МАГУ

МУРМАНСКИЙ АРКТИЧЕСКИЙ ГОСУДАРСТВЕННЫЙ УНИВЕРСИТЕТ

# THE DIFFERENCE BETWEEN DC AND AC GENERATORS

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Ключевые слова:

DC - direct current – постоянный ток;
AC - alternating current – переменный ток;
Electromagnetic induction – Электромагнитная индукция;
Fixed – фиксированный, неподвижный;
Coil – катушка;
Generator – генератор;
Magnetic poles – магнитные полюса.

- Fill the gaps with the correct word:

Not fixed

AC

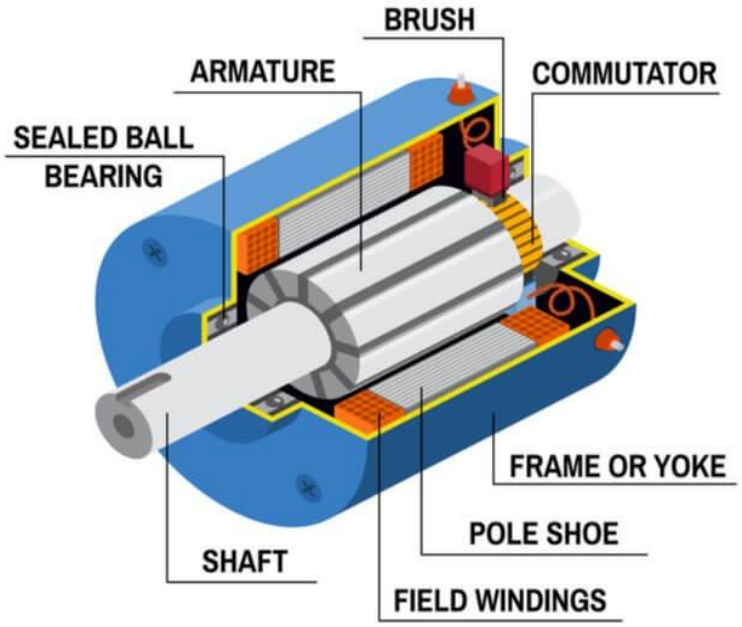
Electromagnetic induction

Fixed

DC

- Кратко запишите ответы
- Напишите перевод получившихся предложений на русский язык.
- 1. The frequency in an ____ generator (перем. тока) is determined by the number of magnetic poles and the rotational speed.
- 2. AC and DC generators both use _____ to generate electricity.
- 3. In an AC generator, the coil through which current flows is _____.
- 4. In contrast, the coil in a DC generator is _____.
- 5. _____ generator is used to power larger electric motors, even as big as those used in subway systems.

# DC generator




Picture 1 - DC generator

- DC Generator Advantages
- Simple design
- Runs large motors
- Smooth voltage

# Cost

## Напишите перевод слайдов 5,6,7 на русский язык

- Unlike an AC generator, a DC generator often does not require an inverter, which reduces the cost and difficulty of running the current. However, this is only the case with regard to powering a small system, such as a small RV or camper.

Picture 2 - DC generator

# Efficiency

Picture 3 - DC generator

- A DC generator is energy and cost efficient as long as you use it correctly. It is also a very efficient way to power electrical appliances that are made to run on a DC current.

# The main disadvantage

- However, if the wiring becomes difficult or complex, you may be required to run a longer wire to transfer electricity from the generator to the specified location to provide power. If this is the case, the longer wire becomes a disadvantage. If you must run the wire longer than 100 feet, an AC generator may be a better choice.

# Спасибо за внимание

Литература:

https://byjus.com/physics/ac-generator/

https://byjus.com/physics/dc-generator/

https://www.electrical4u.com/principle-of-dc-generator/