Rome engineering an empire essay sample

History, Empires

It is said that Rome was not built in a day. True. It took ambition, lust, murder and the unrivalled power of technology to make the Roman Empire span across three continents and many centuries. While the contribution of ambition, conquest and other political and militaristic factors remain important for the Roman Republic to transform into an Empire, none of this could have been possible without the immense contribution of engineering and technology. In this essay, we shall look into three engineering feats that I believe were crucial in building the Roman Empire. We shall be making use of the video “ Rome: Engineering an Empire” as an aid towards the selection of the three technological marvels.

The three most remarkable Roman engineering feats that stand out from the rest, in my opinion, are the Roman Concrete, The Aqueduct and the Coliseum. The reason for it is that even after the Roman Empire is long gone, these three still exist in some form in our modern civilizations.

Beginning with the Roman Concrete, it was the material that the Roman engineers used in building every single type of structure in the Empire. Experts believe it was due to this ‘ secret weapon’ that Roman could build bigger, stronger and faster than anyone else. The Roman Concrete was superior to the rest because of the addition of Pozzolana, a volcanic dust that made the concrete much stronger and water proof. This strong mixing material is the reason that all the other architectural marvels were made possible. It allowed Romans to build under water and enabled building of massive piers and permanent bridges.

The second remarkable achievement in Roman engineering was the building of the Aqueducts. Aqueducts were huge and long structures that carried fresh water from the high mountain slopes to public bath, fountain and private homes of the city of Rome. Aqueducts were remarkable engineering examples of its times. It was based on a simple principle of gravity and built with high levels of precision having a gradient of a few inches every hundred feet in length. The aqueducts also gave birth to another landmark in building of early mega-structures: the arches. Through use of arches, aqueducts could be made taller and longer without using a lot of building materials. The aqueducts enabled expansion of Rome and helped keep the city clean. Through aqueducts the common Roman citizen had access to running water, a quantum leap in the civic amenities as per many experts.

The third most important engineering feat was the Coliseum. The coliseum was the biggest amphitheatre built in the Roman Empire. Started by Vespasian in 72 AD, on the very site where Nero built a lake in his palace Domus Aurea. The giant amphitheatre where events like gladiator contests, prisoner executions, mock sea battles and animal huts etc. took place was a gift of the new emperor to the public. In many ways it was the world’s first mega stadium, like the ones of today and could seat about 50, 000 spectators. It was also the tallest structure ever built in the Roman Empire. The stadium even features like retractable roof and was full of comforts for the spectators.

All the three engineering marvels are important in history and progress of not just the Romans, but also the mankind on a whole. All the three still exist

today and were brought in by those Roman Emperors who are remembered in positive light as being good rulers of their times. Their pro public policy was the reason for such inventions and also testimonial of Roman invention and ingenuity. However if I have to pick one among the three, I would choose aqueducts as the most important. This is because the need of fresh water supply is probably the most necessary need in the city. Only fresh water would enable more people to live in a place and maintain hygienic standards.

Romans engineering is still seen as being much ahead of its times in terms of innovation and creativity. It was due to such use of advanced technology and thinking that the Romans could build an empire this big. However, even when the Roman Empire did eventually fall, thanks to mindless aggression, greed and corruption, they left behind the many engineering feats for the world.

Engineering and technology form an essential ingredient in the growth of a civilization. Without it, sustainable growth cannot be achieved and without growth, a civilization is bound to collapse. The public are the principle members of every civilization. Thus only those innovations remain long lasting which are targeted at the benefit of the common man. Any building or structure meant for personal use of the rulers are invariably lost and forgotten in history.