

МИНИСТЕРСТВО ОБРАЗОВАНИЯ ПРИМОРСКОГО КРАЯ
краевое государственное автономное профессиональное
образовательное учреждение «Лесозаводский индустриальный колледж»

МАТЕРИАЛЫ ДЛЯ ДИСТАНЦИОННОГО ОБУЧЕНИЯ

по «ОГСЭ.04 ИНОСТРАННЫЙ ЯЗЫК»

группа **ОП-2**, специальность 23.02.01 Организация перевозок и управление на транспорте
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Занятие № 5-6

Тема: Паровой локомотив

A **steam locomotive** is a type of railway locomotive that produces its pulling power through a steam engine. These locomotives are fueled by burning combustible material – usually coal, wood, or oil – to produce steam in a boiler. The steam moves reciprocating pistons which are mechanically connected to the locomotive's main wheels (drivers). Both fuel and water supplies are carried with the locomotive, either on the locomotive itself or in wagons (tenders) pulled behind.

Steam locomotives were first developed in the United Kingdom during the early 19th century and used for railway transport until the middle of the 20th century. Richard Trevithick built the first steam locomotive in 1802. The first commercially successful steam locomotive was built in 1812–13 by John Blenkinsop, the Salamanca (locomotive), the *Locomotion* No. 1, built by George Stephenson and his son Robert's company Robert Stephenson and Company, was the first steam locomotive to haul passengers on a public railway, the Stockton and Darlington Railway in 1825.

From the early 1900s, steam locomotives were gradually superseded by electric and diesel locomotives, with railways fully converting to electric and diesel power beginning in the late 1930s. The majority of steam locomotives were retired from regular service by the 1980s, although several continue to run on tourist and heritage lines.

EXERCISES:

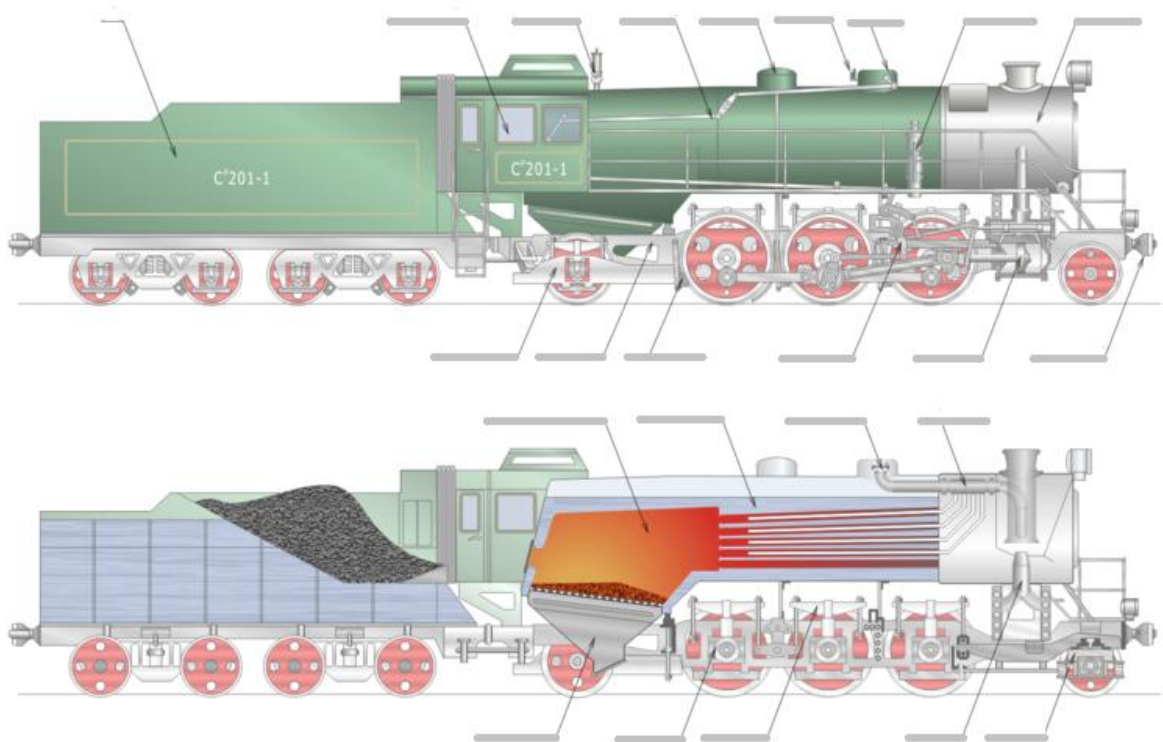
1. Выписать лексику.
2. Подписать части локомотива используя английский язык.
3. Назовите часть локомотива, определение которой дано.

Vocabulary:

Elements of the locomotive	Устройство паровоза
1. Firebox	1. Топка,
2. Ashpan	2. Зольник,
3. Water (inside the boiler)	3. Вода (в котле);
4. Smokebox	4. Дымовая коробка;
5. Cab	5. Кабина машиниста,
6. Tender	6. Тендер,
7. Steam Dome	7. Паросушитель (сухопарник)
8. Safety Valve	8. Предохранительный клапан,
9. Regulator Valve	9. Регулятор давления пара,
10. Superheater Header in smokebox	10. Коллектор пароперегревателя

<p>11. Piston 12. Blastpipe 13. Valve Gear 14. Regulator Rod 15. Drive Frame 16. Rear Pony Truck 17. Front Pony Truck 18. Bearing and Axlebox 19. Leaf Spring 20. Brake shoe 21. Air brake pump 22. (Front) Centre Coupler, 23. Whistle 24. Sand box.</p>	<p>11. Поршень, 12. Паропровод; 13. Кулисный механизм, 14. Привод регулятора; 15. Рама, 16. Задняя поддерживающая тележка, 17. Передняя поддерживающая тележка (бегунковая пара) 18. Колесная букса, 19. Рессора, 20. Тормозная колодка, 21. Насос тормозной магистрали 22. Автосцепка СА-3, 23. Тифон, 24. Песочница.</p>
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1. Container holding both water for the boiler and fuel such as wood, coal or oil for the fire box. –
2. Holds sand that is dropped on the rail in front of the driving wheels to improve traction, especially in wet or icy conditions. –
3. Collects the hot gases that have passed from the firebox and through the boiler tubes. It may contain a cinder guard to prevent hot cinders being exhausted up the chimney. Usually has a blower to help draw the fire when the regulator is closed. Steam exhausting from the cylinders is also directed up the chimney to draw air through the fire bed while the regulator is open. –
4. Collects the ash from the fire. –
5. Steam powered whistle, located on top of the boiler and used for signaling and warning. –

6. Furnace chamber that is built into the boiler and surrounded by water. Various combustible materials can be used as fuel but the most common were coal, coke, wood or oil. –
7. Container almost full of water with air space above. The water is heated by hot gases passing through tubes, producing steam in the space above the water. –
8. Directs exhaust steam up the chimney, creating a draught that draws air through the fire and along the boiler tubes. –
9. Compresses air to operating the brakes (train air brake system). This is sometimes called a *Westinghouse pump* or *Knorr pump* after [George Westinghouse](https://en.wikipedia.org/wiki/George_Westinghouse) and [Georg Knorr](https://en.wikipedia.org/wiki/Georg_Knorr). Single stage steam-driven air compressor or higher capacity two-stage, cross-compound compressors were used. –
10. Carries boiler, cab and engines and is supported on driving wheels and leading and trailing trucks. The axles run in slots in the frames. American locomotives usually have *bar frames* (made from steel bar) or cast steel frames (see Bury bar frame locomotive), while British locomotives usually have *plate frames* (made from steel plate).

Источник:

https://en.wikipedia.org/wiki/Steam_locomotive - Паровоз
https://en.wikipedia.org/wiki/Steam_locomotive_components - Части паровоза