

A device to adsorb and store oil spouting from defective electrical equipment.

Spouting Oil Adsorption Unit for Electrical Equipment Filled with Oil

Features

- Adsorbs and stores oil spouting at high pressure from electrical equipment with internal trouble without causing leakage.
- Supports up to 3 L of spouting oil (with a safety factor of 1.5x set on the condition that the actual absorption capacity is 4.5 L).
- Stainless steel equipment incorporating an internal material made of diatomite ceramics.

Overview

(Technical principles, actions, etc.)

1. Oil Inlet Port

A flexible SUS304 tube is connected to the piping to guide high-pressure oil leakage to the spouting oil adsorption unit.

2. Oil Leakage Indicator

The SUS304 tube is inserted into the above piping, and a transparent acrylic blind tube is connected to the SUS304 tube so that the condition of oil leakage can be inspected (indicated).

3. Oil Adsorbing Element

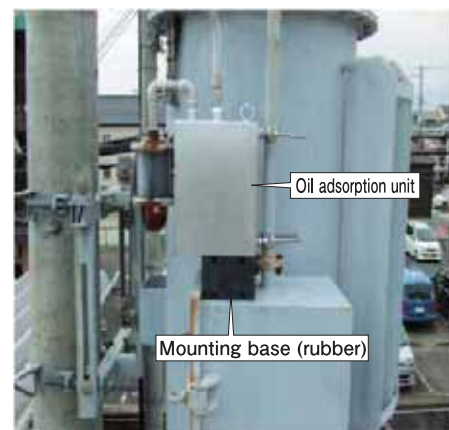
An oil adsorption element made of SUS304 is used. The element is tightly attached to the spouting oil adsorption unit with a pipe band. A newly developed special nozzle is used internally together with a liquid adsorbent so that high-pressure oil guided through the oil inlet port will be adsorbed immediately and released onto the adsorbent. A safety factor of 1.5x is set to the spouting oil adsorption unit that has an actual absorption capacity of 4.5 L.

4. Explanation for Adsorbed Oil

- The liquid adsorbent (made of diatomite ceramics) has excellent liquid adsorbing performance characteristics, which are used for pressure release and decompression.
- The liquid adsorbent (made of diatomite ceramics) is highly lyophilic, because it is processed with a large number of pores where liquid can penetrate with ease.
- In order to maximize the adsorbing power of the liquid adsorbent, KIMURADENKO developed a special nozzle in a shape that enables the instantaneous release of absorbed oil radially and hierarchically uniformly.
- In the above process, sprouting oil is immediately adsorbed and stored in the tank without leaking it in the atmosphere.



Installation Example 1



Installation Example 2

Introductory Track Record

- Seventy (70) units have been delivered to electric power companies in Japan (as of March, 2012).

Effects

- By adsorbing oil that leaks from electrical equipment with internal trouble, the equipment prevents the scattering of the oil on site (in the facilities), the roads, agricultural fields, or waterways, thus preventing water pollution and soil pollution and making it possible to promote environmental protection.

Applicable field
High-voltage power distribution facilities and high-voltage power receiving facilities

Water

Energy saving/Energy recovery

ENERGY
Energy storage/Energy creation

New energy

Waste disposal/
Recycling/
Resource saving

Air

Soil

Other

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