ROMAN AQUEDUCTS

Aqueducts are structures used to conduct a water stream across a valley. In modern engineering 'aqueduct' refers to a system of pipes, ditches,[1] canals, tunnels, and supporting structures used to convey water from its source to its main distribution point.

The Romans are considered the greatest aqueduct builders of the ancient world and the elaborate system that served the capital of the Roman Empire is a major engineering work. Romans, at first, turned to the Tiber River, local springs, and shallow[2] wells for their drinking water; but water obtained from these sources became soon polluted and inadequate for the city's growing population. This led to the development of aqueduct technology. Over a period of 500 years – from 312 BC to AD 226 – eleven aqueducts were built to bring water to Rome from as far away as 90 kilometers and some of those aqueducts are still in use.

The date of the first aqueduct is assigned to the year 312 BC. The water in the aqueducts descended gently through concrete channels. Multi-tiered[3] viaducts[4] were used to cross low areas. Inverted siphons[5] were employed when valleys were particularly deep. Tunnels, burrowed[6] through hills were equipped with vertical shafts[7] for inspection and cleaning. The aqueduct channels were usually rectangular in the cross-section and varied from 0.5 to 2.0 meters in width and from 1.5 to 2.5 meters in depth. Sometimes two or three channels were superimposed,[8] to meet increasing demand. Once in or near Rome, water from the aqueducts passed into large, covered catch-basins. Here waters were supposed to deposit their sediment and were then distributed through free-flowing canals, lead pipes, and terracotta pipes to storage reservoirs and then through lead pipes (called fistulae) to users. The number of connections to private customers were limited; most Romans were obliged to get their supply of domestic water from public fountains.

Water was provided for a variety of uses including fountains and latrines, as well as for public baths and sham[9] naval battles. With few exceptions, the water from the aqueducts reached only the ground floor of apartment buildings. The tenants[10] of the upper floors had to rely on slaves to carry water or go themselves and draw water from the nearest fountain. Because fire was a constant concern, Romans were encouraged to keep water stored in their rooms. Water from the baths, latrines, palaces, fountains, as well as other urban runoff was discharged into Rome's drainage and wastewater collection system.

Roman aqueducts were built throughout the empire, and their arches may still be seen in Greece, Italy, France, Spain, North Africa, and Asia Minor.

GLOSSARY

1 long narrow holes dug at the side of a field or road to hold water
2 not deep
3 with several levels
4 long high bridges, generally with arches
5 bent tubes
6 dug
7 passages
8 put one on top of another
9 not real, but intended to be very similar to a real situation
10 people who live in a house and pay rent to the person who owns it

READING COMPREHENSION

ACTIVITIES

● *Answer the following questions.*

1. What is an aqueduct?
2. When was the first aqueduct built in ancient Rome?
3. How did Roman aqueducts work?
4. Was water supplied to every home in ancient Rome?
5. Where was waste water discharged?
6. Where can you find the remains of Roman aqueducts today?

MATCHING

● *Match each term in the first column with a term in the second column, then provide the Italian equivalent.*

1 Water	Ⓐ World	.....
2 Distribution	Ⓑ Floors	.....
3 Ancient	Ⓒ Customers	.....
4 Drinking	Ⓓ Stream	.....
5 Lead	Ⓔ Point	.....
6 Private	Ⓕ Water	.....
7 Public	Ⓖ Pipes	.....
8 Upper	Ⓗ Fountain	.....

VOCABULARY

● *Explain in your own words the meaning of the following terms and expressions.*

1 Springs	.....	4 Latrines	.....
2 Wells	.....	5 Palaces	.....
3 Reservoirs	.....	6 Wastewater	.....

WRITING

● *Write a short summary of the text above.*

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