

Damaged Municipal Water Valve Repair Ensures Continued London Water Supply

Field service engineer discovers excessive damage during routine inspection and executes a difficult on-site repair.

Hayward Tyler has supplied High Integrity Gate Valves (HIGV) and ongoing aftermarket support for the London, UK water ring main since the late 1980s. The Water Ring Main ensures that drinking water is maintained and distributed throughout London. Along the length of the main are strategically placed 'pump-out' shafts and stored water shafts where water is pumped directly into the local distribution systems.

A Hayward Tyler Field Service Engineer (FSE) was on-site investigating a bent drive shaft when they identified more extensive damage to the valve.

Excessive differential pressure had exposed the fixing bolts, causing them to tear the valve sealing face. Additionally, there was extensive damage to the valve shaft and bolting during the removal of the existing gate.

A quick pivot toward valve repair

The HT FSE performed an assessment of the damage to the sealing face and quickly devised a simple yet effective weld repair plan to get the water main back to an ideal condition as quickly as possible. For two full weeks, the FSE manually welded, repaired, and grinded the valve face back to an acceptable condition. They also installed a new gate and shaft assembly and carried out the commissioning of the repaired valve to ensure it performed its critical function. This repair was completed within the main water pipework, in a confined space, with reduced visibility.

The diligence of the HT FSE led to the discovery of this damage, and their extensive experience allowed them to devise and execute a quick and effective repair plan. Hayward Tyler continues to provide excellent support across the life of our equipment, ensuring our customers' operations continue successfully and with minimal disruption.

Project Summary

SITE / LOCATION:

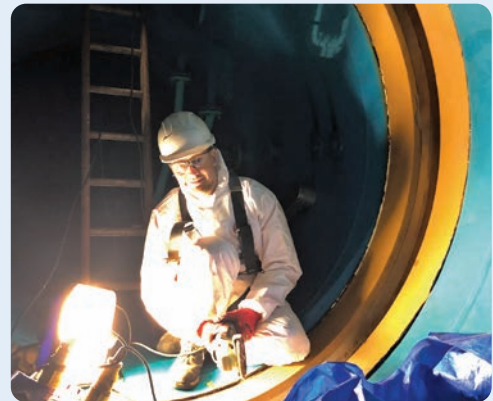
London Water Main

SCOPE OF WORK:

- Inspection of High Integrity Gate Valves
- Assessment of damage found
- Creation of repair plan
- Welding and Grinding within a confined space
- Install new gate and shaft assembly
- Commission repaired valve

BASIC DESIGN DETAILS:

- Qty: 38 High Integrity Gate Valves
- Size: 72" Gate
- Assy Overall length: 10,700mm
- Gate Material: BS EN 11025: S355JR
- Stem Assy Mat: 17-4PH SS



Repair work inside pipework

Project Data Sheet

Product	High Integrity Gate Valves
Quantity	38
Ring Main Length	80km
Original Equipment Supply Date	1987 through 1993
Valve Details	
Valve Type	High Integrity Gate Valve (HIGV)
Valve Size	72"
Fluid	Drinking Water
Design Pressure (Stationary sealing face)	3.5 bar



Bent drive shaft



Damaged valve face



Galled material on valve face



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