**Тема:**  «Фундаментальные открытия в технике. Паровой двигатель»

**Цель:** Повторить грамматический материал , продолжить изучать лексическую тему «электричество, механика, промышленная революция».

**Задачи:** Отработать навык работы (в т.ч. перевода) с профессиональной лексикой по теме «электричество, механика», повторить тематический материал, актуализировать имеющиеся знания.

**Специальность:** 13.02.09 Монтаж эксплуатации линий электропередачи, 13.02.11 Техническая эксплуатация и обслуживание электрического и электромеханического оборудования (по отраслям)

1. **Study the glossary.**
2. **Read the text.**
3. **Learn the rule (if any).**
4. **Do the tasks.**

**Glossary:**

Milestone

Industrial Revolution

symbolic

flow of steam

oscillatory motion

crankshaft

functioning

limited

rotatory motion

steam engine

high pressure

to reduce

to increase

greatest invention

**Steam Engine as a miracle of XX century mechanics**

The invention of the steam engine was an important milestone in the Industrial Revolution. James Watt is often credited with its invention, but Watt only brought about―admittedly game-changing―developments in the original design. *The machine became symbolic of the Industrial Revolution*. Most of the early developments during the period revolved around this vital invention.

The mechanism of the steam engine is quite simple. The steam needed to run this engine is produced in a boiler outside the actual engine. *The flow of steam into the engine is directed through valves. Pistons in the engine move with the help of the pressure generated by the steam.* These pistons move in an oscillatory motion; a crankshaft is used in the conversion of the oscillatory motion to rotatory motion.  
 The engines developed by Newcomen and Watt didn't make full use of the steam power. Their machines were actually powered by vacuum. The vacuum was created by the condensation of steam. The role of steam in functioning of the engine was limited up to the task of compensating for the atmospheric pressure; it helped move the piston back and forth. Richard Trevithick developed engines in which steam was forced under high pressure. The size of this model, too, was reduced to great extent, making it easy to transport the engine itself.  
 *The steam engine brought about a huge change in the industrial scene.* The speed of industrial development increased many times over. Therefore, the steam engine is considered as one of the greatest inventions in history.

1. **Translate the lines given in italics**
2. **Find the equivalents to the following word combination in the text:**
3. Важная веха
4. Подлинный дизайн
5. **Довольно простой**
6. Колебательное движение
7. Вращательное движение
8. Атмосферное давление
9. Размер модели

1. **Give a proper translation to the following sentences:**
2. The machine became symbolic of the Industrial Revolution.
3. The steam needed to run this engine is produced in a boiler outside the actual engine
4. A crankshaft is used in the conversion of the oscillatory motion to rotatory motion.
5. Watt didn't make full use of the steam power.
6. The role of steam in functioning of the engine was limited up to the task of compensating for the atmospheric pressure
7. The steam engine brought about a huge change in the industrial scene
8. **Fill the gaps with the proper words, using your glossary.**
9. Scientists used a \_\_\_\_\_\_\_\_\_\_\_\_\_\_as a moving power.
10. We use the best materials \_\_\_\_\_\_\_\_\_\_\_\_\_\_the danger of using of steam engines.
11. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_had became the greatest\_\_\_\_\_\_\_\_\_\_\_of the XX century.
12. I cant find this detail, obviously, it was a limited edition.
13. A steam engine is based on both \_\_\_\_\_\_\_\_\_\_\_and\_\_\_\_\_\_\_\_\_\_\_\_motions.

Be ready to give an answer