Electric motors



Task 1. Work at pronunciation

To convert	Преобразовывать
Interaction	Взаимодействие
Shaft	Вал
Vehicle	Транспортное средство
To surround	Окружать
Instead of	Вместо
Separate	Отдельный
Elevator	Лифт

Task 2. Pronounce the words.

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Task 3. Read the text. Fill in the gaps. Use the hints below.

An electrical motor is a machine that converts electrical energy into _____energy. Electric motors operate through the interaction between motor's magnetic field and electric current in a wire winding to generate force in the form of rotation of shaft. They can be powered by alternating current sources (electrical generators) or by direct power sources (batteries, motor vehicles).

Electric motor consists of 2 parts: the rotating part (rotor) and the stationary part (stator). One of them generates a magnetic field, the other has a wire winding in which the changing magnetic field induces electric current. _____surrounds the rotor. For most electric motors the rotor is located inside the stator. Electric motors in which the rotor is located outside the stator are called inside out electric motors.

Electric motors are divided into 2 types: AC motors and DC motors. The AC motor converts the alternating current into mechanical power. It is classified into three types: the induction motor, the synchronous motor, the linear motor. The machine which never runs at synchronous speed is called the induction or asynchronous motor. The motor which produces the linear force instead of the rotational force is a linear motor. The synchronous motor is a machine that changes the alternating current into mechanical power at the desired frequency.

DC motor is _____that converts the DC electrical power into mechanical power. The DC motor is classified into two types: the self-excited motor and separately excited. The separately excited dc motor is a motor in which the DC winding is excited by the separate DC source.

Electric motors are used in (pumps, fans, compressors), in construction (elevators, heating, ventilation and air conditioning systems), in consumer devices (refrigerators, air conditioners, vacuum cleaners, washing machines, mixers).

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industry
a machine
The stator
mechanical

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