Pipeline Witness Marks Technical Addendum

Witness marking of Polyvinylchloride (PVC) pipes, Ductile Iron (DI) pipes is an established construction technique for ensuring the correct Depth of Engagement of socketed pipe joint connections on dual water systems. The correct alignment and insertion of the spigot into the socket allows the pipe to expand and contract under test and operating service pressures. An Incorrect insertion can cause the spigot to withdraw from the elastomeric sealing ring, creating a leak or full pipe dislodgement at the pipe joint. Gross over insertion of the spigot within the socket can also lead to structural failure of the pipe.

The Melbourne Retail Water Agencies edition of the Water Supply Code of Australia, (WSA 03-2002) and Dual Water Supplement Manual (Version 1.1), outlines the deemed to comply requirements for pipe laying and jointing of dual water pressure pipeline systems. Clause 15.1.2 of the Code requires witness marks to be provided on the unmarked lengths of any cut pipes. Due to varying interpretations of this clause, this Technical Addendum provides additional information to assist pipe installers and site auditors achieve compliance with this mandatory requirement.

Clause 15.1.2 of the Code, third paragraph is now being replaced with the following wording:

- *Chamfer and provide a witness mark on all unmarked and cut pipe lengths. Apply correct lubricant to the pipe spigot and chamfer in accordance with pipe manufacturer's recommendations. Each witness mark must be placed around the circumference of the pipe barrel. All socketed pipe/fitting connections must have a specific witness mark to match the correct socket depth. Each pipe spigot shall not be over-inserted or pushed beyond the witness mark. If a pipe spigot is pushed beyond the witness mark, it shall be withdrawn immediately and re-inserted to the correct depth. Placing a witness mark around the circumference of the pipe barrel after pipe insertion is not permitted.*

Clause 15.1.4 of the Code, second paragraph is now be replaced with the following wording:

- *All Pipe lengths must be aligned and inserted into a pipe or fitting socket in a straight line. To prevent movement, restrain laid pipes with an approved pipe laying fork or suitable equivalent before the next joint is made. Witness marks must be visible on all pipeline lengths.*

In addition to the revised clauses to the Construction part of the Water Supply Code, South East Water has re-introduced Water Industry Technical Standard (WITS) Drawing WAS.011 for guidance purposes. This drawing is to be read in conjunction with the Construction WAT-1100 and WAT-1800 series Standard Drawings.


If you have any further questions or suggestions regarding the information outlined in this Technical Addendum, please contact Mr Colin Paxman on telephone number (03) 9552 3651 or email at colin.paxman@sewl.com.au
TYPICAL INSTALLATION OF POLYVINYL CHLORIDE (PVC) & DUCTILE IRON (DI) PIPES & FITTINGS