



Mongolia Pressure Management

Climate Change and rapid urbanization are threatening fragile water resources in Mongolia where more than half the inhabitants have no access to clean water (quote from Mongolia Water Authority and UNEP).

All surface water in Mongolia is covered by ice for up to six months of the year so groundwater is the primary source of water for major urban areas and it's expected that climate change will affect these resources throughout the country in the coming years.

These effects have been compounded by rapid urbanization reducing the availability of water for both domestic and industrial use. The population has grown from 896000 in 2005 to a projected 1.7million by 2030. This situation is particularly serious in the capital city of Ulaanbaatar where nearly 40% of the population reside.



Globally Mongolia is one of the 60 countries with limited water resources, total water consumption is approximately 540 million m3 per year and over 80% is consumed by the industrial and agricultural sectors leaving 20% for domestic use and if the status quo continues the country will not be able to provide sustainable water resources for its population. In Ulaanbaatar the daily consumption is only about 5-10 litres per capita per day and very few are connected to the cities water distribution network.

Currently water is being withdrawn faster than the rate of discharge in the city where groundwater tables have shown a marked decline in the past 50 years. The temperature increase in the last 20 years has been 2.14 Celsius and the dry desert area has increased by 21% in the last 20 years. Changes to dry and harsh winters and hot dry summers are reducing river flows and ground water tables.

UNEP (United Nations Environmental Programme) identified increased investment and rehabilitation of existing water supply networks as a key component of improving the management of water supply utilities.

In 2017 a major rehabilitation of Ulanbataars Water supply was instigated and critical to that was the application of Cla-Val's range of Automatic Control valves

Model 340 series Rate of Flow Control valves from 150mm thru 500mm and 360-02 series pressure control valves from 200mm thru 400mm were installed into the Network to able remote control of both Flows and Pressures across the network



Ten existing 25 year old Cla-Val 90 series valves were fitted with the latest generation of Cla-Vals 34 series actuated pilot controls and 117 series of position transmitters to enable these long serving valves to be upgraded to the latest technology

The application of the flow control valves enabled the city to obtain much more even distribution of flow throughout the network and of the CRDHS 34 actuated pilot allowed them to alter the flow set points particularly during times of high demand such as spring festival.

Control of pressure dramatically reduced NRW and line break frequency and again use of the CRD34 pilots allowed the city the ability to manipulate the pressure at times of high demand. As well as this latest technology the city forwards to another 25 years of trouble-free performance from their Cla-Val Automatic Control Valves.