



An Aquam Group Company

JD7 Amplus™ Technology



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Introduction

About JD7

JD7 is a specialized technology provider focused on Pipeline Assessments and Inspection solutions for all utility sectors

JD7 have pioneered none-disruptive pressurised water main CCTV, Acoustic and NDT condition assessment technologies with support from the UK's leading utility and private sector companies.

Our fully trained operatives are available 24/7 to sustain our clients requirements, and are ready to be deployed anywhere around the world. JD7's business model is simple; we have the best industry engineers and we partner the best organizations in specific fields. Following this model has allowed the JD7 brand to grow significantly throughout the water industry with an ongoing international technology exploitation programme.

Amplus™

Description

The JD7 Amplus™ is the most advanced ROV Crawler system on the market for industrial pipelines. The system is a long range 1km capable crawler with ultrasonic scanning technology incorporated. The system utilises a 1km neutrally buoyant umbilical to transmit and receive commands and data, allowing full governing via control station that utilises a Panasonic Toughbook and unique JD7 software. HD CCTV, hi resolution ultrasonic scanning and an acoustic sensor systems allow the system to detect leaks in all materials, gather hundreds of thousands of measurements enabling accurate remaining life expectancy to be calculated.



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Access

The system has the ability to be deployed through access points as small as 100mm meaning a large amount existing fittings can be utilised, with no disruption. It can be implemented on mains from 200mm in diameter and greater.

Benefits

- Hi Resolution ultrasonic scanning for condition monitoring
- HD camera system (Forward and reversing)
- 1km configuration
- Fully programmable
- On board acoustic leak detection
- Pressurised insertion (up to 6 bar)
- Software control



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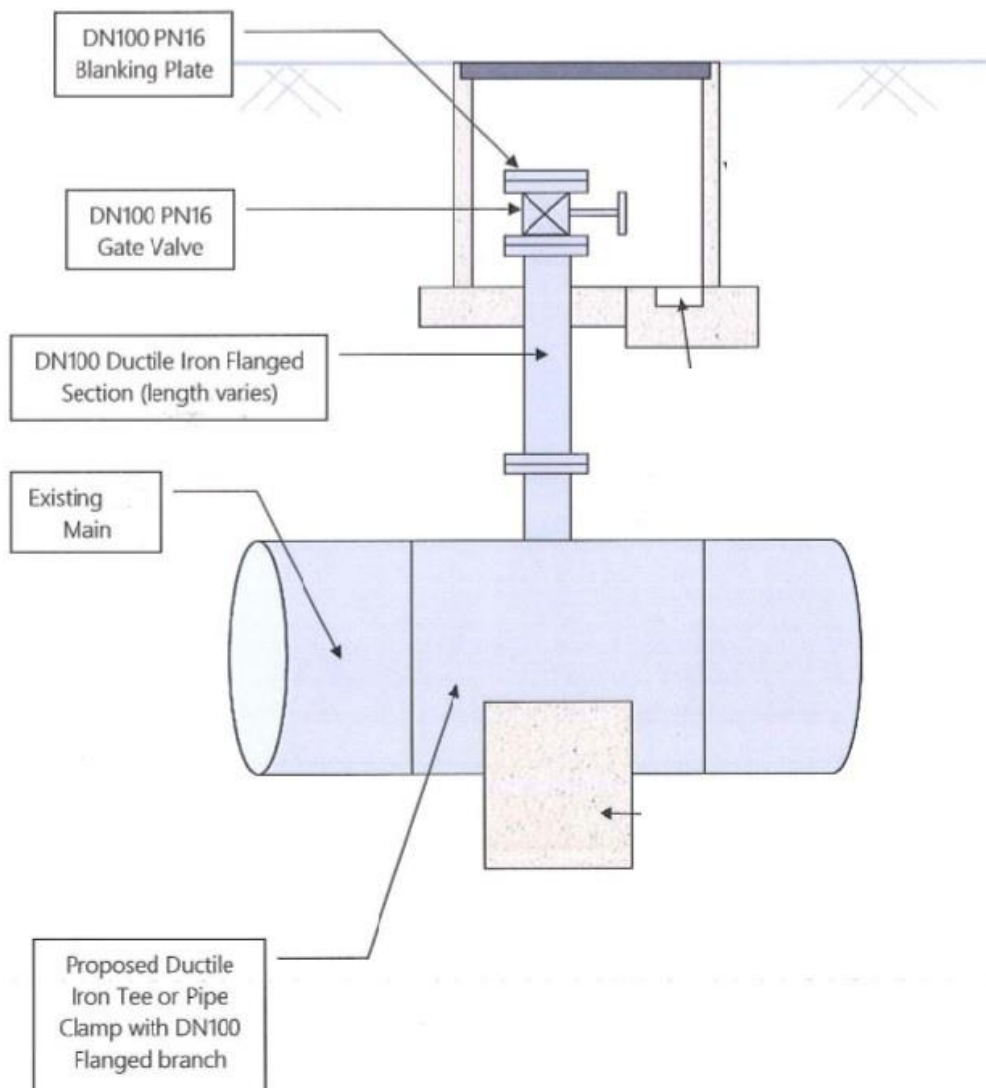
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Required insertion point setup

Below is a typical set up required for the insertion of the system, the diagram shows the isolation valve/insertion fitting to be on a riser section. This does not have to be the case and it can be attached directly to the Tee on the clamp. In addition the need to have the insertion points in chambers is not necessary, excavated pipes can be used.



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Insertion method

The Amplus™ vehicle is passed into the launch assembly and this is then attached to the DN100 valve located on the top tee of the clamp fitting ensuring that all in contact parts are sprayed with a 1000ppm chlorus solution prior. The tripod is then set up above the insertion point and launch assembly to ensure smooth passing of the umbilical and to make sure that it does not come into contact with the ground.

The entry point valve is now slowly opened allowing the main pressure to equalise in the launch assembly. The Vehicle is then passed manually into the main and the axels actuated, it is then driven forward approximately 1 meter to ensure it is seated correctly in the main. The operator will then drive the Amplus™ vehicle along the main whilst monitoring the CCTV footage and the audio being returned to the control station and periodically tracking the vehicle above ground with the second operator. (Throughout the survey the umbilical is continuously pulled through a bath of chlorus solution of 1000ppm before entering the main). If any areas of interest are identified then these are located above ground and marked up with a spray can.

Once the vehicle has reached its full distance or is not able to travel further (distance cannot be guaranteed due to the unknown internal condition of the main) then the operator sets the scanning system on vehicle and then sets to reverse. The system will then collect data enabling on its journey back to the insertion point enabling and remaining life calculation to be completed for each meter surveyed.

Please note:

- Survey distance cannot be guaranteed due to the unknown internal condition of the main

If you were to have any questions or require more information, please do not hesitate to contact us.

Yours sincerely

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