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Water conditioning for boiler
feed water and boiler water



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Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of International Trade and Industry through deliberations at the Japanese Industrial Standards Committee in accordance with the Industrial Standardization Law. Consequently **JIS B 8223 : 1989** is replaced with **JIS B 8223 : 1999**.

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Water conditioning for boiler feed water and boiler water

1 Scope This Japanese Industrial Standard specifies the water conditioning for feed water and boiler water of land steam boiler and marine steam boiler.

2 Normative references The following standards contain provisions which, through reference in this Standard, constitute provisions of this Standard. The most recent editions of the standards indicated below shall be applied.

JIS B 0126 *Glossary of terms for thermal power plants—Boilers and auxiliary equipment*

JIS B 8224 *Boiler feed water and boiler water—Testing methods*

JIS K 0556 *Testing methods for determination of anions in highly purified water*

3 Definitions For the main terms used in this Standard the definitions in **JIS B 0126** and **JIS B 8224** apply, and the rest of the terms are as follows.

- a) **feed water** The mixed water with condensate⁽¹⁾ and make-up water⁽²⁾ supplied to the boiler entrance (economizer entrance if an economizer is provided) by a feed water pump. However, when special components such as dissolved oxygen of feed water is made the object, the feed water is the water sampled from the sampling position of the feed water specified in 3.2 of **JIS B 8224**.

Notes (1) Condensate refers to water condensed in and after the portion of the system where steam is used, and reused for feed water.

- (2) Make-up water refers to water mixed with condensate for water feeding. When no condensate is available at all, the total quantity of feed water corresponds to make-up water, and the quantity of make-up water when almost all the amount of steam generated is recovered as condensate corresponds to the shortage of the feed water amount (for example, the steam use, the blow, and the leakage).

- b) **boiler water** The water condensed in the circulating boiler. Generally, this water is represented by water in the drum.
- c) **circulating boiler** The generic name of natural circulating boiler and forced circulating boiler. The circulating boilers include cylindrical boilers, special circulating boilers and water tube boilers.
- d) **natural circulating boiler** The natural circulating boiler refers to a boiler which is designed to circulate naturally boiler water by the difference of density of saturated water including steam bubbles.
- e) **forced circulating boiler** The forced circulating boiler refers to a boiler which is designed to circulate boiler water forcedly by using a circulating pump.
- f) **cylindrical boiler** The cylindrical boiler refers to a boiler of which the shell is the main body and in its inside, a flue tube, fire box, smoke tube, etc. are provided. The cylindrical boilers include vertical boilers, flue tube boilers, smoke tube boilers and flue tube smoke tube boilers.