

The steam engine essay



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The Steam Engine: In the never-ending search for energy sources, the invention of the steam engine changed the face of the earth. (Siegel, Preface) The steam engine was the principal power source during the British Industrial Revolution in the 18th century. The steam engine opened a whole new world to everyone.

Category:

History

Paper Title:

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Text:

In the never-ending search for energy sources, the invention of the steam engine changed the face of the earth. (Siegel, Preface) The steam engine was the principal power source during the British Industrial Revolution in the 18th century. The steam engine opened a whole new world to everyone. The steam engine

maximized production, efficiency, reliability, minimized time, the amount of labor, and the usage of animals. The steam engine in all revolutionized the Eastern Hemisphere, mainly European society. What does revolutionize actually

mean? It means that something such as the steam engine brought about a radical

change in something, and this something is the European Society. The steam engine specifically brought about a radical change in work, transportation of goods, and travel. The invention of the steam engine revolutionized European

society by enabling tasks to be done quicker, cheaper, and more dependably.

The steam engine use throughout the several professions revolutionized numerous aspects of Western European Society. The first important use of the

steam engine came in 1776. The steam engine was used to show the Cornish miners

how successful it could be in removing the water from the mineshafts. This proved to be of great importance to the Cornish, because one of their biggest

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problems was the flooding of the mining shafts. (The Penetration of the Industry

by Steam Power) The mine owners worried that the mines would have to be shut down unless water could be pumped out of the shafts. The engine successfully raised water from the bottom of deep mines. (Siegel, 17) This saved the shutting down of the mines, which were essential to further the economy. Not only did the steam engine save the mines, it provided a method of

mining that proved to be extremely quicker than the traditional techniques.

One

of the biggest incomes for the British was found in their textile industry. In

the textile industry, the domestic system presented many problems for merchants.

They had difficulty regulating standards of workmanship and maintaining schedules for completing work. Workers sometimes sold some of the yarn or cloth

in their own profit. As the demand in cloth increased, merchants often had to compete with one another for the limited amount of workers available in

manufacturing, which increased merchants costs. As a result, merchants turned

increasingly to machinery, which was powered by the steam engine, for greater

production and also turned to factories for central control over their workers.

(Johnson, 30) The steam engine proved to be a reliable investment for merchants

of the textile industries not only because it wasn't accident prone like

humans and increased production by unimaginable amounts, but it also moved the

company into a factory, which helped to urbanize life to the way we live it

today. The steam engine was also used on the farm for several purposes. It was

used extensively for deep plowing, cultivating, mole draining and ground

clearing. Great advances were also made in agriculture with the engines

enabling greater acreage to come under the plough and production

increased by

the use of machines to do tasks formerly done by hand or by horses.

(Johnson,

39) These steam engines allowed farmers to grow crops in abundance with minimal

manual labor, which was an increase in quantity and quality productions since a

machine and not a human was doing the work. Another great contribution of the

steam engine was made in the iron/coal industries. Since iron was starting to be

produced so rapidly, more coal was needed to keep the steam engines running.

Since the coal mining industry had to keep up, steam power was used for the mining of coal, which proved to be much faster than customary methods.

Because

the steam engine was used to mine coal, and because England had large

deposits of coal to fuel the new steam engines, it enabled people to use more

machines and to build larger factories. (Industrial Revolution. Earth

Explorer). More machines and factories using the steam engine meant more

production, more reliability, and cheaper prices. The steel industry was also

revolutionized through the use of the steam engine. Steel, smelted from iron,

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was beaten, rolled or shaped on steam-powered machines. This steel became very

cheap, and was able to be used for the railroad tracks, and also used later on in construction. (Gordon). Without the steel to be shaped so fast by the steam

engines, countries couldn't have expanded its trade and travel the way it did.

It is also said that, The water works and, in many cases, the canals could not exist without steam-power, for their very existence depended upon the regular raising of large quantities of water to high levels. Steam was the only power that made this possible. (The Penetration of the Industry by steam power) Without the steam engine, these factories, mills, agricultural advances,

and other industries could not have been revolutionized in the way they were.

The steam engine used in means of travel revolutionized the transportation of

goods, as well as the importing and exporting of them. The steam-powered railroad changed geography and history. When grain merchants transported their

goods by horsepower, they could go only so far before the horse consumed more

than it could carry. (Gordon) In this aspect, the steam engine in railroads allowed people to import and export their goods on a faster, more reliable, source. Another major effect of the steam engine on society was the increased

communication between different areas and countries relating to prices.

Before

the steam engine in the railroad, prices of products varied dramatically from area to area. Prices were lower in the area that produced a certain good and higher in an area that had to import it. Now for the first time prices seemed to

be relatively equal due to the steam engine in the railroads. (Johnson, 35)

The

industry that the steam engine developed depended on transport of raw materials.

The steam engine in ships carried these raw materials as well as finished products through waterways, for long distances. Goods could be transported by

water at a speed of 20 miles per hour, which is a lot faster and economical than

other methods. Because of the steam engine, countries could now import and

export with other countries at a faster pace than the wooden ships. Road

Locomotives were fitted to carry out relatively long and fast journeys, hauling

big loads on the hard road surfaces. This was an alternative to transporting products through railways, because there was a lack of the choice of routes.

(Wise, 56) The steam engine used in these Road Locomotives, provided yet another means of transporting goods from one place to another quickly and directly which was important in transporting. Road locomotives were extremely

efficient because if someone didnt have much money, than they could transport

their goods via this transportation method. The coming of the lighter steam wagons revolutionized local delivery work, horses being brought within a reasonable days journey of the market. Jobs, such as timber hauling,

previously carried out by teams of horses and dozens of men could be done by two

engines and half a dozen men. (Johnson, 41) Steam engines used in the steam

wagons brought about yet another technique to transport goods quickly, proficiently and in some cases cheaper, than the usual transporting of goods through horses. Not only did the steam engine lead into the use of the means of

traveling, for the purpose of importing, local deliveries, and transports of materials, but it made those three things quicker and cheaper.

Transportation, which is a necessity for everyone today, was revolutionized because of the steam engine. The steam engine allowed people to travel from one

place, to another, and start a new life, but also return to their old dwelling to perhaps visit family, to do business, or to do whatever that may be needed.

It wasn't until the early 1800s that one of the greatest inventions caused by the steam engine was invented, the railroad. Since several entrepreneurs saw

that the potential of this was enormous, many entrepreneurial companies were

formed to build railroads. The railroad caused an economic boom for many countries. The country that was the most effected by this was Germany.

When they

started the development of the railroads, they made over 2000 miles of connecting tracks to every part of the country. These railroads caused Belgium,

Germany, and France to become the most industrialized Continental powers during

the mid-nineteenth century. (Johnson, 33-34) The steam engine allowed the people

to travel to almost any destination safely, and at an extremely fast pace. The

steam engine used in railways was like a magic carpet fulfilling peoples

hopes for a different future. They felt free to move from place to place. Many

ended their rural isolation and relocated in urban centers (Siegel, 41) The

steam engine was used in Britain for the first type of cars, and was used for

other road paving machines. If the first car was not powered by a steam engine,

there is slim to none chance that people would have had an interest in these cars and started to experiment with them. And because of that, we would not have

the same extraordinary means of car transportation as we do today. For the road

paving machines, the steam engine was used to power heavy lorries, road rollers,

and traction engines. Steam engines used in road rollers were used for improving

our roads for the 18th century and onward. It is to the credit of the rollers that formed the base to most of our roads that their work is still standing up to traffic which the designers of that time could not possibly have foreseen.

(Johnson, 26-27) Though steam engines used in road rollers to pave roads may not

be revolutionary to the mind at first, when thought about, one can see how it is

revolutionary. Without the roads to be paved, the cars would travel on the gravel, which was very uncomfortable and makes the travel incredibly slow. The

steam ship was another alternative to the many steam operated means of
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transportation. Since you couldn't travel across Asia by railroads yet, and there were no paved roads to take a steam-powered car to your destination, steam

ships allowed a quick travel through the seas, rivers, lakes, or canals to arrive at long distance destinations. Because of the steam engine in the steamships, people could travel long distances like from Britain across the Atlantic in under three weeks, where as before it took over 2 months and was

unsafe, and unreliable. Now it is safe, reliable, and quick. (Sproule, 54)

Thanks

to steam power, distance and time had lost their old links with wind, terrain, and hurrying horses hooves. To the dizzied onlookers, it must have seemed that the world was shrinking as they watched (Sproule, 56)

The industrial revolution that started in about 1770 in England revolutionized several aspects of life, as we know today. The reason to most of

this revolutionized life can be credited to the steam engine. The steam engine

was, and still is vital to the world today. What the steam engine did to the

world is something everyone should know and care about. The steam engine changed

the map of the world; it also changed the map of every country where it held sway. The towns with these steam powered factories, just grew and grew and grew. Power sources no longer had to be by a river. Because of the steam engine,

cities changed from centers of trade to production centers, industrializing everywhere this steam fever went. The steam engine allowed a wave of new machines to come into use, which gave way to tons of jobs. These jobs were a

basis for the jobs we all have today. Animals no longer had to do so much work.

The steam engine replaced all the animals jobs in traveling and in transportation of goods. In all, the steam engine was a key that unlocked the doors to the infinite amount of paths that have been walked through to reach to

today's society. The steam engine, says Author H. W. Dickinson, was never so important in the world's economy as it is today.

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