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Delivering fresh water 'on-tap' to 3,000 homes in Malkapur

Malkapur like many villages in rural India has an intermittent and inadequate water supply system, which leads to its villagers spending many hours each day queuing for their allocation. The Maharashtra State Government has a policy to improve this situation and provide a continuous supply of fresh water with a much reduced leakage rate. Borouge, together with a local pipe supplier and installer, is working to meet this challenge by providing high-quality material for a new, sustainable water supply network.

By the summer of 2008 they expect to have installed a new leak-free water supply system serving all 3,000 homes in the village of Malkapur, around the clock, 7 days a week.



Access to clean, drinkable water is a major challenge in many developing countries. In India, around 200 million people living in rural areas have no access to fresh water. Providing durable solutions for such populations is critical for their health and welfare and is a basis for future economic and social development. The increased access to clean drinking water is also an important element within the United Nations Millennium Goals.

Malkapur is a small village in the State of Maharashtra, India, 400 km to the south of Mumbai. The current population of 30,000 is served by a water supply system that was installed in 1988. The system was designed to supply a population projected to have grown to 14,000 by 2010. But, due to the rapid increase in the number of people who have come to work in sugar production in the area, the system delivers insufficient water to meet local needs.

Consequently, the water supply is available for only a few hours per day, and 35% of the pumped water is lost because of leakage. Malkapur villagers have had to live with an irregular and unsustainable supply of drinking water. They have depended heavily on either the supply of water by tank trucks, which operate a few days a week, or walking long distances to fetch water for their daily needs. Sometimes this means spending hours during the day or night waiting for their turn to fill their water containers.

Reliable delivery for a growing population

The objective of the project is to provide every household in the village with fresh water, around the clock, 7 days a week. To do this, a new water distribution network was required to deliver water to the 3,000 homes, as well as to minimise water losses. Maharashtra Jeevan Pradhikaran (MJP), the body financing and owning the project, set a requirement for the new network to reduce water loss to less than 5%. In addition, the system had to be designed to supply a population projected to grow to 67,000 by 2030. The State of Maharashtra is closely monitoring this project in order to use it as an example for uninterrupted water supply projects in many other villages.

Implementing a sustainable solution

To meet the project's objectives, MJP required pipes to be of the highest quality and durability to ensure a long, uninterrupted service life and minimal water loss through system leakage. This led to the selection of high-quality polyethylene material provided by Borouge to produce the 54 km of water mains needed, in diameters ranging from 75 mm to 140 mm. Kimplas Piping Systems manufactured all pipes and fittings, including the service pipes supplying each of the 3,000 houses in the village. EPC Industries installed the pipes in Malkapur's six different water districts. All pipes were supplied in long coils, which reduced the number of joints. They were jointed using electrofusion fittings to reduce the potential for leaks and speed up installation.

Fresh water supply around the clock for every house

By summer 2008, every house in Malkapur village will be connected to the new water system. This target timing was proposed by Kimplas Piping Systems and EPC Industries in order to allow the people of Malkapur to enjoy having the precious fresh water 'on tap' for the beginning of the hot summer months.

The Malkapur pilot water project is set to become an important reference in the Maharashtra State Government's programme to improve the supply of water to its wider rural population, as well as an example for other water-stressed communities across India.



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