

100 μm

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environmental ltd

How microbes effect retail sites

Workshop on Microbial Growth in Fuel Supply and Distribution

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Managing Director

Eurotank Environmental Limited

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Specialist Contractor Consultants to the Petroleum Industry

Presentation plan:

Potential sources of water ingress

Where microbes can live in the system

Microbial Influenced Corrosion (MIC)

Reactive maintenance

Preventative maintenance

Questions

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Water: very difficult to keep out!

PETROMAN ENVIRONMENTAL SERVICES LIMITED
THE WELL TUBE IN THIS TANK HAS BEEN INSTALLED
BY PETROMAN AND HAS BEEN CHECKED AND CERTIFIED
AS VAPOUR TIGHT.
IN THE EVENT OF A LEAK CONTACT PETROMAN ON
TELEPHONE NUMBER 01754 260750

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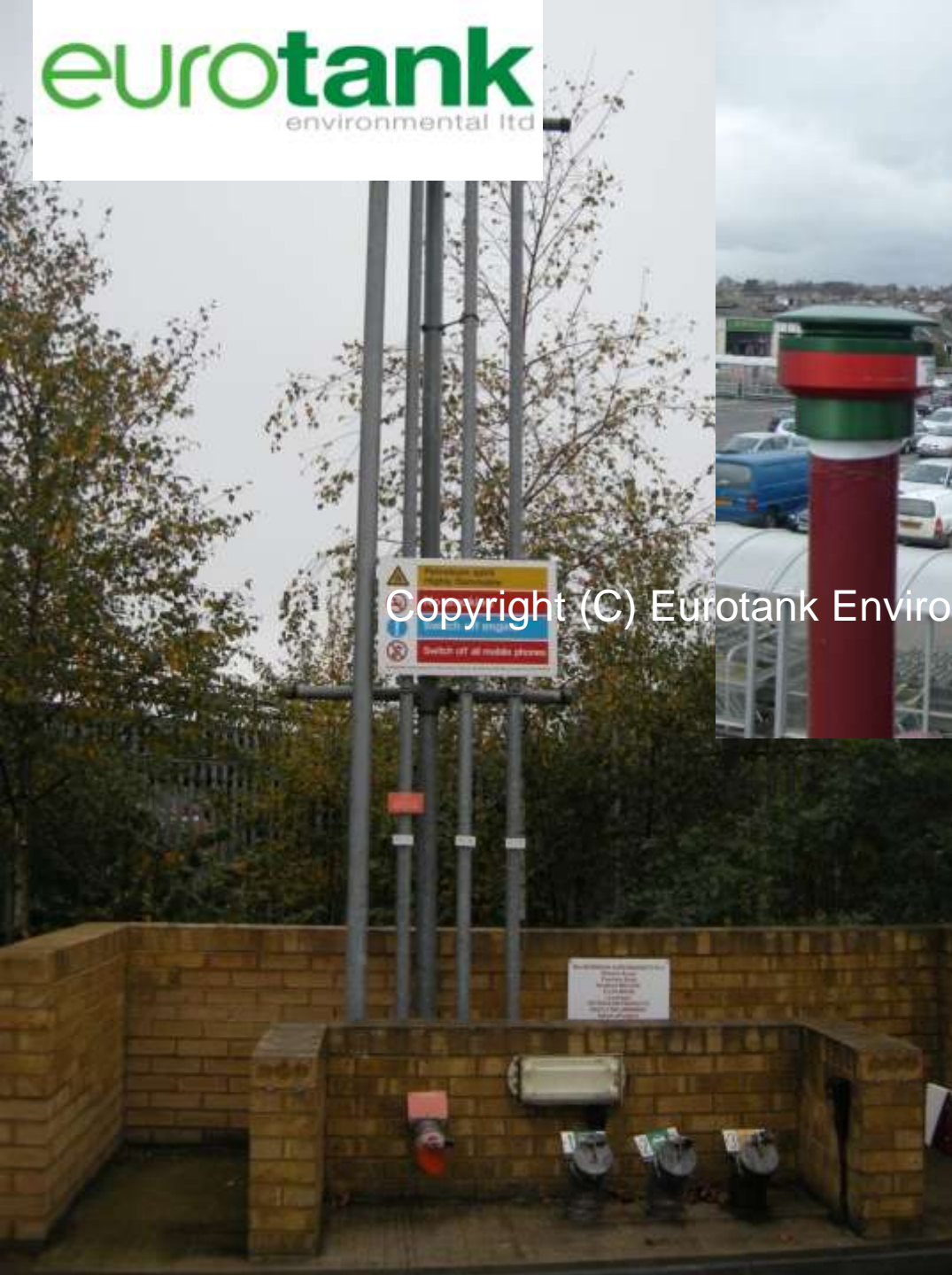


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30/01/2008



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Vents: all diesel tanks are atmospheric tanks, which means that they work at atmospheric pressures, draw in air during dispensing and will contain moisture.



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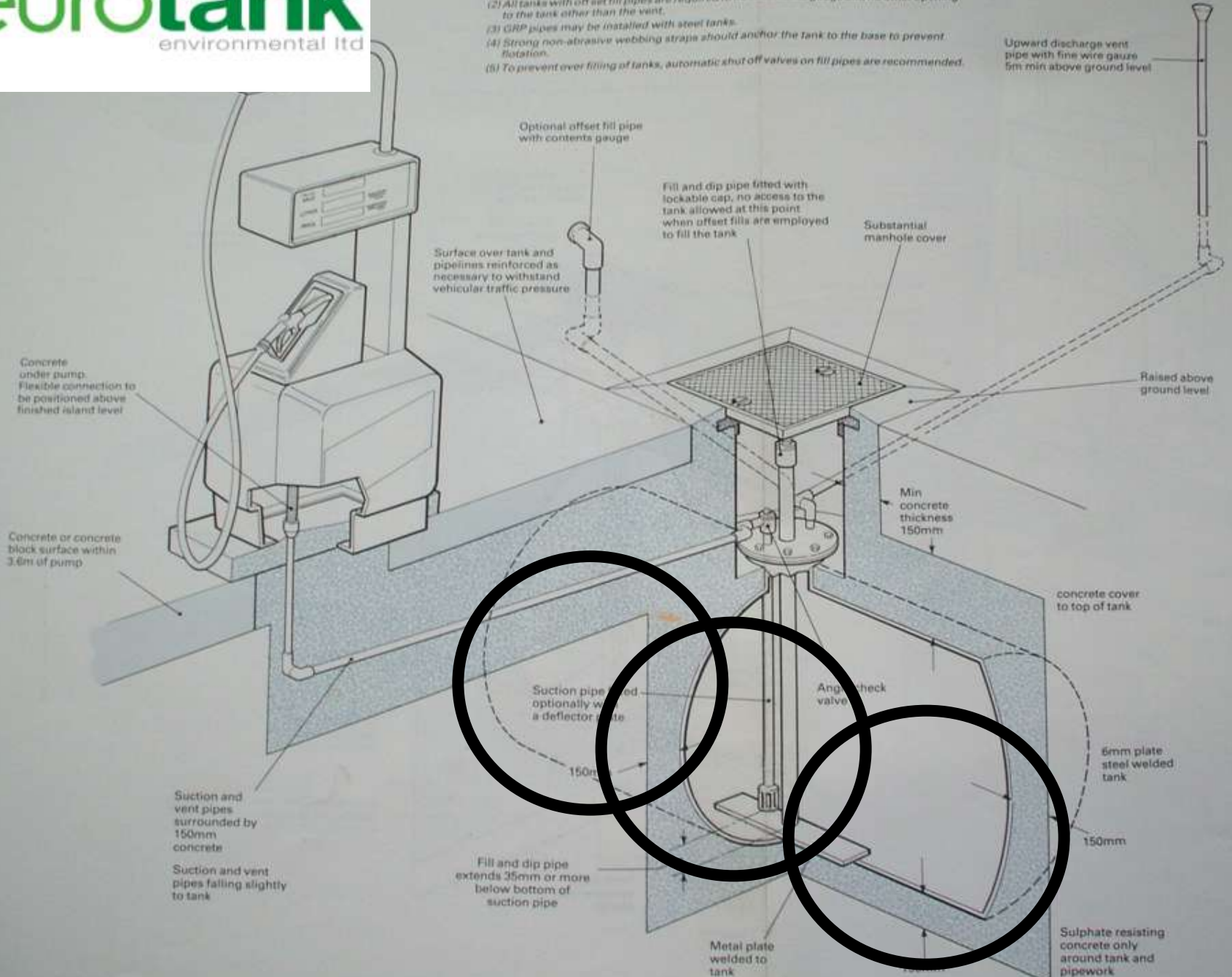
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Where can microbes live in the fuel system?



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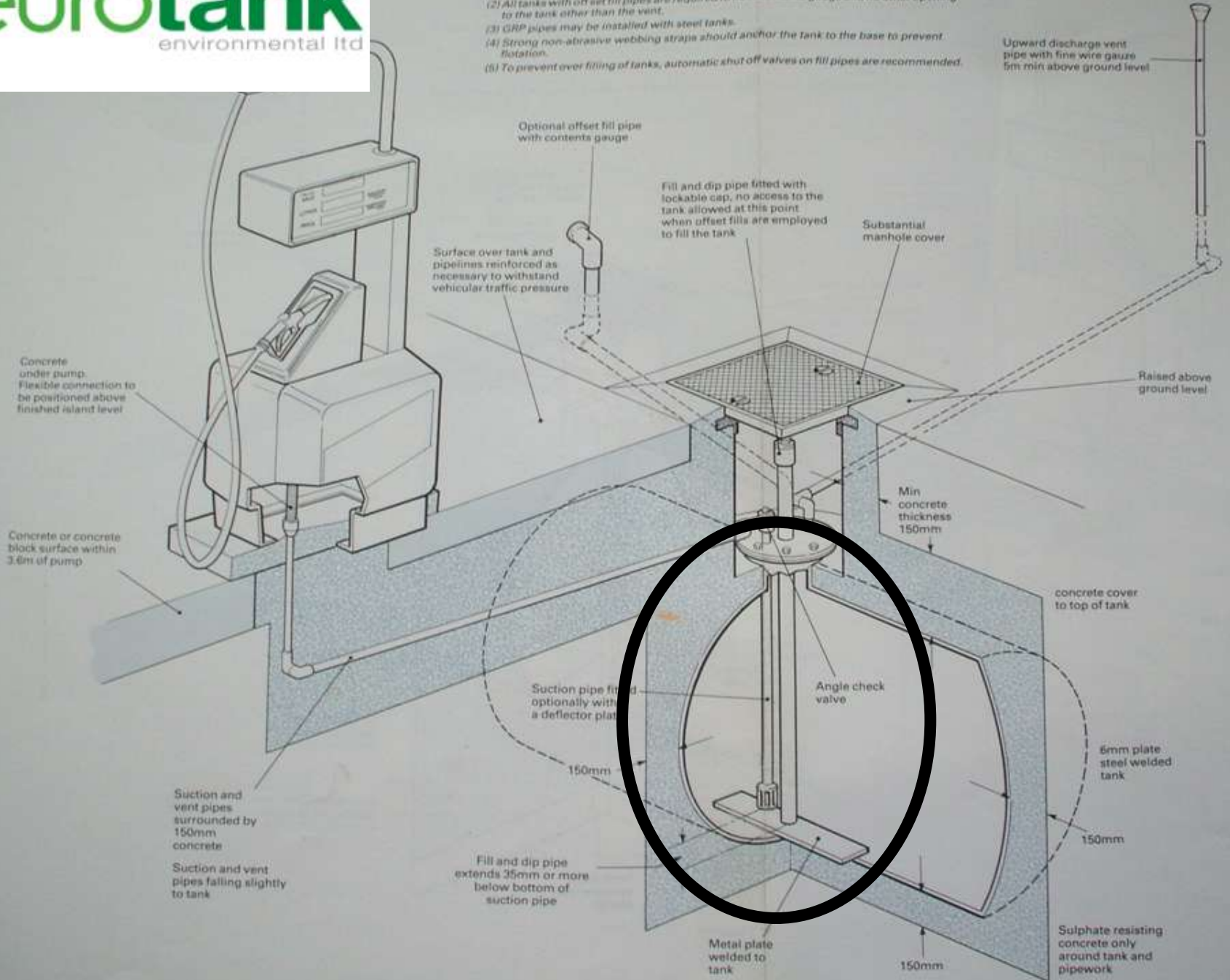
- NOTES**
- (1) An installation is not permitted to have both an off set fill and a dip opening.
 - (2) All tanks with off set fill pipes are required to have contents gauge and no other opening to the tank other than the vent.
 - (3) GRP pipes may be installed with steel tanks.
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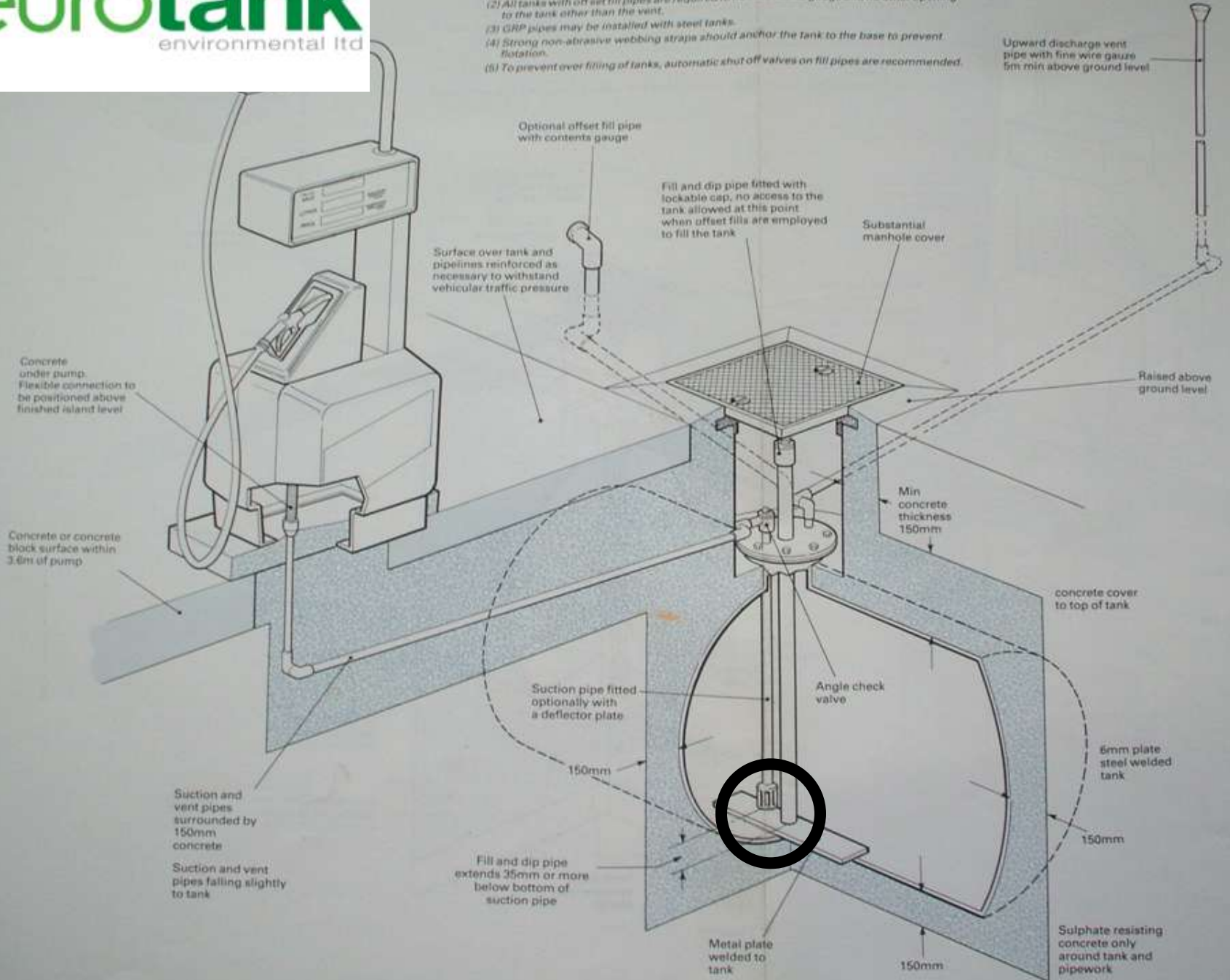
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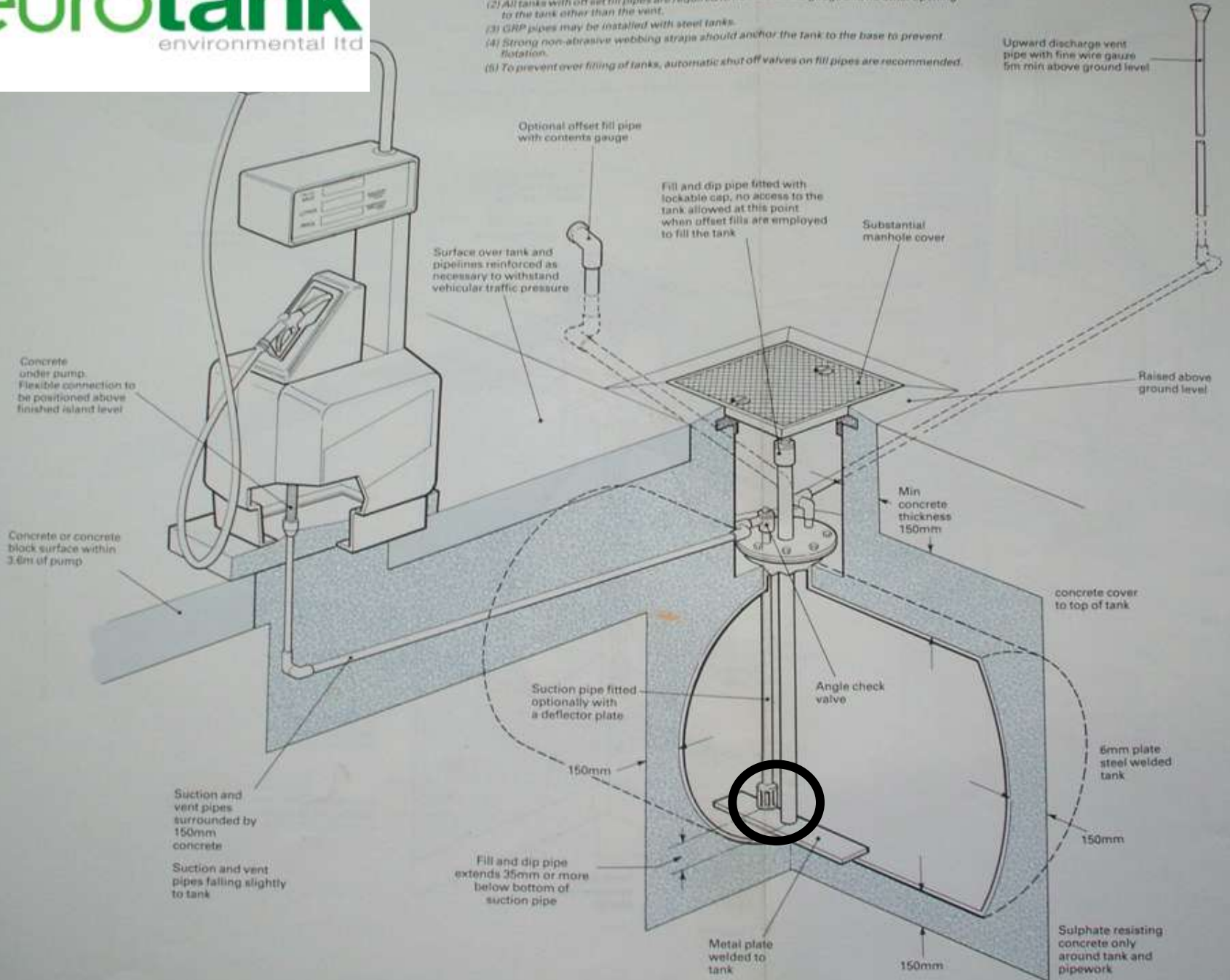
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Concrete under pump
Flexible connection to be positioned above finished island level

Concrete or concrete block surface within 3.6m of pump

Suction and vent pipes surrounded by 150mm concrete

Suction and vent pipes falling slightly to tank

Optional offset fill pipe with contents gauge

Surface over tank and pipelines reinforced as necessary to withstand vehicular traffic pressure

Fill and dip pipe fitted with lockable cap, no access to the tank allowed at this point when off set fills are employed to fill the tank

Substantial manhole cover

Upward discharge vent pipe with fine wire gauze 5m min above ground level

Raised above ground level

Min concrete thickness 150mm

concrete cover to top of tank

Suction pipe fitted optionally with a deflector plate

Angle check valve

6mm plate steel welded tank

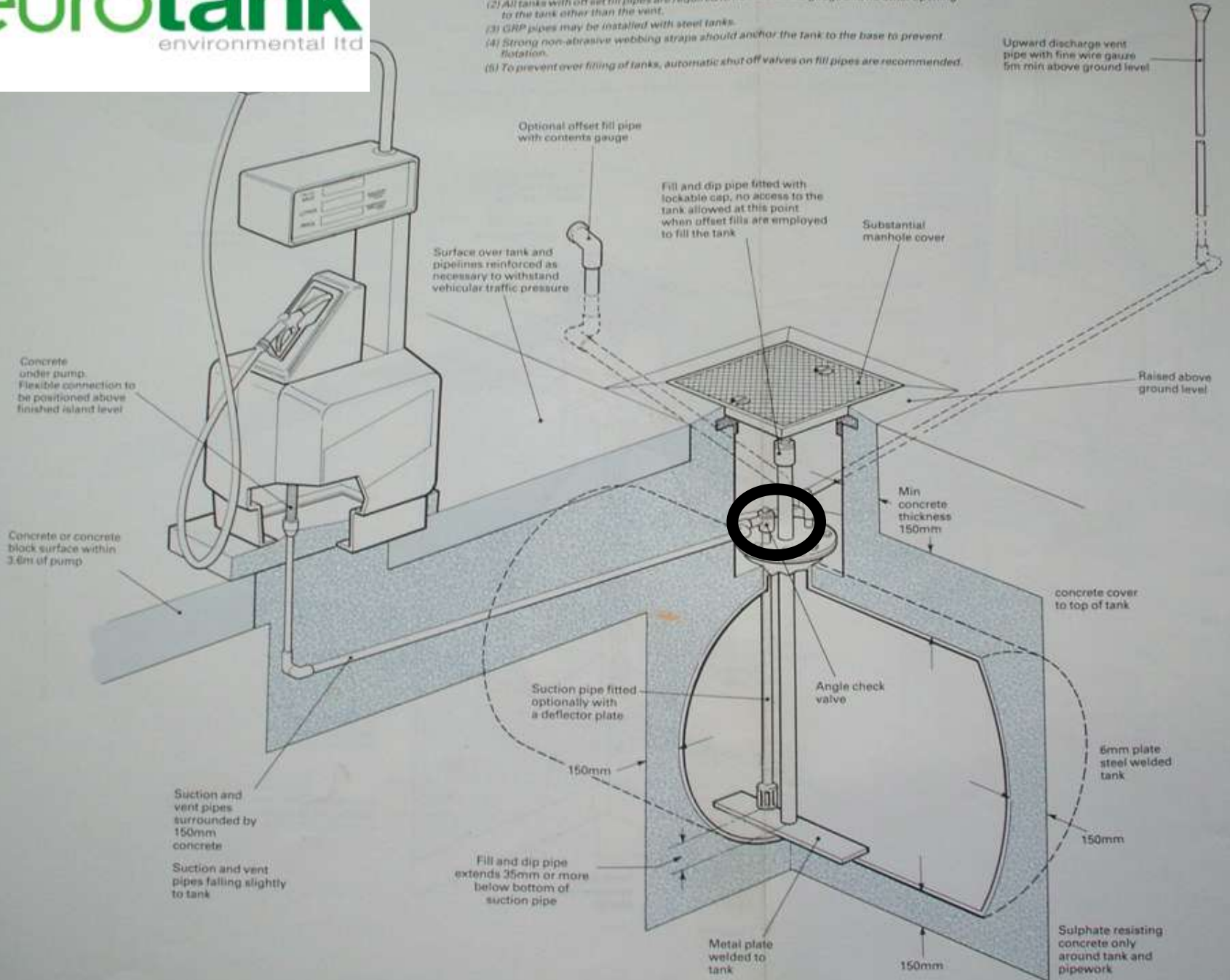
Metal plate welded to tank

Sulphate resisting concrete only around tank and pipework



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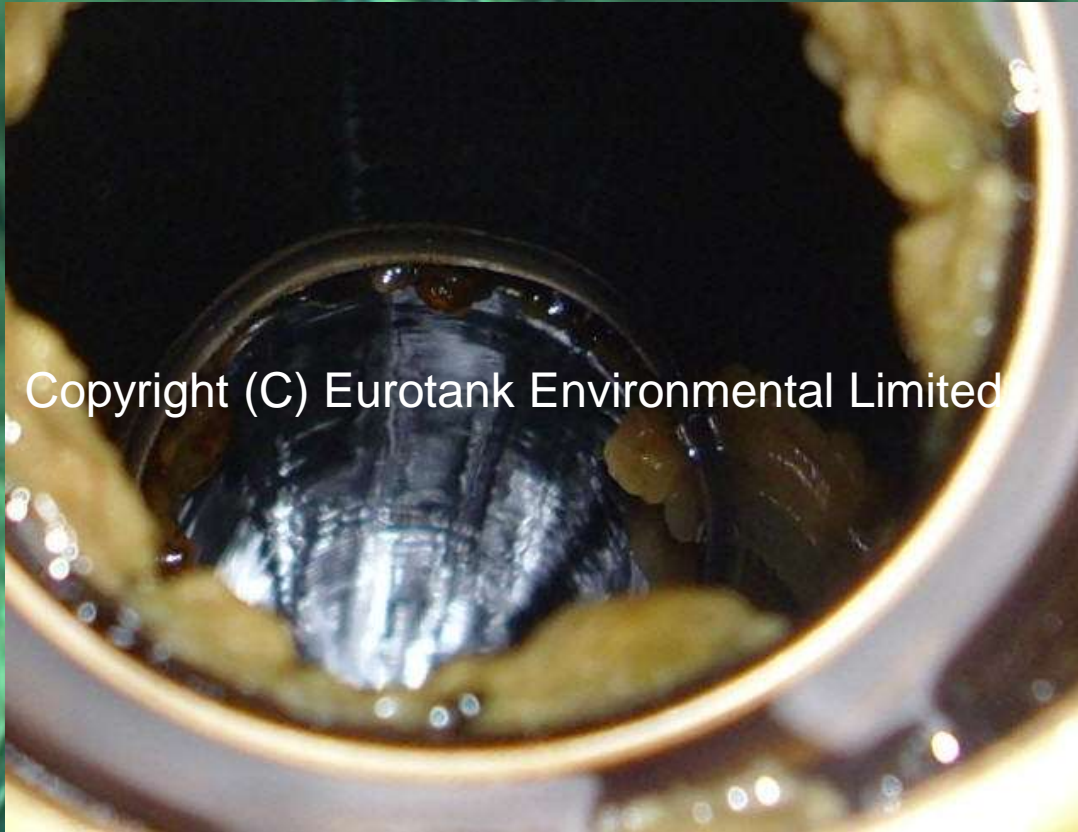
Angle check valve

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Fill and dip pipe extends 35mm or more below bottom of suction pipe

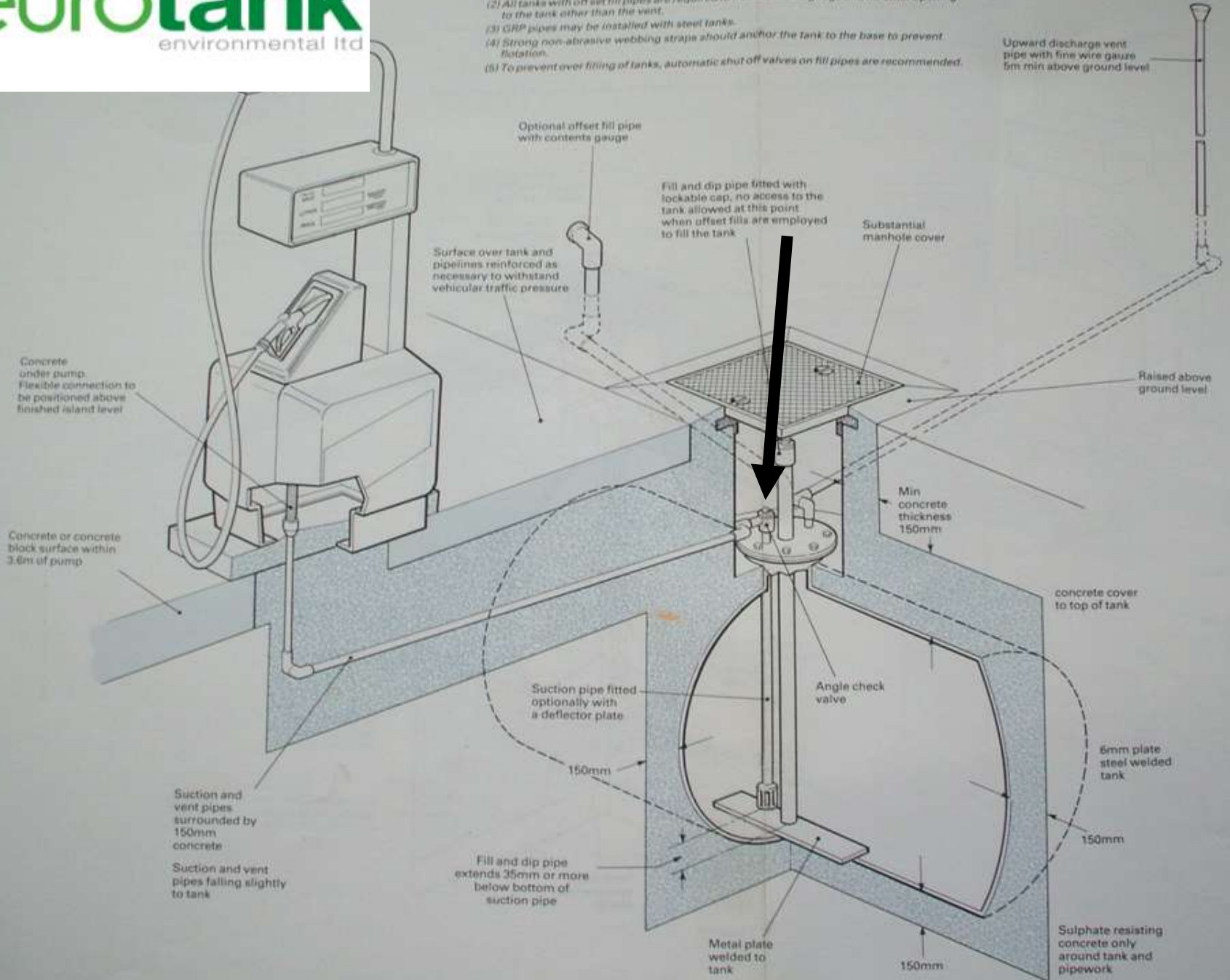
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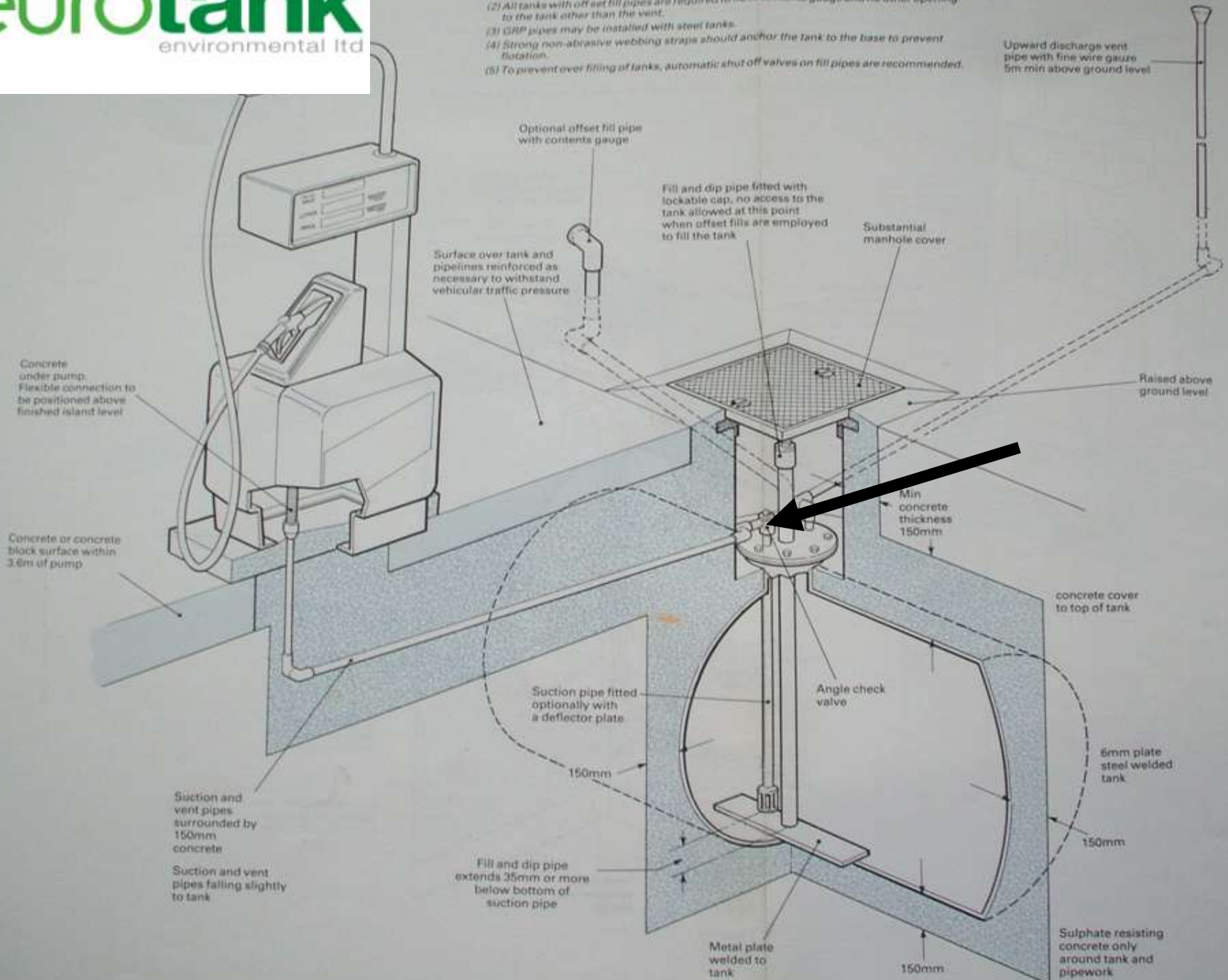


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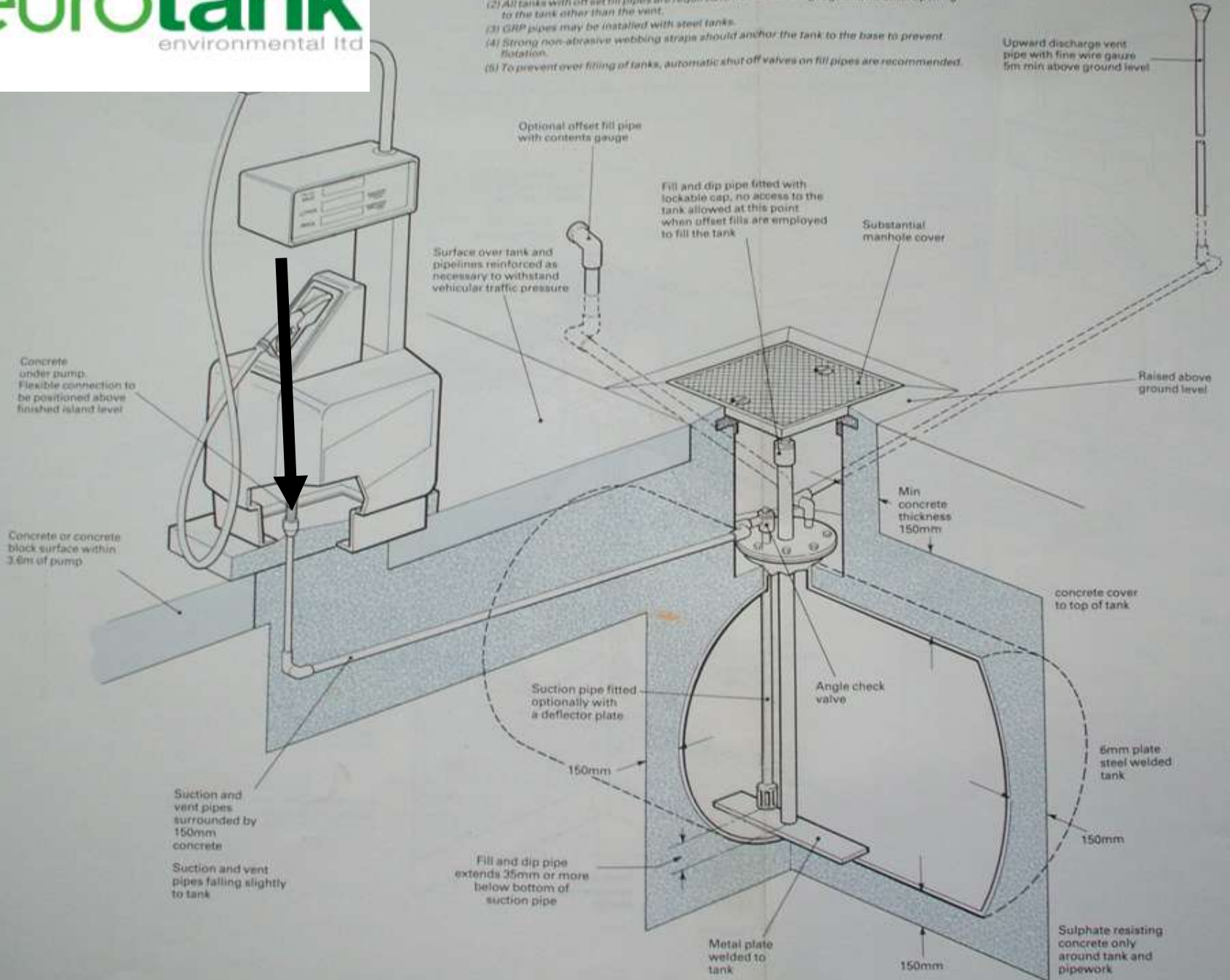
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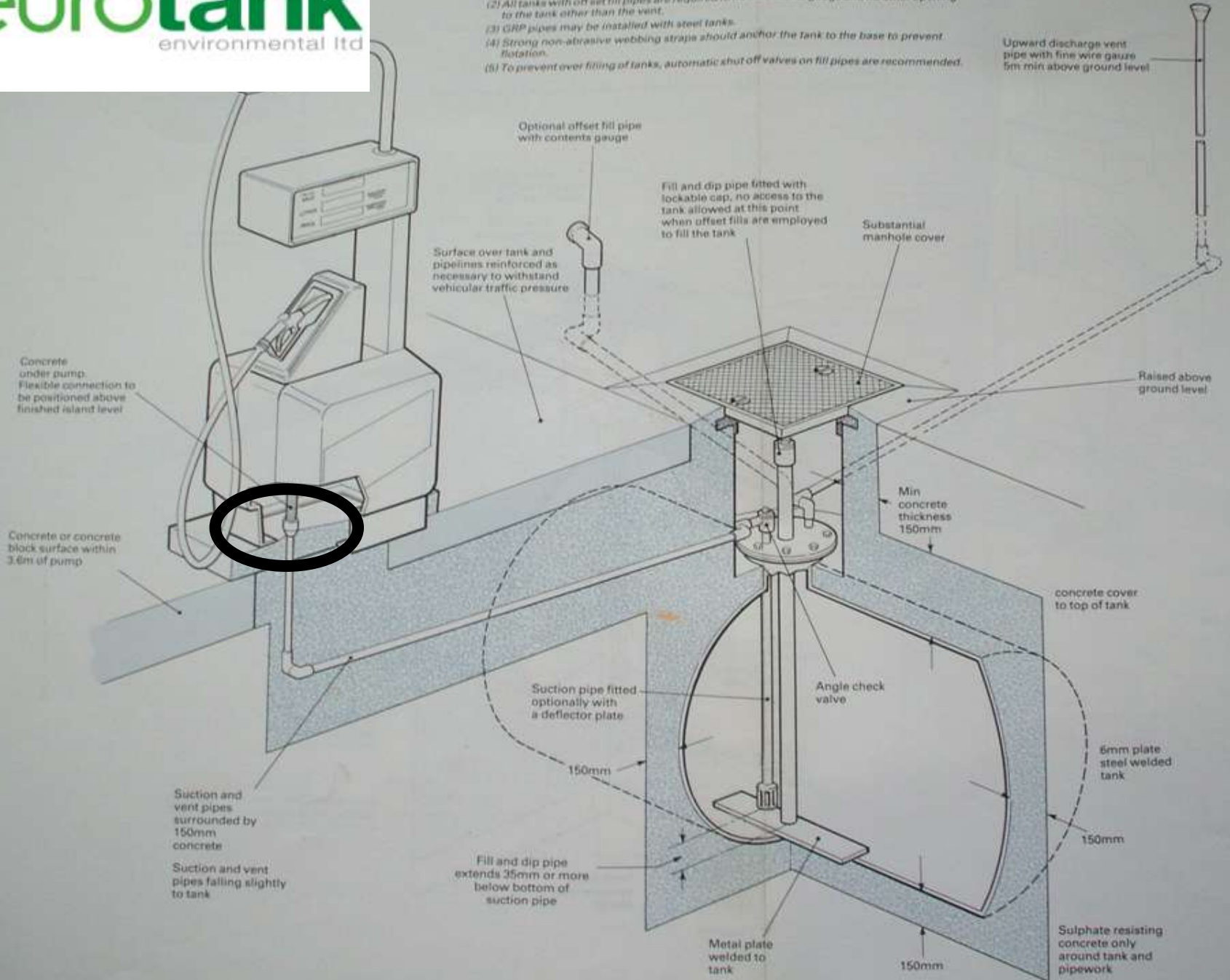
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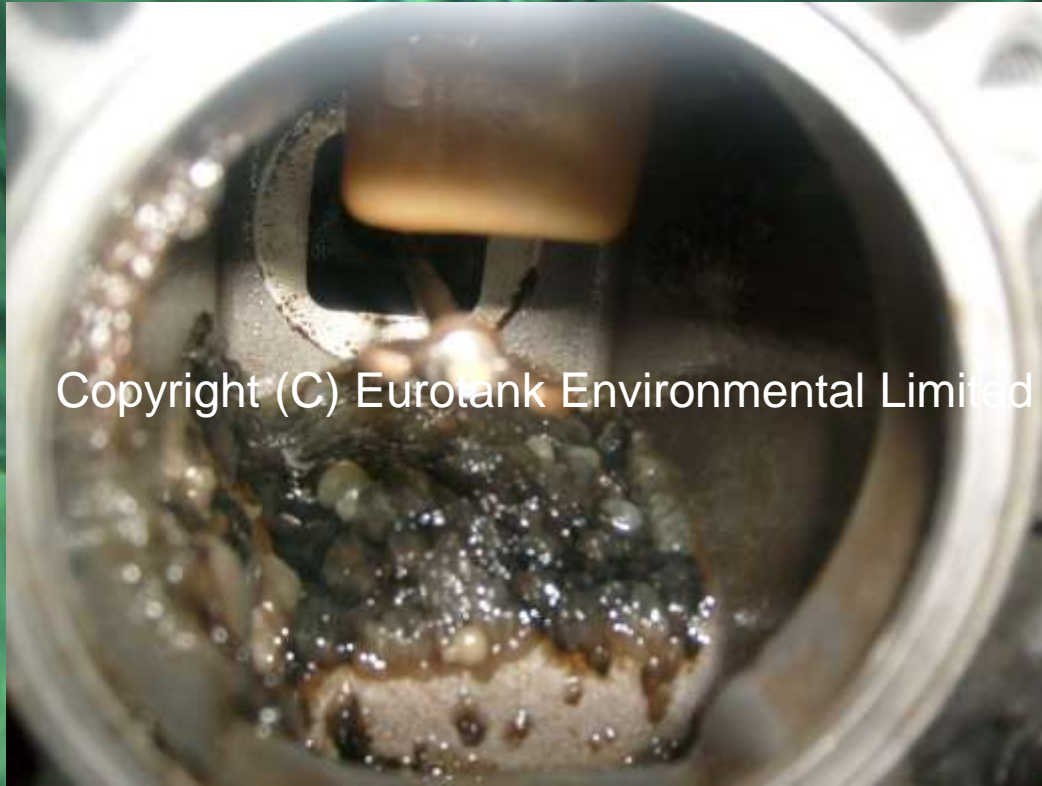
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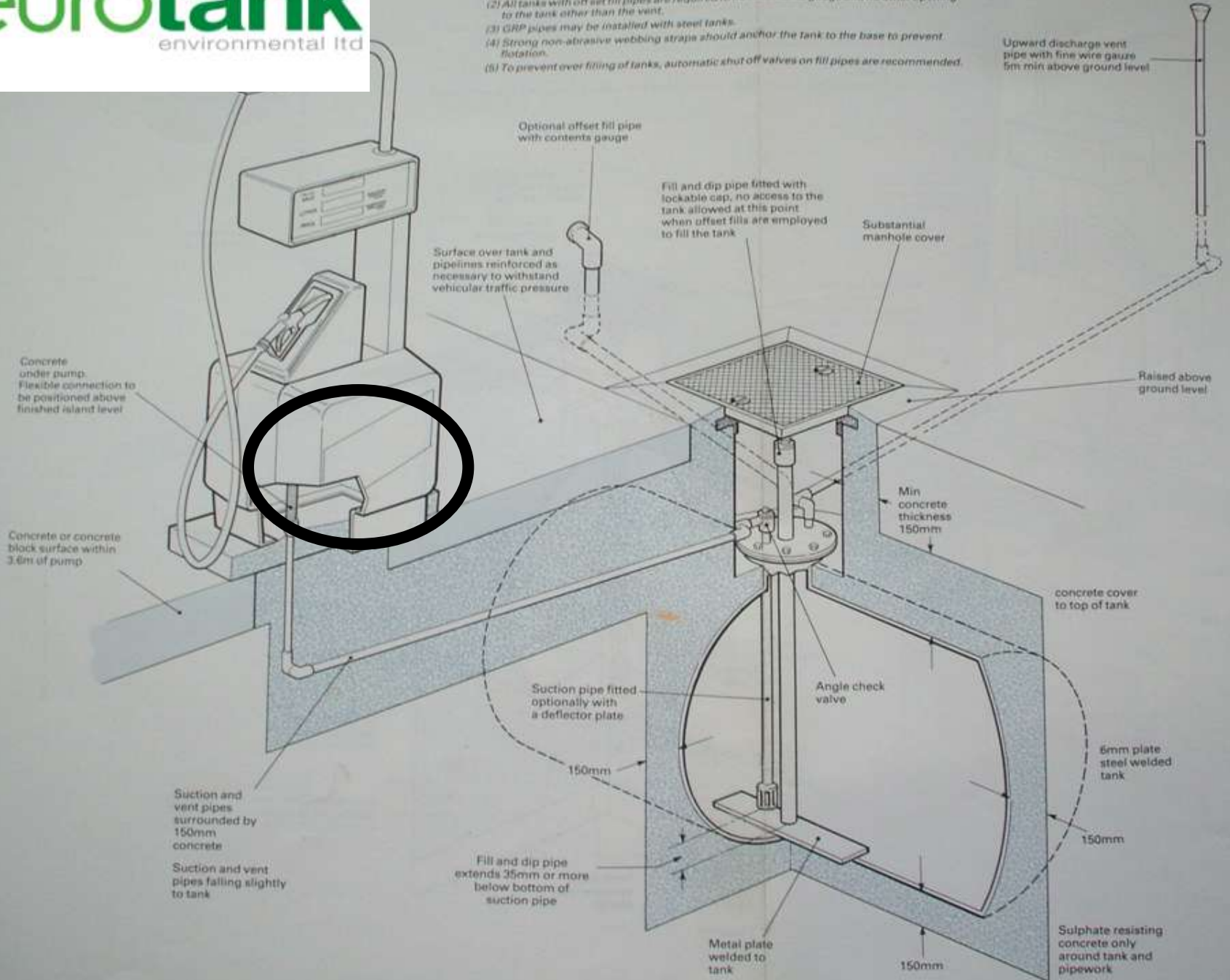


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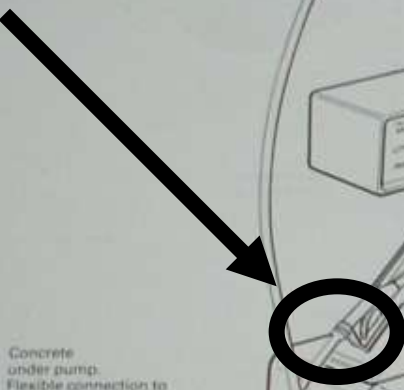
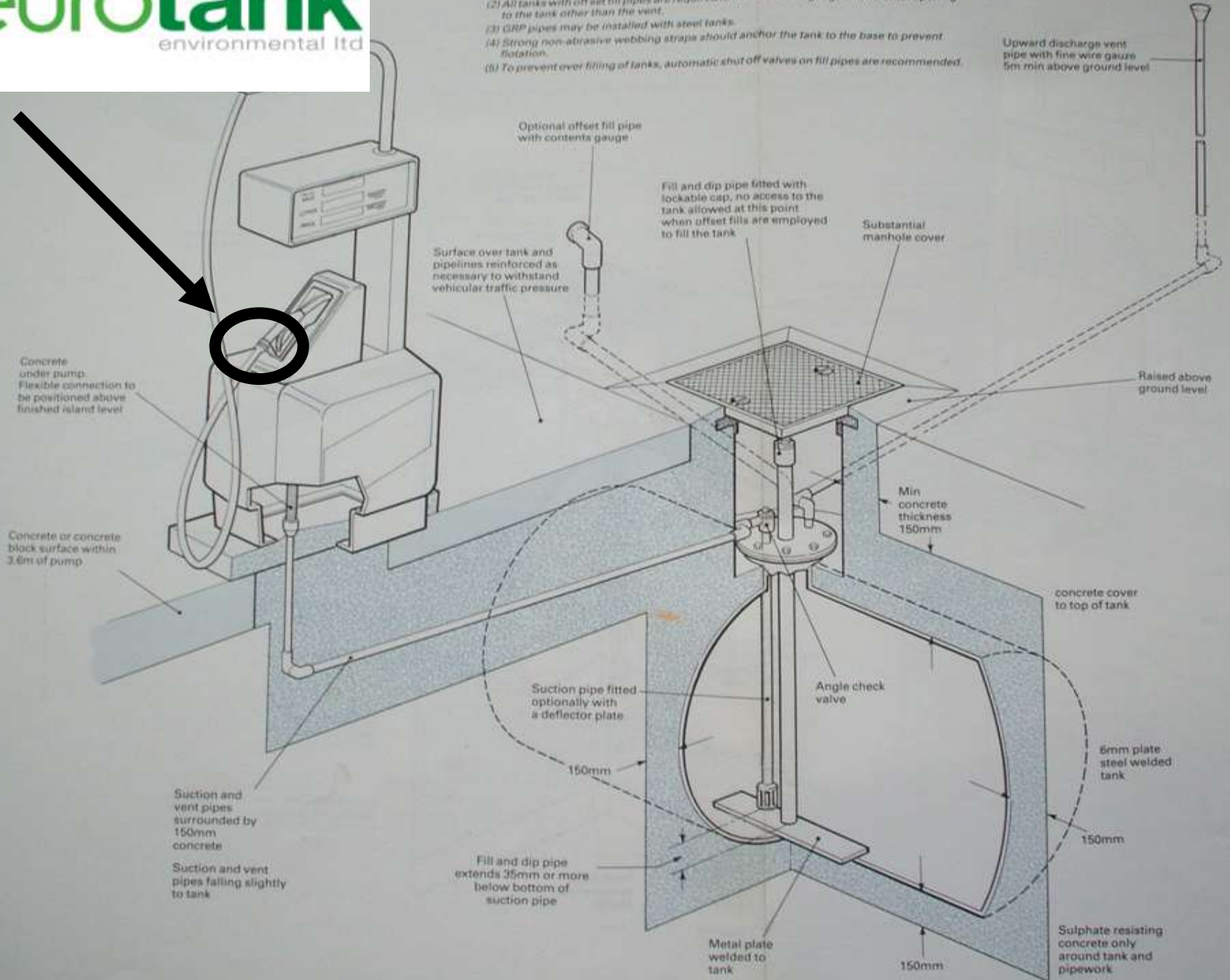


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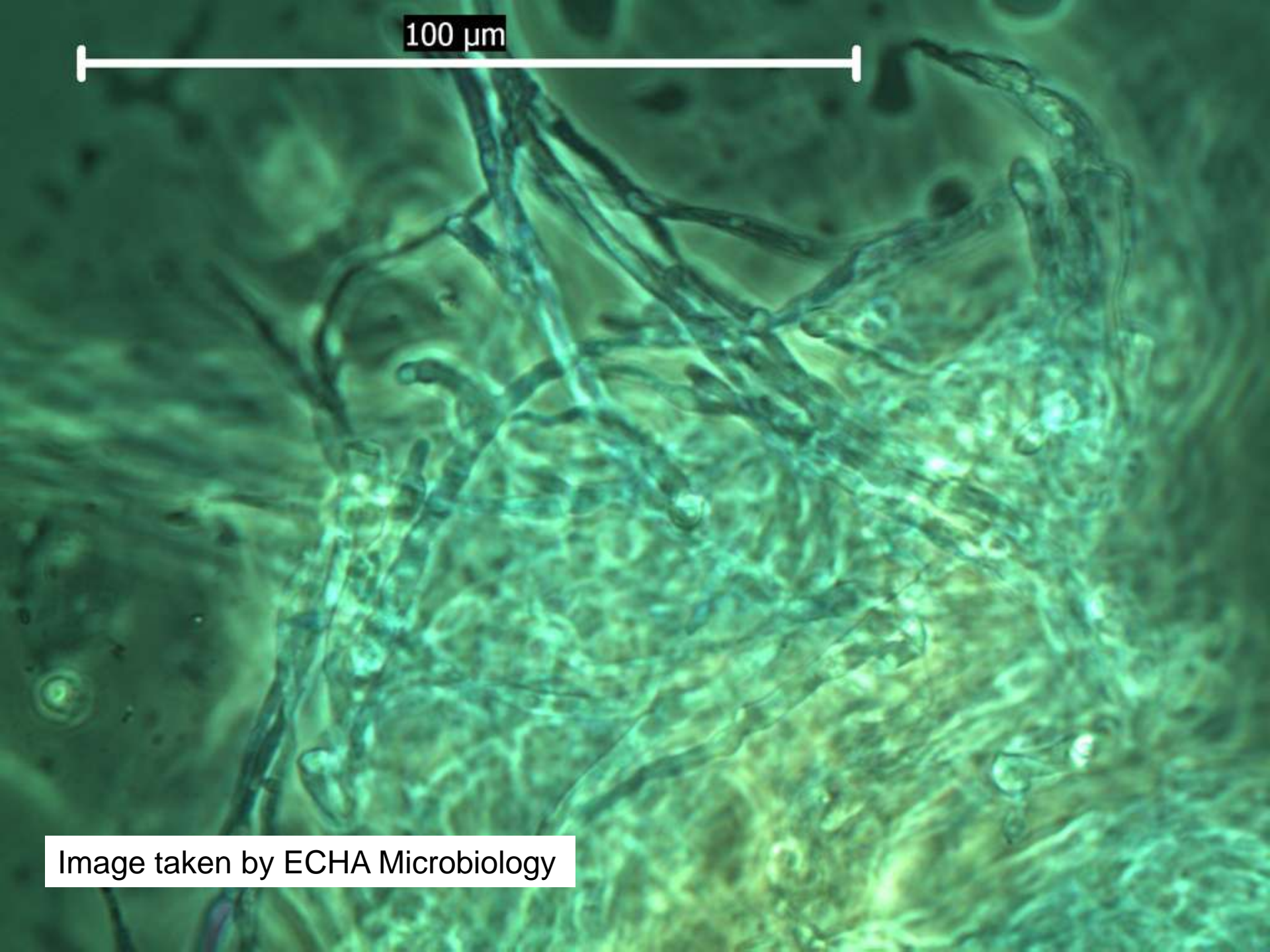
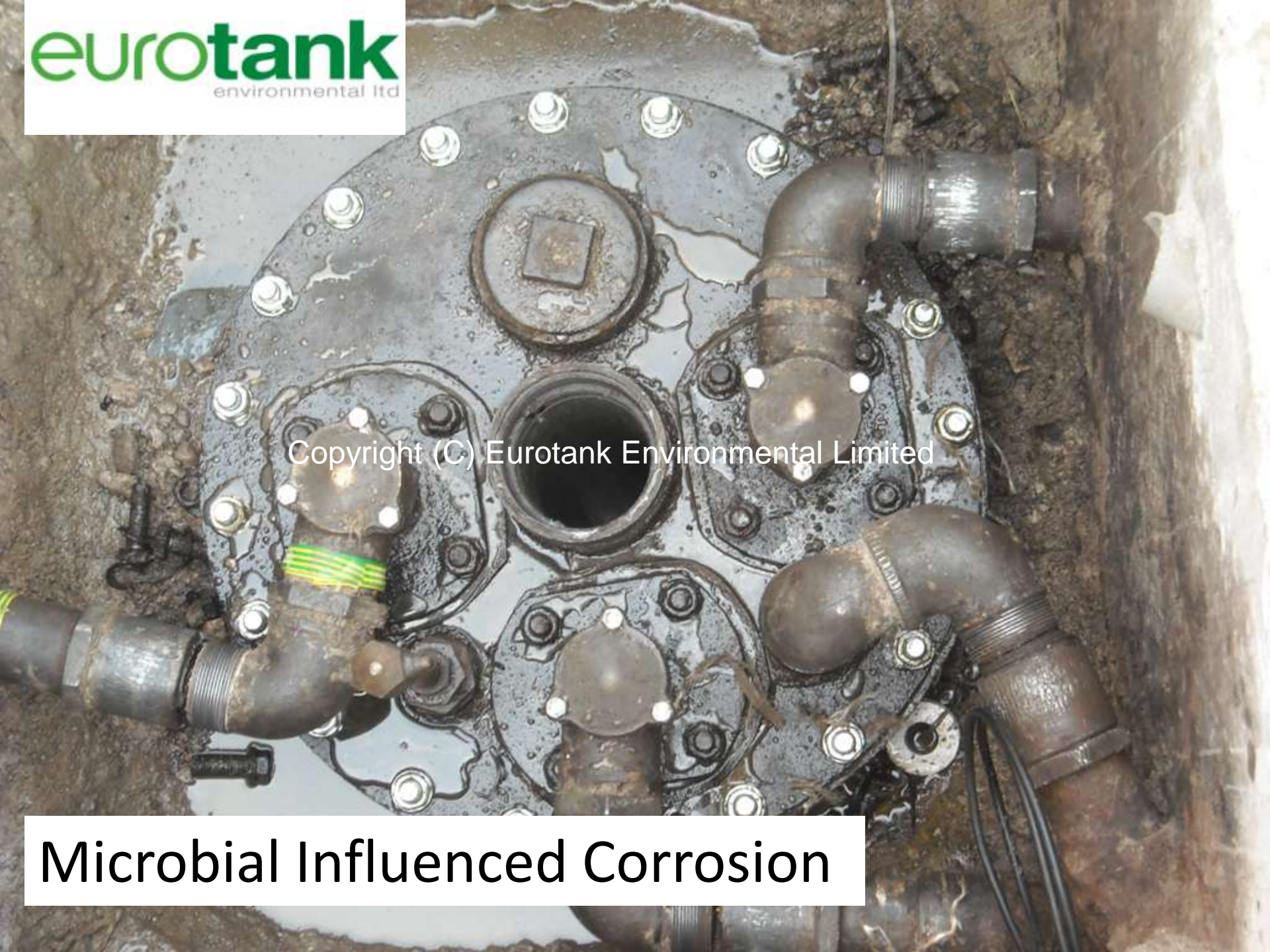


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Microbial Influenced Corrosion



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CHIATHAM

PUMP 2

A microscopic image of plant tissue, likely a cross-section of a stem or root, showing various cellular structures. A white scale bar is positioned at the top, with the text "100 μm" in a black box above it. The tissue shows a central vascular cylinder with distinct layers of cells, including what appears to be the cortex, pith, and vascular bundles. The overall color is a mix of green and yellowish-brown, typical of stained plant tissue.

100 μm

Questions ?