

Fluxmeter General Electric, the USA



General Purpose of a Fluxmeter:

- A fluxmeter is an instrument used to measure magnetic flux. Magnetic flux is a measure of the total magnetic field that passes through a given area.
- These devices are crucial in various applications, including:
 - Testing and evaluating permanent magnets.
 - Analyzing magnetic circuits in electrical equipment.
 - Measuring the magnetic fields generated by coils and other devices.
 - Hysteresis loop tracing.

Key Features and Characteristics:

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- Measurement Units:
 - Typically measures in Maxwell-turns.
- Search Coils:
 - Fluxmeters rely on search coils to detect magnetic fields. The induced voltage in the coil is proportional to the rate of change of magnetic flux.
 - Different coil designs are used for various measurement applications.

• Integration:

 A key function of a fluxmeter is to integrate the voltage induced in the search coil, providing a measure of the total magnetic flux.

• Display:

 Older models used analog meters, while modern versions utilize digital displays (LED).

• Accuracy:

 Accuracy is a critical factor, often expressed as a percentage of full-scale reading.

• Input Resistance:

• This is an important specification that affects the interaction between the fluxmeter and the search coil.



• Applications:

- Used in the manufacturing and testing of:
 - Motors and generators.
 - Loudspeakers.
 - Magnetic components.
 - Magnetic shielding effectiveness testing.



References:

- 1. <u>https://dlaweb-dev.whoi.edu/repositories/2/archival_objects</u> /1347
- 1. <u>https://www.sciencedirect.com/topics/engineering/fluxmeter</u>
- 1. <u>http://cy-sensors.com/Fluxmeter.htm</u>

