MERCURY SWITCH

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Mercury switch is a type of electrical switch for controlling the flow of electrical current, in which a small amount of mercury is used as a conductive medium. Mercury switches are used in a variety of applications including automotive, medical, and security systems. The use of mercury switches has become increasingly controversial due to the environmental impact of mercury.

Mercury switch works by using a sealed glass tube containing a small amount of liquid mercury. When the switch is activated, the two metal contacts within the tube are brought into contact with the mercury, allowing electrical current to flow. When the switch is released, the two contacts are separated, breaking the electrical circuit.

The advantages of using a mercury switch include its non-sparking operation, its highly reliable operation in a wide range of temperatures, and its low cost. Additionally, the lack of physical contact between the two contacts means that there is no wear and tear over time, and that the switch will remain reliable over time.

The disadvantages of using a mercury switch include its environmental impact due to the use of mercury, its limited electrical current handling capacity, and its relatively short life expectancy. Additionally, the mercury switch is prone to false triggering due to vibration and contact bouncing.

The use of mercury switches has decreased in recent years due to the environmental concerns associated with mercury. Alternatives to mercury switches include solid-state switches, reed switches, and non-contact switches.

In conclusion, mercury switches are a type of electrical switch that use a small amount of liquid mercury as an electrical conductor. While they offer advantages in terms of cost and reliability, the use of mercury switches has become increasingly controversial due to their environmental impact. Alternatives to mercury switches include solid-state switches, reed switches, and non-contact switches.

References

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