

KUROSE CHEMICAL EQUIPMENT CO.,LTD.

Waste water treatment sludge heat exchanger

- **Heat exchanger with a special structure of a single watercourse with no obstacles**

Features

• **Compact** The Kurose KO heat exchanger has no wasted space between watercourses, in contrast to double-pipe heat exchangers. Thus, the volume of the Kurose KO equipment is significantly less than that of double-pipe heat exchangers (less than one tenth).

• **Easy maintenance** All the watercourses of the Kurose KO heat exchanger can be inspected simply by removing a flat cover; in contrast, many flanges need to be disassembled to inspect watercourses of double-pipe heat exchangers.

Overview (Technical principles, actions, etc.)

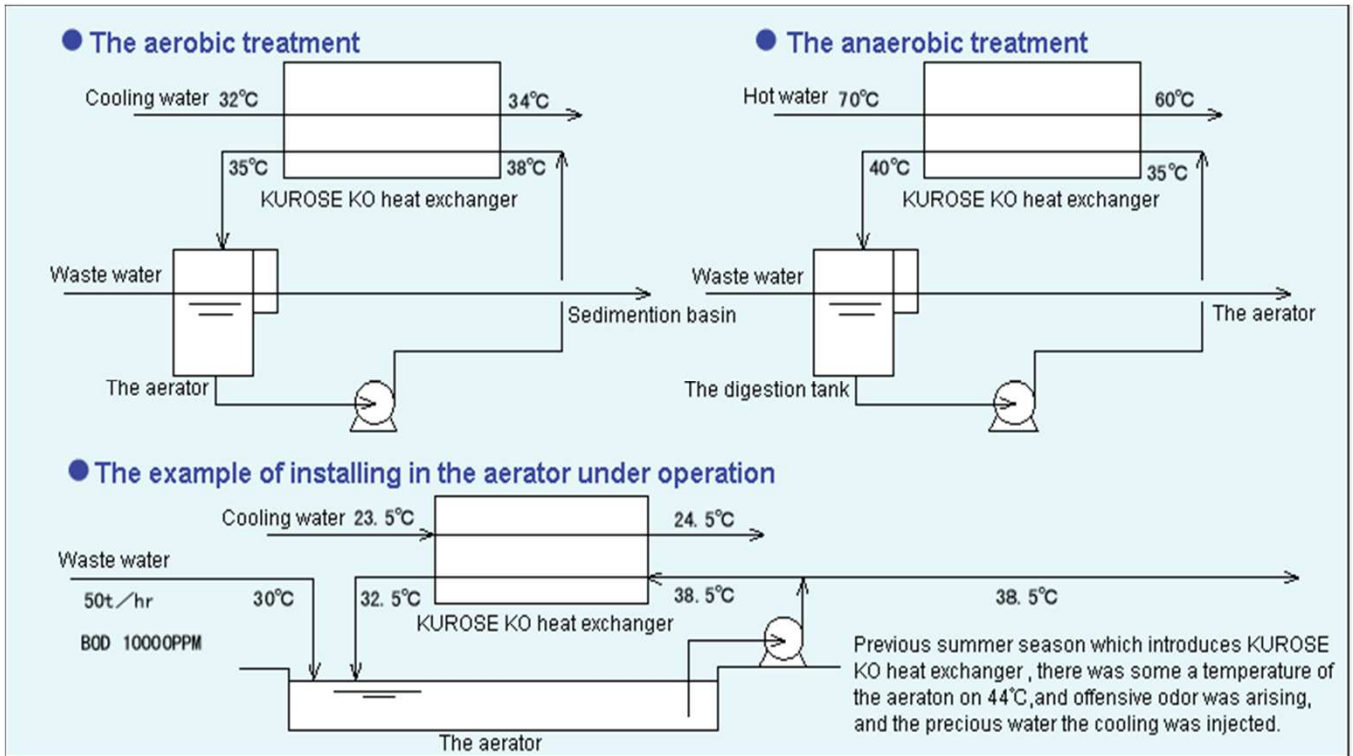
To protect the earth environment, advanced treatment of industrial waste liquid is required. Frequently used methods include biological treatment such as aerobic treatment using aerobic tanks, and anaerobic treatment using digester chambers. However, these methods require temperature control to activate the microorganisms, facilitate the treatment, and reduce the equipment volume.

Various types of heat exchangers have been used, but one problem is that the sludge in wastewater contains various contaminants such as fibers, which can cause watercourse clogging due to fiber entanglement with potential obstacles in the watercourses. Conventionally, double-pipe heat exchangers featuring a uniform watercourse shape have been used. Recently, however, Kurose KO heat exchangers have often been used instead, because the double-pipe heat exchangers for wastewater treatment system facilities have a layout problem: that is, they have smaller heat transfer areas despite their large equipment volume.

The watercourse of the Kurose KO heat exchanger (sludge heat exchanger) is rectangular in shape and spirally wound, while that of double-pipe heat exchangers is round in shape. In addition to a special structure of a single watercourse with no obstacles, as with double-piped heat exchangers, the Kurose KO heat exchanger has a mechanism to let the sludge drained in a spiral manner. Thus, all sludge flowing into the exchanger entrance flows out from its exit without solid material sedimentation.



Flow sheet (example)



Inquiries

**KUROSE CHEMICAL
EQUIPMENT CO.,LTD.**

<http://www.kurose.co.jp/>

Ozawa Bldg. 19-12, 1-chome, Edobori, Nishi-ku, Osaka 550-0002
JAPAN

TEL +81-6-6444-0881 FAX +81-6-6444-0885