

BOARD OF GOVERNORS
OF THE
FEDERAL RESERVE SYSTEM
WASHINGTON

S-380

ADDRESS OFFICIAL CORRESPONDENCE
TO THE BOARD



October 22, 1941

Dear Sir:

Enclosed is a copy of a letter addressed to a Federal Reserve Bank relating to the methods of determining the actual net output of household furnaces and heating units for furnaces as required by the Board's Ruling W-51 under Regulation W together with a copy of a letter to the Stoker Manufacturers Association as to the classification of coal stokers.

Because of the technical nature of the subject, the Board does not wish to give general circulation to this material, but it is believed that it will prove useful to your staff in applying the ruling to special cases that are presented to your Bank.

Very truly yours,

A handwritten signature in dark ink, appearing to read "L. P. Bethea", is written over a horizontal line.

L. P. Bethea,
Assistant Secretary.

Enclosure

TO THE PRESIDENTS OF ALL FEDERAL RESERVE BANKS

S-380-a

October 16, 1941

Mr. _____,
Federal Reserve Bank of _____,
_____, _____.

Dear Mr. _____:

This is in reference to your letter of September 23, 1941, relating to the methods of determining the actual net output of household furnaces and heating units for furnaces under the Board's Ruling W-51.

Enclosed is a copy of a letter sent to the Stoker Manufacturers Association accompanied by a memorandum indicating the way in which Ruling W-51 should be applied in the case of the stokers manufactured by the members of the association. This memorandum outlines principles which have general application in fields other than coal stokers and it is believed that you will be able to answer most inquiries by reference to these principles.

The Board prefers not to issue a ruling which would say that the net output for cast iron boilers should be the rating determined in accordance with the Institute of Boiler and Radiator Manufacturers' code, but it is believed that it will be clear from the above mentioned memorandum that the I.B.R. code employs the correct method. If this information is given to the Institute it should be able to notify the manufacturers and dealers accordingly. This will not preclude manufacturers who are not members of the Institute from using ratings that are not identified as I.B.R. ratings, provided they are established in accordance with the prescribed method.

No special inquiries have been presented to the Board with reference to steel boilers or oil burners. If any questions with regard to these articles are presented and cannot be answered by reference to the principles previously referred to, the Board would appreciate having the matter brought to its attention.

Very truly yours,

(Signed) L. P. Bethea

L. P. Bethea,
Assistant Secretary.

Enclosure

S-380-a

October 13, 1941

Stoker Manufacturers Association,
307 North Michigan Avenue,
Chicago, Illinois.

Attention: Mr. Marc C. Bluth, Secretary
Mr. E. C. Webb, Chairman
Engineering and Research Committee

Gentlemen:

This is in answer to your letter of September 20 which relates to the method that may be used to determine, for purposes of the Board's Regulation W, whether a stoker of a given description is or is not within the meaning of Item 1, Group D, as set forth in the Supplement to the regulation. Your letter refers, by implication, to the Board's Ruling W-51 which prescribes a certain standard involving a heat generating source designed for actual net output of 240,000 B.t.u. per hour or less.

Enclosed is a memorandum written by a member of the Board's staff which indicates the way in which Ruling W-51 should be applied in the case of the stokers manufactured by the members of your association.

The Board suggests that your association assist the manufacturers in making the necessary ratings, which can then be made available to dealers and sales finance companies. Subsequently, the identification of the model will be sufficient to enable anyone to classify the transaction.

Very truly yours,

(Signed) L. P. Bethea

L. P. Bethea,
Assistant Secretary.

Enclosure

CLASSIFICATION OF STOKERS UNDER REGULATION W

In its letter of September 20, 1941, the Stoker Manufacturers Association has made certain suggestions with reference to the classification, for purposes of Regulation W, of stokers manufactured by its members. This requires an application of Ruling W-51 which states that the classification "household furnaces and heating units for furnaces (including oil burners, gas conversion burners, and stokers)" includes heat generating sources such as furnaces and boilers and appurtenances which form a part of such sources, individually or collectively installed, when such sources or appurtenances are designed for actual net output of 240,000 B.t.u. per hour or less.

Since furnaces, boilers, and separate heating units are to be rated similarly, and since a heating unit cannot be used except in a furnace or boiler, the basic concept is a furnace or boiler of specified capacity. The capacity to be measured is the net output, which is the gross output less allowance for piping and pick-up. This, for example, in the case of the boiler, is interpreted as the installed radiator load where average or normal installation conditions exist. Then the rule is applied to heating units like stokers by determining the appropriate stoker for the boiler of the stated capacity. This means that the maximum size of stoker covered by the regulation is one which is suitable for a boiler designed for a net output of 240,000 B.t.u. per hour.

Coal stokers are customarily rated according to the number of pounds of coal per hour they are designed to deliver to the fire box. The classification, therefore, depends upon selection of a stoker delivering the appropriate number of pounds of coal for a boiler such as the one described in the previous paragraph. This means that it is first necessary to take the B.t.u. value of the pounds of coal delivered by a given stoker and convert that value into the equivalent net output. This must take into account the operating efficiency of the stoker as well as the piping and pick-up factor of the boiler.

The Board desires to have the regulation apply uniformly, so that credit sales of a particular model of stoker either will or will not be subject to the regulation, no matter what the circumstances of an individual installation. This means that a particular figure must be selected for the B.t.u. value of the coal, for the operating efficiency of the stoker, and for the piping and pick-up factor. The B.t.u. value of the coal should be an average, and the operating efficiency and piping and pick-up allowances should conform with generally accepted standards for cases in which average or normal installation conditions exist.

The following is the application of the rule: Coal of 12,000 B.t.u. value is taken as average and therefore as the basis for the formula. Using such coal, a 45 pound stoker would deliver coal having 540,000 B.t.u. per hour. If the operating efficiency is 65 per cent (which the Stoker Manufacturers Association has adopted as average) the gross output would be 351,000 B.t.u. per hour. If then the piping and pick-up factor of 1.466 is utilized, the net output is 239,000+ B.t.u. per hour, and the stoker is subject to the regulation.