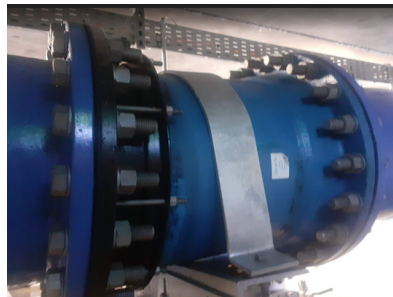


Lessons Learned:
**Above Ground Pipework
-Flange Adaptor Tie Backs**

Brand imagery can be downloaded
from our image library [here](#)



ISSUE X



Flange Adaptors slipping and moving when pressurised

Cause of Movement – Pipework / fittings not secured where the spigot end of the pipe inserts into flange adaptor

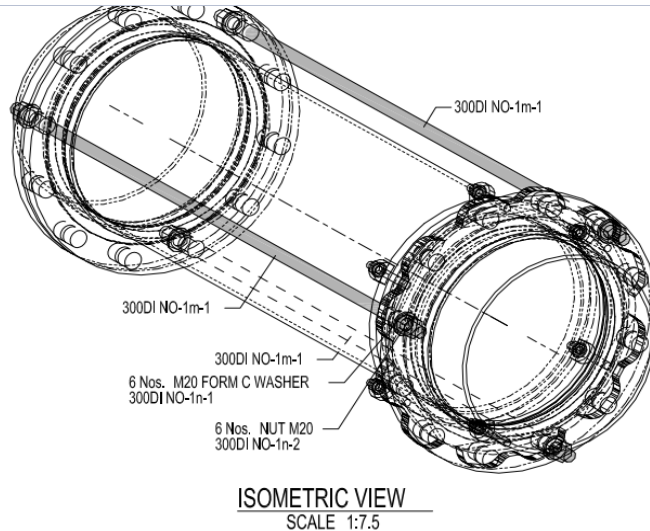
Consequences – Movement and slipping of Flange adaptors under pressure can lead to blowouts of pipework which can seriously harm and injure

Root Cause

Flange adaptor locations and where to secure them previously not considered on above ground pipework designs/ drawings

Left to site team/ pipework installer to determine location of these flange adaptors No structural design for securing flange adaptors never incorporated in pipework layouts

SOLUTION



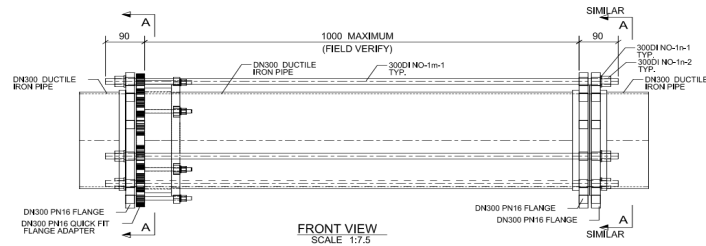
Flange Adaptors will always be required when installing above ground pipework as a flexible joint is required to allow for any cast in/ pop up pipework that may be off centre/ off plumb or out of alignment. The flexible joint can cater for these issues without getting fabricated sections on pipe to suit

Full standardised structural design must be completed and readily available.

Similar to thrust blocks for belowground pipework, the aim was to create a set of drawings detailing out the flange adaptor tie back details for various pipe sizes up to a set pressure

Structural design now informs the flange adaptor location and distance away from nearest flange when detailing above ground pipework

Design Parameters ✓



- Max operating pressure – 5 Bar, Test Pressure 7.5 Bar
- Details max length for tie back at 5bar O.P
- Design and calcs for quickfit, flexlock and maxifit adaptors
- Extender plates and extension tie backs detailed in drawings
- Details no. of tie backs, Location on Flange, Length, nuts, washers, threaded bar
- Design from 100mm up to 600mm ductile
- Any deviation from the above parameters, a separate structural design must be sought from designers

Thank you.

