

[Published in Part II, Section 3, Sub-section (i) of the Gazette of India dated 8th September, 2001]

Government of India
Ministry of Commerce and Industry
Department of Industrial Policy and Promotion
(Central Boilers Board)

New Delhi, the 28th August, 2001.

Notification

G.S.R 496.- Whereas certain draft regulations further to amend the Indian Boiler Regulations, 1950 were published, as required by sub-section (1) of section 31 of the Indian Boilers Act, 1923 (5 of 1923), at pages 1701 to 1708 in Part II, Section 3, Sub-section (i) of the Gazette of India, dated the 12th June, 2001 vide notification of the Government of India in the Ministry of Commerce and Industry (Department of Industrial Policy and Promotion) (Central Boilers Board) number G.S.R. 271, dated the 15th May, 2001 for inviting objections and suggestions from persons likely to be affected thereby till the expiry of forty-five days from the date on which copies of the Gazette containing the said notification were made available to the public;

And whereas the copies of the said Gazette were made available to the public on the 26th June, 2001;

And whereas no objections or suggestions have been received within the specified period;

Now, therefore, in exercise of the powers conferred by section 28 of the Indian Boilers Act, 1923, the Central Boilers Board hereby makes the following regulations further to amend the Indian Boiler Regulations, 1950, namely:-

1. (1) These regulations may be called the Indian Boiler (Second Amendment) Regulations, 2001.

(2) They shall come into force on the date of their publication in the Official Gazette.

2. In regulation 3 of the Indian Boiler Regulations, 1950 (hereinafter referred to as the said Regulations), in sub-regulation (2), in clause (ii), for the word "Board", the words "Chief Inspector" shall be substituted.

3. In the said regulations, in regulation 5A, for the words "by the Inspecting Authority; the registering authority", the words "registering authority or Chief Inspector of Boilers" shall be substituted.

4. In the said regulations, in regulation 151, for sub-regulation (c), the following sub-regulation shall be substituted, namely: -

"(c) Flash welding shall be undertaken on a welding machine of a type approved by the Inspecting Officer. The external fin caused by welding shall be removed subject to a maximum height of 5 per cent of the tube outside diameter. The internal fin shall also be removed subject to a maximum height of 20 per cent of the wall thickness of the tube."

5. In the said regulations, in regulation 270, in sub-regulation (a), in Eqn (72), for the connotation "E", the following shall be substituted, namely:-

"E = The efficiency of ligaments between the tube holes or other uncompensated openings in shell, or the weld factor of the longitudinal joints."

6. In the said regulations, in regulation 343, in sub-regulation (1), the following proviso shall be inserted, namely:-

"Provided that subject to satisfactory flattening test, pipes to IS : 1239 of 13 mm to 51 mm nominal bore for working pressure up to 10.5 kg/cm² at saturation temperature shall be allowed for use for the pipes."

7. In the said regulations, in regulation 562, after sub-regulation (3), the following sub-regulation shall be inserted at the end, namely:-

"(4) Notwithstanding anything contained in sub-regulations (1) and (2), post-weld heat treatment in weld joints of such equipment in carbon steel and low alloy steel may be exempted when heat treatment is not practical in some of such equipment, where inside is lined with special Stainless Steel which cannot be heated beyond 400°C (due to the associated problem of reduction of corrosion properties of such lining during heating to the temperature), post weld heat treatment may be avoided in the weld joints of such equipment in carbon steel and low alloy steel when all the following conditions are satisfied:-

(a) Built up overlay welding (buttering is performed on both the welding edge bevels of the parts of the closing joint to be welded together. The buttering can be of :

- (i) With Carbon Steel Electrode with low carbon (C) = 0.1 per cent max (Ex: E7018-1) in case of Carbon Steel parts.
- (ii) With Stainless Steel Electrode E-309 or with Inconel electrode in case of low alloy steel parts.
- (iii) With low alloy steel electrodes, having carbon (C)=4.12 per cent max (Ex:9018G) or with Inconel electrode in case of high strength low alloy steel parts having UTS greater than 56 kg/mm² such as WB36, SA533 Gr. B C 1.02:

(b) Buttering thickness shall be 15mm minimum on the side where chip back is required to be done before re-welding and 8mm minimum on the other side. Refer figure given below:-

- (c) Suitable pre-heat and other pass heating is applied during buttering;
- (d) Individual parts shall be post weld heat treated after buttering if required as per applicable regulations prior to welding the special stainless steel corrosion resistant liner plate or prior to applying final weld overlay of special corrosion resistant stainless steel lining;
- (e) The final layer on the internal liner side shall be compatible with liner material and final weld (carbon steel welding in carbon steel base metal, low alloy steel Inconel welding in case of high strength low alloy steel base metal and E309 Inconel welding in case of other Low alloy steel base metals) on the base metal side shall be compatible with base metal in respect of mechanical properties. The welding procedure shall be established taking care of adequate toughness and ductility and the procedure approved by IBR inspectors;
- (f) Charpy -V Notch impact test shall be carried out at 0°C for:
- (i) base metal and heat affected zone;
 - (ii) weld metal in case of Carbon Steel welding;
- (g) Non-destructive testing as below is recommended,-
- (i) Magnetic particle test of weld bevels prior to buttering.
 - (ii) Dye- Penetrant test of buttering layer,
 - (iii) Dye Penetrant test of rest of weld,
 - (iv) Dye Penetrant test of final weld on internal liner side,
 - (v) Ultrasonic test of final weld after hydro test of the equipment with the closing seam."

8. In the said regulations, in regulation 607, the following note shall be added at the end , namely:-

"Note.- However a welder qualified for a type and process of higher grade of steel can be allowed to weld the lower grade of steel."

[File No. 6(4)/96-Boilers]

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Note.- The principal regulations were published in the Gazette of India vide S.O. 600, dated the 15th September, 1950 and subsequently amended vide notifications –

- (i) G.S.R. 178 dated the 24th March 1990;
- (ii) G.S.R. 179 dated the 24th March 1990;

- (iii) G.S.R. 488 dated the 9th October, 1993;
- (iv) G.S.R. 516 dated the 23rd October, 1993;
- (v) G.S.R. 634 dated the 25th December, 1993;
- (vi) G.S.R. 107 dated the 26th February, 1994;
Errata G.S.R. 223 dated the 14th May, 1994;
- (vii) G.S.R. 250 dated the 4th June, 1994;
- (viii) G.S.R. 402 dated the 13th August, 1994;
- (ix) G.S.R. 427 dated the 20th August, 1994;
- (x) G.S.R. 562 dated the 12th November, 1994;
- (xi) G.S.R. 607 dated the 10th December, 1994;
- (xii) G.S.R. 83 dated the 25th February, 1995;
- (xiii) G.S.R. 93 dated the 4th March, 1995;
- (xiv) G.S.R. 488 dated the 9th November, 1996;
- (xv) G.S.R. 582 dated the 28th December, 1996;
- (xvi) G.S.R. 59 dated the 25th January, 1997;
- (xvii) G.S.R. 117 dated the 1st March, 1997;
- (xviii) G.S.R. 172 dated the 29th March, 1997.
- (xix) G.S.R. 221 dated the 21st November, 1998.
- (xx) G.S.R. 131 dated 1st May, 1999.
Errata G.S.R. 201 dated 7th April, 2001.
- (xxi) G.S.R. 139 dated 8th May, 1999.
- (xxii) G.S.R. 237 dated 31st July, 1999.
- (xxiii) G.S.R. 345 dated 23rd October, 1999.
- (xxiv) G.S.R. 397 dated 14th October, 2000.
- (xxv) G.S.R. 219 dated 7th April, 2001.

To

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