In Dept To China Essay, Research Paper

The World is forever in debt to China for its innovations. Ancient China was extreme advance and many of its discoveries are still in use today. This is what Robert Temple, the author of The Genius of China 3000 years of science, discovery and invention. The book is based on 11 main parts of Chinese innovation. Within these 11 categories, there are 3 main parts that contain the most significant inventions. Robert Temple concentrates the bulk of his examples in these three categories, agriculture, domestic and industrial technology , and engineering. Temple?s examples were not limited to these fields of innovation. The Chinese excelled in many other areas, including mathematics, warfare and transportation, to name a few. Although Temple wrote about eleven fields of invention, I feel that these three sections contain the greatest examples of Chinese innovation, and the debt that the modern world owes China. The first main area is the field of engineering. Within this chapter, the development of iron and steel is the greatest achievement. The development of iron and steel led to other advances. By at least the 4th century the Chinese have developed blast furnaces to obtain cast iron from iron ore. This was 1200 years before the first blast furnace showed up in Europe. The reasons that the author gave to explain the reasons why the Chinese developed this technology are simple. The Chinese had access to large amounts of clay, the key ingredient in making blast furnaces. The Chinese also figured out that by adding a substance they called :Black Earth,? they could lower the melting point of iron. Another major invention of the Chinese, that led to other achievements, is steel. The common belief today is that Henry Bessemer discovered the process of refining iron into steel. The fact is Chinese had developed the process to refine iron into steel in the second century BC The Chinese learned that by injecting oxygen into the blast furnace, they could remove the carbon from the iron. The Chinese called this process the ?hundred refinings method? since they repeated the process that many times. The finished product was highly prized in China for its strength and ability to hold an edge on a sword. The Chinese would weld the steel onto weaker iron thus creating a strong edge and a superior weapon. The Chinese iron and steel workers were the best at making different types of metals into modern times. But then, no one else could have done so at the time, since iron existed nowhere else but in China. The Chinese invented the chain pump in the first century AD The chain pump allows water to the pumped from lower to higher elevations. The chain pumps were used for draining and pumping in civil engineering, but what is more important is it was used for irrigation. Irrigation allows for greater and more intense farming, thus resulting in a better crop yield. With the greater crop yields larger populations can be supported. The chain pump was exported to all parts of the world by way of visiting ambassadors and dignitaries. The first European chain pump appeared in the sixteenth century, and was a direct copy of the Chinese version. The second area of great Chinese achievement is in domestic and industrial technology. The most recognized Chinese invention is in the field of domestic and industrial technology, paper. Paper was invented around the second century BC and was used as clothing. One might not believe that paper could be used as clothing, but the paper made at that time used thicker and tougher paper fibers. Not only was paper used for clothing, it was also used for military body armor. The Chinese found out that pleated sheets of paper could stop the penetration of arrows. The paper armor was standard issue with Chinese land and sea units. Paper?s writing property was not discovered till about one century after its discovery. The earliest example of writing on paper was found an abandon military post. The paper found dates back to 110 AD and contained two dozen readable characters. The area that let China grow and expand was the innovations in the area of agriculture. The greatest achievement in the field of agriculture is row cultivation and intensive hoeing. In Europe, as with the rest of the world, they practiced scatter seed farming. Scatter seed farming is the practice of throwing the seed onto the fields at random. By throwing the seed randomly, half the seeds would not grow and make it impossible to weed the field. The Chinese on the other hand, planted individual seeds and rows, thus reducing seed loss. The planting of crops in rows also allowed for intensive hoeing, which in turn reduce weeds. Another major advancement in the field of agriculture is the seed drill. The seed drill complements the row farming of the Chinese. The seed drill is a device that plants the seed into the ground. It replaces the farmer to plant the seeds by hand, thus allowing the farmer to plant more acreage. The first seed drill was introduced to Europe in sixteenth century, 3500 years after the Chinese had invented it. In conclusion, I believe that the author has proved his original idea, that the modern world is in debt to China. The author has given many examples of Chinese innovation and intelligence that are seen in use today. Chinese innovation in agriculture has not only allowed the Chinese to grow, it has also allowed the modern world to grow. The growth of these other countries is directly linked to the inventions that they copied from the Chinese. Many of the Chinese engineering feats are still practiced today. The process of refining iron into steel is still used today, though the process has been refined. The suspension bridge, invented by the Chinese in the first century AD, is still the bridge of choice when one has to span a great distance. The greatest area of Chinese invention is in agriculture. The Chinese excelled in farming, not only did they discover the seed drill, they discovered row farming that is still used today. I would recommend this book with one wants to read about the past glory of China and the huge potentional of the future. It gave in-depth views into each Chinese invention, while not over doing the techical explaination. The Author is clear and concise on his point, the modern world is in debt to the Chinese. He gave many examples of Chinese invoation, and how the rest of the world copied the Chinese. Not did the rest of the world copy Chinese inventions, they claimed that they were the first to invent it. The author opened my eyes to the greatness of anicent China. What the author, Robert Temple, did do gave me even more reason to respect China. The Genius of China 3000 years of Science, discovery, and invention By Robert Temple