MAIN CHARACTERISTICS AND PARAMETERS OF MEASURING INSTRUMENTS

Abduraximov Zafarbek Abdusafar ugli
Andijan Institute of Agriculture and Agrotechnologies
Kamoldinov Sardorbek Xamidullo og'li
Andijan Institute of Agriculture and Agrotechnologies
Akbaraliyev Azamatjon Oybek o'g'li
Andijan Institute of Agriculture and Agrotechnologies

Abstract. *Measuring instruments are tools that allow direct determination of the value or amount of the measured quantity. Analog, digital, indicating and recording, integrator, summator, etc. are divided into types. Measurement of quantities in analog measuring devices is carried out by a scale, and in digital measuring devices by a digital computing device. Indicator Measuring instruments are designed to determine measurement results only by sight. Recorder Measuring instruments are equipped with a device for recording measurement results on paper. Such devices are divided into recording notes are drawn on paper in the form of diagrams and printing measurement results are printed on paper in the form of numbers types.*

Key words: *measuring instruments, standard, scale.*

Introduction. Measuring instruments - a measuring tool designed to obtain the values of a physical quantity measured in a specified range. Often, a measuring device is a measurement tool for generating a measurement data signal in a form that can be directly perceived by the operator. A measuring instrument is a technical instrument designed for measurements that has normalized metrological characteristics, reproduces and or stores a unit of physical quantity whose size does not change over a certain period of time within a specified error. There is also a difference between direct indirect and comparative indirect measuring instruments.

In a direct measuring device, the measurement result is obtained directly from its display device. Examples of such devices include an ammeter, a manometer, and a mercury-glass thermometer. Direct impact measurement instruments are designed to measure directly. In contrast, measurement by comparison with measurement is done using measuring instruments for comparison, also called comparators.

ko’rsatkichli voltmeter

A reference measuring device is a measuring device designed to directly compare a measured quantity with a quantity of known value. Examples of comparators: two-circuit balance, interference length comparator, electrical resistance bridge, electrical measuring potentiometer, photometric bench with photometer. Comparators may not store units of measure to perform their tasks. Such comparisons, strictly speaking, cannot be considered measuring instruments, but they must have a number of important metrological properties, first of all, they provide a small random error and high measurement sensitivity.

In measuring instruments, the measured quantity is integrated over time or another independent variable quantity mas, electric and gas meters. Aggregating measuring instruments show the sum of two or more quantities coming from different channels for example, a wattmeter that sums the power of several electric generators. In order to automate technological processes in measuring instrument enterprises, measuring instruments are often equipped with adjustment, calculation

and control devices. They work according to specially designed programs. A measuring instrument designed to transmit, transform, or generate a signal in a form convenient for use in automatic control systems is called a measuring device. This device includes measuring instruments, transducers a means of converting the measured quantity into a convenient signal, amplifiers, and other devices. Instruments for measuring lines and angles rulers, protractors, etc, are called measuring instruments, and instruments used to measure weight scales, scales are called measuring instruments. An electrical measuring transformer is used to ensure the safety of current, voltage, power and energy measurements in electrical distribution facilities and high voltage alternating current circuits. Its primary circuit is affected by the quantity to be measured current, voltage, etc, and the secondary reducing circuit is connected to measuring devices and a protective relay. It is possible to measure different values of electrical quantities with electrical measuring devices voltmeter, ammeter and wattmeter using a measuring transformer. In a broad sense — Measuring instruments include all measuring devices, devices and tools related to the measurement of various quantities physical, mechanical, electrical and magnetic quantities. Now pulse and digital measuring devices are widely used.

Summary. We have given some information about the main characteristics of measuring instruments in the article mentioned above.

REFERENCE

1. https://kun.uz/news/
2. https://lex.uz/docs/-4355545
3. https://www.standart.uz/page/view?id=28
4. R.J. Baratov, A.M. Denmuxammadiyev.Elektr o'lchashlar va instrumentrlar. O'quv qo'llanma .