Steam Z Case study

Method for judging steam leakage

Steam trap diagnosis

Before and after installation, you can feel the effect of steam · Z more.

The investigation method

① **Thermography survey**

② **Steam Condensed Water Collection Test**

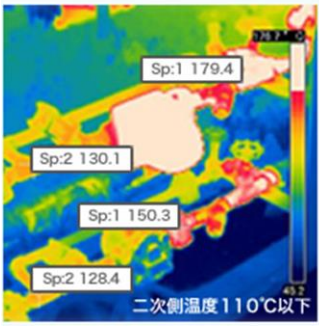
• Thermography survey

Thermography: a method of measuring the surface temperature of an object using an infrared camera. When a specific camera is directed to the subject and the shutter is pressed, the surface of the object is color coded by colors such as white-red-yellow-green-blue is the image that the temperature distribution was captured by the surface was will take. White is the highest temperature and low temperature sequentially.

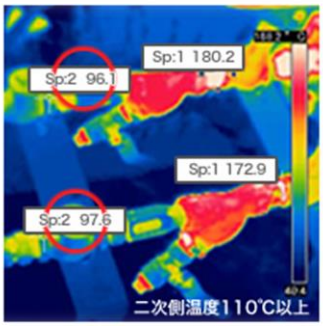
As steam · Z needs to design the discharge port diameter (orifice) according to the amount of drain generated at the time of introduction, our company is responsible and conducts on-site investigation, product selection, installation, after-follow up.

Several types of shapes and models are prepared for Steam · Z that suitably deal with the conditions of use and equipment to be installed, so please feel free to contact our company's staff when considering introduction.

Before introduction ... Leakage



Steam · Z after introduction ... no leak



By comparing the color of the trap entrance and the exit, it is possible to judge the degree of leakage of steam on the spot.

In this method, only by pressing the shutter of the camera at the site, the surface temperature of the object is color-coded on the spot.

Although it is a very convenient method that can be checked visually, unfortunately only by judging whether steam is leaking or not, It is not possible to quantitatively measure the amount of leakage of steam.

• Steam Condensate Collection Test

Quantity grasp of steam loss. You can see the room for energy saving achievable with trap exchanges!

In the steam condensate trapping test, loss generated from the steam facility can be reliably grasped by analyzing the amount of heat in the condensed water. ? Condensate water collection test is effective to confirm cost effectiveness before facility improvement work.

Steam condensate water collection test equipment?
ZEC-0020SS type

○ **<u>Steam condensed water collection test scenery</u>**

Quantitatively measure the amount of leakage of steam.
Place approximately 10 to 20 liters of water in a cylindrical container and measure the water volume and water temperature.
Leave the drain from the outlet of the steam trap and the leaked steam two-phase fluid into the water and absorb all of the water in the water for 1 - 3 minutes . Measure the amount of water and the water temperature after the work is finished. By inputting these data to a prescribed calculation formula, the amount of leakage of steam can be quantified.

<u>As an illustration</u>

1) Chemical factory

- Collection time is only 5.9 seconds, 35 L of water.
- The water temperature is 7.3 ° C to 70.6 ° C,
- The leakage per hour is 144.7 kg / hr
  Result : 5,209,139 yen / unit per year of Steam leaked

2) Beverage maker

- Collection time is 3 minutes, 20 L of water is 20.7 L
- The water temperature is 17.4 ° C. to 39.3 ° C.,
- The leakage per hour is 14.2 kg / hr
  Result : 280,406 yen / unit per year of Steam leaked