A.				NA		NA	
Supply-Cold return	2	141,3mm	Flanged	Welded	SA106Gr.B	12,7/6,55mm	SA516 Gr.60	N1,N3
Safety Valve	1	73mm	Threaded	Welded	SA106Gr.B	9,53mm	N.A.	N5
Medium temperature return	1	114,3mm	Flanged	Welded	SA106Gr.B	8,56mm	N.A.	N2
Inspection	2	60,3mm	Threaded	Welded	SA106Gr.B	8,74mm	N.A.	N4

FORM H-2 (Back)

16. Boiler supports 1 Base frame welded
(no) (type [saddles, legs, legs]) (attachment [bolted or welded])

17. MAWP 80psi Based on Code Para HG300 Heating surface 488.68 sqft Shop hydro test 120psi
(Code per and/or formula) (total) (complete boiler)

18. Maximum water temperature 210°F

19. Remarks

9. Tubes: SA 240-316TI / SA312-TP316L

15. Nozzle, inspection, and safety valve opening:

- N.1 Nozzle N6 - Blowdown O.D. 26.7 mm - th. 2.87 mm - threaded - welded - SA 106 Gr B
- N.1 Nozzle N7 - Condensate drain O.D. 21.34 mm - th. 1.65 mm - threaded - welded - SA 312 TP 316 L
- N.1 Nozzle N8 - Additional Blowdown O.D. 48.3 mm - th. 8.74 mm - threaded - welded - SA 106 Gr B

Minimum Relief valve capacity: 6.841.5 lb/hr

CERTIFICATE OF SHOP COMPLIANCE	
We certify that the statements made in this data report are correct and that all details of design, material, construction, and workmanship of this boiler conform to Section IV of the ASME BOILER AND PRESSURE VESSEL CODE.	
"H" Certificate of Authorization no. <u>43,535</u> expires <u>12/31</u> <u>2015</u>	
Date <u>12/03/2014</u> Signed <u>[Signature]</u> Name <u>ICI CALDAIE S.p.A.</u>	<small>(by representative) (manufacturer that constructed and certified boiler)</small>
CERTIFICATE OF SHOP INSPECTION	
Boiler constructed by <u>ICI CALDAIE S.p.A.</u> at <u>37059 Campagnola di Zevio, Zevio (VR) Italy</u>	
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 <u>OHIO</u> and employed by <u>HSB Global Standards</u>	
_____ have inspected parts of this boiler referred to as data items <u>N.A.</u> and have examined Manufacturers' Partial Data Reports for items <u>N.A.</u> and state that, to the best of my knowledge and belief, the manufacturer has constructed this boiler in accordance with the applicable sections of the ASME BOILER AND PRESSURE VESSEL CODE.	
By signing this certificate neither the inspector nor his employer makes any warranty, expressed or implied, concerning the boiler 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 <u>Dec. 3, 2014</u> Signed <u>[Signature]</u> Commissions <u>NB 13897-A-OH 1225</u>	<small>(Authorized Inspector) (National Bd. (incl. endorsements), state, prov., and no.)</small>
CERTIFICATE OF FIELD ASSEMBLY COMPLIANCE	
We certify that the field assembly construction of all parts of this boiler conforms with the requirements of Section IV of the ASME BOILER AND PRESSURE VESSEL CODE.	
"H" Certificate of Authorization no. _____ expires _____	
Date _____ Signed _____ Name _____	<small>(by representative) (assembler that certified and constructed field assembly)</small>
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 _____	
_____ have compared the statements in this Manufacturer's Data Report with the described boiler and state that the parts referred to as data items _____, not included in the certificate of shop inspection, have been inspected by me and that to the best of my knowledge and belief the manufacturer and/or the assembler has constructed and assembled this boiler in accordance with the applicable sections of the ASME BOILER AND PRESSURE VESSEL CODE. The described boiler was inspected and subjected to a hydrostatic test of _____.	
By signing this certificate neither the inspector nor his employer makes any warranty, expressed or implied, concerning the boiler 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 _____	<small>(Authorized Inspector) (National Bd. (incl. endorsements), state, prov., and no.)</small>



Inspection Opening





