

Public Works (1897) Department.

G.O., No. 14445

DATED 20 mar 1897

[Despatch Abstract.]

Indian Steam Boilers and Prime Movers Act 1873

Approving the proposal of the Sanitary Engineer  
to make a rule under the — with respect to the  
tenacity of steel for boilers ~~and~~ notifying the  
<sup>rule</sup> ~~proposal~~ in the Fort St. George Gazette and stating  
that the Government will consider any suggestion  
made in respect of the rule which may  
be received on or before the 1<sup>st</sup> July 1897.

BACK PAPERS.

FURTHER PAPERS.

| G.O. | No. | Department. | Date. | G.O. | No. | Department. | Date. |
|------|-----|-------------|-------|------|-----|-------------|-------|
|      |     |             |       |      |     |             |       |

GENERAL.  
ESTABLISHMENT.

Government { 1897 } of Madras.  
PUBLIC WORKS.

*Recd.*

*Regd.*

1897.

*Enclosures*

*Spare copies*

G.O., No. 1444 W., 28th May 1897.

**MAY.**

**Madras Steam Boilers and Prime Movers Act, 1893**

Approving the proposal of the Sanitary Engineer to make a rule under the — with respect to the tenacity of steel for boilers, notifying the rule in the *Port St. George Gazette*; and stating that the Government will consider any suggestions made in respect of the rule which may be received on or before the 1st July 1897.

## GOVERNMENT OF MADRAS.

## PUBLIC WORKS DEPARTMENT.

General.  
Establishment.

READ—the following paper :—

From J. A. JONES, Esq., MEM. INST. C.E., F.R.S.E., Sanitary Engineer to Government, to the Secretary to Government, Public Works Department, dated 29th April 1897, No. 788.

In forwarding a copy of the Boiler Inspector's No. 120 of 27th April 1897, I have the honour to point out that the only reference made to steel boilers in the rules framed under the Boiler Act III of 1893 is in paragraph 22, but the constants there referred to are for flat surfaces only.

2. Paragraph 19 of the rules refers to iron boilers, and it would be desirable that a similar rule be framed in respect to steel boilers. The tensile strength of iron is to be taken as 47,000 lb. per square inch with the grain and 40,000 lb. across the grain or 21 and 18 tons per square inch, respectively.

3. Steel under Lloyd's rules is taken as between 26 and 30 tons. The Boiler Inspector proposes to allow 28 tons (62,720 lb.). I think this is too high and it would be better to allow the minimum only, viz., 26 tons or 58,240 lb. per square inch. To paragraph 22 might be added a similar rule to paragraph 19 only substituting the figures 58,240 for the figures 47,000 and omitting the words "with the grain and 40,000 lb. across the grain." Lloyds do not seem to make any difference in this respect in regard to steel. The rule to conclude thus, "when the above conditions are not complied with, the additions in the scale under rule 19 must be added to the factor 5 according to the circumstances of each case."

## ENCLOSURE.

From H. T. WALTERS, Esq., Inspector of Steam Boilers and Prime Movers, Madras, to the Sanitary Engineer to Government, dated 27th April 1897, No. 120.

I have the honour to state that there are more steel boilers in Madras than iron and the tenacity of steel for boiler shells is not mentioned in the rules for inspection of steam-boilers.

I request you will be good enough to let me know if I may use 62,720 lb. per square inch as the tenacity of steel.

ORDER—No. 1444 W., dated 28th May 1897.

The proposal of the Sanitary Engineer is approved.

2. 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 an addition to rule 22 of the rules published in the *Fort St. George Gazette* of the 26th January 1897.

"When cylindrical boilers are made of the best material with all the rivet holes drilled in place and all the seams fitted with double butt straps each of at least five-eighths the thickness of the plates they cover, and all the seams at least double riveted with rivets having an allowance of not more than 75 per cent. over the single shear and provided that the boilers have been open to inspection during the whole period of construction, then 5 may be used as the factor of safety. The tensile strength of the steel is to be taken as equal to 58,240 lb. per square inch. When the above conditions are not complied with, the additions in the scale under rule 19 must be added to the factor 5 according to the circumstances of each case."

The Government will consider any suggestions made in respect of this rule which may be received on or before the 1st July 1897.

(True Extract.)

Under Secretary to Government.

To the Superintendent, Government Press.

Sanitary Engineer to Government.

Local and Municipal Department.

Ed. Shaik Karim.

Steam Boilers & Prime Movers Act III of 1893  
PUBLIC WORKS DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Read the following

Letter from the Sanitary Engineer No 788 dated 29<sup>th</sup> April 97

110: 1444 6328.5.97

30

- The proposal of the Sanitary Engineer is approved.
2. 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 an addition to rule 22 of the rules published in the Fort St. George Gazette of the 26<sup>th</sup> January 1897:—

"When cylindrical boilers are

(40-4,000-2-11-95.)

H.E. 21-5-97 R 25-5-97

S.P.

are made of the best material with all the rivet holes drilled in place and all the seams fitted with double butt straps each of at least five-eighths the thickness of the plates they cover, and all the seams at least double riveted with rivets having an allowance of not more than 75 per cent. over the single shear and provided that the boilers have been open to inspection during the whole period of construction, then 5 may be used as the factor of safety. The tensile strength of the steel is to be taken as equal to 58,240 lb. per square inch. When the above conditions are not complied with, <sup>in</sup> the additions to the scale under rule 19 must be added to the factor 5 according to the circumstances of each case."

The Government will consider  
any

S.P.

any suggestions made in respect of this rule which may be received on or before the 1st July 1897.

21/5/97

R.W.

To  
The Supt., Govt. Press  
" Sanitary Engineer, Govt.  
" Local & Municipal Dept.

14/11/97

S.P.

*Public Works*  
**Local & Munl. (1897) Department.**

**CURRENT No. 5227**

**From**

*The Sanitary Engineer  
to Govt.*

**No. 788**

**Order.**

**Dated 29. 4. 97**

**Received 30. 4. 97**

**Registered 27. 5. 97**

**Enclosures one**

**Spare copies**

*Handwritten for papers*  
**SUBJECT.**

*Suggesting certain additions  
to the rules framed under  
the Steam boiler & Prime-  
movers Act III of 1893.*

*any suggestion made in reply  
of the rule which may be  
Department (1897) Local & Munl.*

**CURRENT No.**

**From**

*The Sanitary Engineer  
to Govt.*

**Order.**

**No. 788**

**Dated 29. 4. 97**

**Received**

**Registered**

**Enclosures one**

**Spare copies**

**SUBJECT**

*Suggesting certain additions  
to the rules framed under  
the Steam boiler & Prime-  
movers Act III of 1893.*

# BACK PAPERS.

| G.O. | No. | Department. | Date. |
|------|-----|-------------|-------|
|      |     |             |       |

# FURTHER PAPERS.

| G.O. | No. | Department. | Date. |
|------|-----|-------------|-------|
|      |     |             |       |

No. 120

From

H.T. Walters, Esq.,

Inspector of Steam-boilers

To

and Prime-movers , Madras.

The Sanitary Engineer to Government,

Fort St. George.

Sir,

I have the honor to state that there are more steel boilers in Madras than iron and the tenacity of steel for boiler shells is not mentioned in the rules for Inspection of Steam-boilers.

I request you will be good enough to let me know if I may use 62720 lb.per square inch as the tenacity of steel.

I have the honor to be,

sir,

Your most obedient servant,

(sd) H.T.Walters

Inspector of Steam-boilers&Prime-movers

( True copy )



Sanitary Engineer to Government.

No. 788

GOVERNMENT OF MADRAS.

OFFICE OF SANITARY ENGINEER,

Fort St. George, 29<sup>th</sup> April 1897.

10P.

From

J. A. JONES, Esq., MEM. INST. C.E., F.R.S.E.,

SANITARY ENGINEER TO GOVERNMENT,

To

The Secretary to Government,

Public Works Department.

SIR,

In forwarding a copy of the Boiler Inspector's No. 120 of 27th. April 1897, I have the honor to point out that the only reference made to steel boilers in the rules framed under the Boiler Act III. of 1893 is in para 22 but the constants there referred <sup>to</sup> are for flat surfaces only.

2. Para 19 of the rules refers to iron boilers and it would be desirable that a similar rule be framed in respect to steel boilers. The tensile strength of iron is to be taken as 47,000 lbs. per square inch with the grain and <sup>lbs</sup> 40,000 across the grain or 21 and 18 tons per square inch respectively.

3. Steel under Lloyd's rules is taken as between 26 and 30 tons. The Boiler Inspector proposes to allow 28 tons ( <sup>lbs</sup> 62,720 ) . I think this is too high and it would be better to allow the minimum only, viz, 26 tons or 58,240 lbs per square inch. To para 22 might be added a similar rule to para 19 only substituting the figures 58,240 for the figures 47,000 and omitting the words " with the grain and 40,000 lbs across the grain ". Lloyds do not seem to make any difference in this respect in regard to steel. The rule to conclude thus, " when the above conditions are not complied with, the additions

P.W. E.I.  
5227/97

tions in the scale under rule 19 must be added to the factor  
5 according to the circumstances of each case."

I have the honor to be,

Sir,

Your Most Obedient servant,

A handwritten signature in dark ink, appearing to be 'H. M. J.' with a long, sweeping underline.

Sanitary Engineer to Govt.