Alberta Municipal Affairs

ABSA
the pressure equipment safety authority

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Interpretation
Power Engineers Regulation
Sections 1(k) and 29(1)(a)

Unfired Steam Boiler Rating

Introduction

In this Information Bulletin “unfired steam boiler” means a heat exchanger in which steam is generated under pressure by the application of a liquid or gaseous heat source that is not “products of combustion”.

Section 29 of the *Power Engineers Regulation* establishes methods that may be used to determine boiler rating for the purpose of determining certificate of competency requirements for persons supervising the operation. The most common method applicable to all types of fired boilers is 29(1)(a) which calculates the boiler rating at 10 kw per square metre of heating surface.

The definition of “heating surface” provided in Section 1(k) of the *Power Engineers Regulation* references “products of combustion” as the heat source.

Since the definition of heating surface references “products of combustion” as the sole type of heat source it may not be clear that the heating surface of an unfired boiler can be used to determine its rating in accordance with Section 29(1)(a).

This Interpretation clarifies that the heating surface of an unfired steam boiler may be used to determine its boiler rating with respect to the application of the *Power Engineers Regulation.*

Interpretation

Power Engineers Regulation

Definitions

1 (k) "heating surface" means any part of the surface of a boiler or thermal liquid heating system that is in contact with fluid under pressure on one side and the products of combustion on the other side;

Boiler rating

29(1) *If calculations are made with respect to the application of the Act or this Regulation, a boiler rating must be determined on the basis that*

(a) one square metre of heating surface equals 10 kW,
(b) if electric power is used as the heat source, the boiler rating is the maximum kilowatt capacity of the heating element, or
(c) if neither clause (a) nor (b) is applicable, an hourly boiler output of 36 megajoules is equivalent to 10 kW.

When calculations are made in accordance with Section 29(1) to determine the rating of an unfired steam boiler, the "heating surface" used in the calculation means any part of the surface of the boiler that is in contact with steam or water under pressure on one side and a liquid or gaseous heat source other than the products of combustion on the other side.

<*original signed by*>

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