

2826
Public Works, (1897) Department.

G.O., No. 1018W

DATED 10-4-97

with

19/4/97

[Despatch Abstract.]

Madras Steam Boilers' and Prime Movers' Act
III of 1893. Certain addition to rule 21 of the
proposed by the Sanitary Engineer to
Govt., approved and a notification to that
effect ordered to be published in the Fort
St George Gazette.

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Indexed

not

FURTHER PAPERS.

Government { 1897 } of Madras.
PUBLIC WORKS.

} 1897.

Spare copies

G.O., No. 1018 W., 10th April 1897.

APRIL.

Madras Steam Boilers and Prime Movers Act (III of 1893)

Certain addition to rule 21 of the rules under the — proposed by the Sanitary Engineer to Government, approved and a notification to that effect ordered to be published in the *Fort St. George Gazette*.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

General.
Establishment.

READ—the following papers :—

From J. A. JONES, Esq., M.I.C.E., F.R.S.E., Sanitary Engineer to Government and Inspector of Steam-boilers and Prime-movers (*ex-officio*), to the Secretary to Government, Public Works Department, dated Fort St. George, 16th March 1897, No. 537.

I have the honour to forward copy of a letter from the Inspector of Steam-boilers and Prime-movers for consideration. There is nothing in the rules to allow of the grant of a higher pressure than 128·20 lb. as shown in the letter. The rules do not allow for any furnace constructed with Adamson's rings, nor do they give power to the Sanitary Engineer to deal with such a case as this. It would be unfair to limit the pressure to 128 lb., and the Boiler Inspector considers it safe to issue the license for 175 lb.

2. It is suggested that a footnote be added to the second formula in rule 21 to the following effect :—

“When furnaces are fitted with two Adamson rings, the following formula may be substituted—

$$\frac{11,400 \times T}{D} = \text{Working pressure in lb. per square inch ;}$$

Where T is the thickness of the plate in inches ;

D outside diameter of furnace in inches ;

and when furnaces are fitted with a series of Adamson rings not more than 23" apart, the formula to be used will be—

$$\frac{1,000 \times (T - 2)}{D} = \text{Working pressure in lb. on the square inch ;}$$

Where T = thickness in sixteenths of an inch ;

D = outside diameter of furnace in inches.”

ENCLOSURE.

From H. T. WALTERS, Esq., Inspector of Steam-boilers and Prime-movers, Madras, to the Sanitary Engineer to Government, dated 15th March 1897, No. 72.

I have the honour to forward a sketch of a boiler belonging to Messrs. Binny & Co., Perambur, now working at the Buckingham Mill.

2. The boiler was constructed by Messrs. D. Adamson of Dukinfield, England, and passed at a safe working pressure of 175 lb. per square inch by Mr. W. T. Parrack, Inspecting Engineer of London, but according to rules laid down (*vide Fort St. George Gazette*, dated 26th January 1897) the boiler must not work beyond 128·20 lb. (*vide* rule 21). The furnace is 39" in diameter, longitudinal joints are welded and is made in eight segments, each fitted with Adamson flanged rings.

3. I request you will be good enough to give me permission to grant the necessary license for a maximum working pressure of 175 lb. per square inch, as boilers of this description, in my opinion, are capable of the load imposed.

4. I may add that my calculations were taken from Hutton's *Engineer's Hand Book*, page 167, formula 5, which reads thus: If the furnace is fitted with two Adamson's rings, then the pressure may be calculated from

• Note.—This should be 11,400.
(Signed) J. A. JONES.

$$\frac{11,000 \times \cdot 625}{39} = 128 \text{ lb. per square inch. Fort}$$

St. George Gazette, dated 26th January 1897, page 5, rule 21, is as follows :—

Circular furnace with longitudinal joints welded $\frac{90,000 \times \cdot 625 \times \cdot 625}{(27 - 1\frac{1}{4} + 1) \times 39} = \text{working pressure of}$
288 lb. per square inch, provided it does not exceed that found by the following formula
 $\frac{8,000 \times \cdot 625}{39} = 128 \cdot 20 \text{ lb.}$, which is much below the pressure given by the Inspecting Engineer of London.

ORDER—No. 1018 W., dated 10th April 1897.

The proposal of the Sanitary Engineer is approved.

The following notification will be published in the *Fort St. George Gazette* :—

NOTIFICATION.

In exercise of the power conferred by section 23 of Act III of 1893, the Madras Steam Boilers and Prime Movers Act, His Excellency the Governor in Council proposes to make the following rule under the said Act. It will appear as a footnote to the second formula in rule 21 of the rules published in the *Fort St. George Gazette* of the 26th January 1897 :—

“When furnaces are fitted with two Adamson rings, the following formula may be substituted—

$$\frac{11,400 \times T}{D} = \text{Working pressure in lb. per square inch ;}$$

Where T is the thickness of the plate in inches ;

D outside diameter of furnace in inches ;

and when furnaces are fitted with a series of Adamson rings not more than 23" apart, the formula to be used will be—

$$\frac{1,000 \times (T - 2)}{D} = \text{Working pressure in lb. on the square inch ;}$$

Where T = thickness in sixteenths of an inch ;

D = outside diameter of furnace in inches.”

The Government will consider any suggestions made in respect of this rule, which may be received on or before the 15th May 1897.

(True Extract.)

Under Secretary to Government.

To the Superintendent, Government Press.
Sanitary Engineer to Government.
Local and Municipal Department.

Exd. C. Rajagopal Chetty.

Crow.

The file regarding the rules re in connection with the steam boilers act 1893 is a very bulky one and contains many papers that have no bearing on the subject of the present reference. It is thought the papers now put up will be sufficient to deal with the case.

J.F.
27/4/97.

A copy of the act will be found at the bottom of the file 28.

Chs 2826

10/8/97

For orders whether the Sanitary Engineer's proposed addition to the rule may be sanctioned.

R.S.
5/4/97

The addition may be sanctioned

5/4/97

10/8/97

Public Works (1897) Department.

CURRENT No. 2826

Order

From The Sanitary Engineer to Govt. and Inspector of Steam boilers and prime movers (En officio)

No. 537.

Dated 16 March 1897

Received 18 March 97

Enclosures Two (x1 sketch)

Spare copies —

SUBJECT.

Madras Steam boilers & Prime Movers act 1893

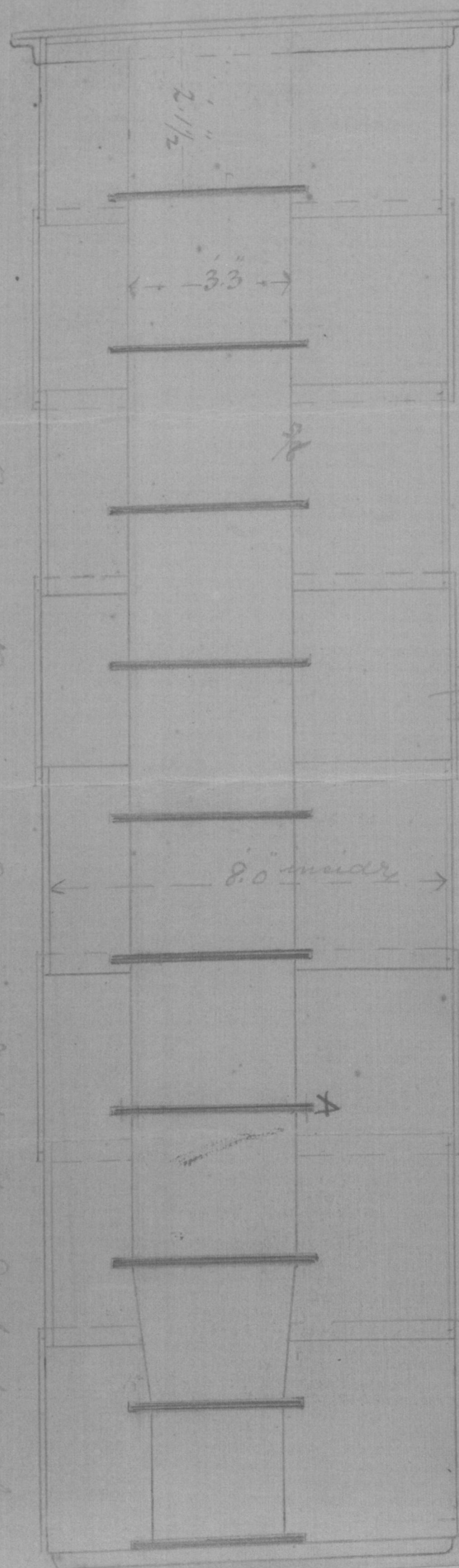
Submitting for orders letter from the Boiler Inspector requesting permission to grant license for maximum working pressure of 175 lbs for a boiler as the Boulton & Watt Mills suggesting that certain additions to the rules under the —

BACK PAPERS.

No.	Date.
215 W 24	23-1-97 ✓
174	25-1-95 Judl. ✓

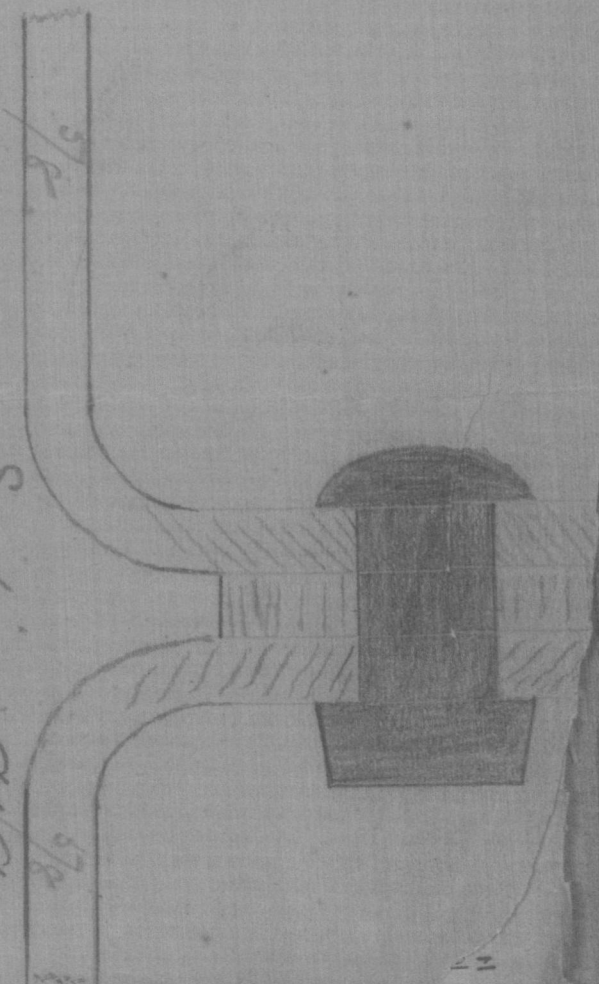
FURTHER PAPERS.

No.	Date.



Lancashire
boiler belonging to
Buckingham Mill
Company, Perambur

angle iron 5 1/2 x 5 1/2 x 1/4
13 1/4
30.1



Boiler belonging to
Buckingham Mill
Company, Perambur
13 1/4
30.1

128 lb. per sq. ft. Fort St. George Gazette dated 26th. January 1897

page 5 rule 21 is as follows:-

FURTHER PAPERS.

[A.-500-8-2-97.]

No. 72

ENCLOSURE.

OFFICE OF THE INSPECTOR OF
STEAM-BOILERS AND PRIME-MOVERS,

Madras, 15th March 1897.

From

H. T. WALTERS, Esq.,

INSPECTOR OF STEAM-BOILERS

AND PRIME-MOVERS,

Madras,

To

The Sanitary Engineer to Government,

Madras.

SIR,

I have the honor to forward a sketch of a boiler belonging to Messrs. Binny & Co., Perambore, now working at the Buckingham Mill.

2. The boiler was constructed by Messrs. D. Adamson of Dukinfield, England, and passed at a safe working pressure of 175 lb. per $\square$ by Mr. W. T. Parrack, Inspecting Engineer of London, but according to rules laid down, vide Port St. George Gazette dated 26th. January 1897 the boiler must not work beyond 138.20 lb. vide rule 21. The furnace is 39" in diameter longitudinal joints are welded & is made in 8 segments each fitted with Adamson flanged rings.

3. I request you will be good enough to give me permission to grant the necessary license for a maximum working pressure of 175 lb. per $\square$ as boilers of this description in my opinion are capable of the load imposed.

4. I may add that my calculations were taken from Hutton's Engineer's Hand Book, page 167, formula 5 which reads thus-if the furnace is fitted with two Adamson's rings then the pressure may be calculated from $\frac{11000 \times 39}{39} = 138$ lb. per $\square$ Port St. George Gazette dated 26th. January 1897 page 5 rule 21 is as follows:-

X
Note
This should be
11400.
(Sd) J. A. Jones.

10 H. T. Walters
13 June 97

845.1
25th/57

Circular furnace with longitudinal joints welded $\frac{90000 \times .625 \times .625}{(2' - 1\frac{1}{2}" + 1) \times 39}$ working pressure of 288 lb. per $\square$ provided it does not exceed that found by the following formula $\frac{8000 \times .625}{39} = 128.20$ lb. which is much below the pressure given by the Inspecting Engineer of London.

I have the honor to be,

Sir,

Your most obedient servant,

(Sd) H.T. Walters.

Inspector of Steam-boilers & Prime-movers.

(True copy)

H.T. Walters

Assistant Sanitary Engineer to Government

Government of Madras.
Office of Sanitary Engineer,
Fort St. George 16 March 1897.

No. 537

From

J.A. Jones, Esqr., Mem. Inst. C.E., F.R.S.E.,
Sanitary Engineer to Government and
Inspector of Steam-boilers & Prime-movers
(E.O)

To

The Secretary to Government,
Public Works Department.

Sir,

I have the honor to forward copy of a letter from the Inspector of Steam-boilers & Prime-movers for consideration. There is nothing in the rules to allow of the grant of a higher pressure than 128.20 lbs. as shown in the letter. The rules do not allow for any furnace constructed with Adamson's Rings, nor do they give power to the Sanitary Engineer to deal with such a case as this. It would be unfair to limit the pressure to 128 lbs. and the Boiler Inspector considers it safe to issue the license for 175 lbs.

2. It is suggested that a foot-note be added to the second formula in rule 21 to the following effect.

"When furnaces are fitted with two Adamson rings the following formula may be substituted

$\frac{11400 \times T}{D}$ = Working pressure in lbs. per square inch.

Where T is the thickness of the plate in inches.

D outside diameter of furnace in inches.

and when furnaces are fitted with a series of Adamson rings not more than 25" apart the formula to be used will be

$\frac{1000 \times (T - 2)}{D}$ = Working pressure in lbs. on the square inch.

Where T = thickness in sixteenths of an inch.

D = outside diameter of furnace in inches."

I have the honor to be,

Sir,

Your most obedient servant,

Wm. J. May

Assistant Sanitary Engineer to Government

For Sanitary Engineer to Government

and Inspector of Steam-boilers & Prime-movers (E.O).

Public Works DEPARTMENT.

Inspection of Boilers. No 10 P.W. of 10-4-97
PROCEEDINGS OF THE MADRAS GOVERNMENT.

Read the following

From the Sanitary Engineer to Govt. and Inspector of Steam
Boilers and Prime movers. No 537, dt 16-March 1897.

The proposal of the Sanitary
Engineer is approved.

The following notification
will be published in the Fort
St George Gazette.

Notification

In exercise of the power
conferred by section 23 of
Act III of 1893, the Madras
Steam boilers and Prime
movers act, His Excellency
the Governor in Council
proposes to make the following
rule under the said act.
It will appear as a footnote
to the second formula in
Rule 21 of the Rules published
in the Fort St George Gazette
of the 26th January 1897.

"When furnaces are fitted with two Adams rings the following formula may be substituted:-

$$\frac{11,400 \times T}{D} = \text{Working pressure in lbs. per square inch.}$$

Where T is the thickness of the plate in inches

D outside diameter of furnace in inches

and when furnaces are fitted with a series of Adams rings not more than 23" apart the formula to be used will be

$$\frac{1000 \times (T-2)}{D} = \text{Working pressure in lbs. on the square inch.}$$

Where T = thickness in sixteenths of an inch

D = outside diameter of furnace in inches.

The Govt. will consider any suggestions which may be made in respect of this rule which may be received on or before the 15 May 1897. ~~By agreement~~ interested.

JS

1/4/97

Recd
11/5/97
The Supdt. Govt. Press
" Sanitary Engineer to Govt.
" L & M. Dept.
(To cancel after issue.)