



TECHNICAL NOTES

OCTOBER 1997

Number 2

EDITORIAL

Welcome to the second in our series of Newsletters issued by the Infrastructure Standards Unit. It is now over 12 months since the introduction of the Construction Manuals and the Authorised Items system and it continues to develop.

This Newsletter covers a wide range of information related to the updates, general details on why and how things should be done as well as giving ideas and advice on all sorts of things.

I would also like to remind everyone that the Construction Manuals are designed to be living documents which grow and develop as we find ways of improving the various systems and we look for your help and suggestions in this process. An easy way to do this is to contact us by phone / fax / email or using the Defect Advice Form process. I urge all of you to become involved by sharing any suggestions you might have.

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NEW DOCUMENTS

With this set of updates is the revised Water Supply Construction document - DS 9(b). This document has been issued as a Code of Practice instead of a Specification, this allows us to be prescriptive rather than legalistic. The legal aspects are included as Supplementary Notice to DS 10, which is the next document for review.

The Sewer Design document - DS 11(a) is undergoing its final review at this time and it is proposed to run a seminar for consultants in November to explain the various aspects of DS 11(a). This seminar will give consultants an opportunity to resolve any issues they may have, once they have had an opportunity to study the Code of Practice. Invitations will be posted out shortly.

MANUAL UPDATES

All manual owners who purchased their manuals before 1 July 1997 have or will receive an account to cover the cost of providing the update service. The annual cost is \$50 per manual for water or sewer (the purchase price covers updates for the first year). To establish a common charge date (1 July), the initial update fee will be on a pro rata basis to bring all subscribers to that date.

The intent of the Standards Unit Update Service is to keep all subscribers abreast with the latest information relevant to the design and construction of water and sewerage infrastructure. To ensure all correspondence reaches you as quickly as possible please ensure your contact details are correct. If your details need amending, contact the Infrastructure Standards Unit with the new details.

Valve Chamber

Pump Chamber/Sump

Switchboard

Control' Access Chamber

ELEVATION OF SUBMERSIBLE PUMPING STATION

SUBMERSIBLE PUMPING STATIONS

The next major area for review is Submersible Pumping Stations.

It is proposed to authorise various grouped areas of the stations namely :-

- Pump Chamber
- Valve Chamber
- Pumps and Level Controllers
- Switchboard

This will still allow companies to provide the complete station package, but will also introduce some competition and give better guidelines to exactly what SA Water requirements are. This review is expected to be resolved before the issue of the next documentation update.

The existing authorisations remain current until the review is complete.

PRODUCT NEWS

Stockbrand Tapping Saddles

Product Authorisation for Stockbrand Tapping Saddles has been removed due to a number of recent problems with installed tapping saddles of this brand.

Tapping Saddles

The authorised units are currently being reviewed - it is expected that the number and types will be consolidated.

Pre-Tapped Connectors

The majority of suppliers are no longer stocking the Pre-Tapped Connectors with 25 mm diameter tappings due to lack of demand.

The manufacturers of Pre-Tapped Connectors are currently investigating the possibility of manufacturing 200 mm and 250 mm units.

Autotherm Adaptors

The Autotherm Adaptor Product Code 4730-4965 (Brass End Connector for 25 mm PE tubing that screws onto a 20 mm Main Cock) has been modified with the new style Philmac nut assembly which accepts 25 mm MDPE tubing.

The Autotherm Adaptor Product Code 4730-4926 (Brass End Connector for 25 mm PE tubing) has been changed from 25 mm BSP to 20 mm BSP thread. The PE Connector has also been modified with the new style Philmac nut assembly.

Autotherm
4730-4926

Autotherm
4730-4965

Resilient Seated Valves

Resilient Seated Valves, (Flange/Flange) have been authorised for use as from the 1st October 1997.

The major difference to Metal Seated valves are :

- flange to flange width is narrower
- different 'feel' when closing
- 'O' Ring seals on spindle easily replaced under pressure
- epoxy coated internally and externally
- corrosion protection unnecessary unless external epoxy coating is damaged

Note :- Any valve with damaged internal coating is to be rejected and replaced with an undamaged valve.

The initial authorisation covers valves manufactured by - Charmac, Johns and Tubemakers.

Resilient Seated Valve

Use of AS 1415 Sewer Fittings

With the amalgamation of Australian Standards AS 1415 (Soil Waste & Vent - SWV) and AS 1260 (Sewerage) into AS 1260 (Drain Soil Waste & Vent - DWV) the use of products in the 100 & 150 mm marked AS 1415 are **acceptable provided that they made by an Authorised Manufacturer** until 5 October 1999.

Use of AS 1254 Storm Water Fittings

There has been instances where Storm Water Fittings, marked AS 1254, were used in sewer reticulation systems - these **are not authorised** for use in sewer applications - therefore **these fittings shall be removed from any installations.**

REMEMBER !!!

If a product is **not in the 'Authorised Fittings Catalogues'** it shall not be used. If you have any queries, or suspect that a product may be authorised but has yet to be included in the Catalogue, contact the contract inspector or the Infrastructure standards Unit. Use of alternative products may seriously affect the long term performance of the infrastructure system.

If you are experiencing problems with a product or require information on how to get product authorisation please contact the Standards Unit.

Alternate Screenings

Mobile Reclaimers (a subsidiary of McMahon Services) have recently spent \$900 000 establishing a recycling plant for concrete waste and as a result they now have the capacity to produce 1 200 tonnes of recycled product per day. Their crushing plant is set up in a similar fashion to a commercial quarry with screens and sieves to obtain various gradings of products. The crushed product consists primarily of concrete and brick. The process includes a system to remove metal and organic materials.

One of their products is a 10-7 mm screenings (from crushed building material) - this has been tested and meets all the essential requirements necessary for its use as a sewer embedment material. The key requirements being that the material will not deteriorate over time, can be easily compacted and is sufficiently free draining so that it can conduct water along the trench floor to a sump.

On this basis **the product has been authorised as an alternative 10-7 mm screenings material** (to the existing PM43 quartzite material) for use as the **embedment material** for PVC sewer pipe in SA Water's sewer infrastructure

The material is available from :-
Mobile Reclaimers
Corner Wingfield and Hines Roads
Wingfield
Phone No. (08) 8347 3329.

Recycled Material PM43 Quartzite Material

Note :- It is not a replacement for PM43 as a road surface material because it lacks the durability necessary for continuous vehicular traffic (road wear).

DIRECT TAPPING OF DICL PIPE

The Superintendent's Representative **may** authorise the direct tapping of 300 and 375 mm diameter DICL pipe, in lieu of tapping saddles, provided that :-

- Sharp drill bits and sharp thread taps are used
- Drill jig to be used is approved by Supt's Rep
- All damage to the protective pipe sleeving is repaired in accordance with manufacturers specifications.

UNLOADING OF DICL PIPE

Tubemakers Water Pipelines Systems have recently reviewed field practices and recommended procedures in unloading DICL

pipe. The result is they now "advise that conventional power lifting machinery should be used in unloading pipes". Their publications will accordingly be amended to reflect this procedure change.

UNLOADING OF PVC PIPE

There have been occasions when loads of pressure PVC pipe were unloaded by simply pushing the pipe off the back of the truck. This has occurred despite the supplier being advised that suitable mechanical handling equipment would be available.

Such practices cause significant damage to the pipe - which may render it totally unusable or have a harmful effect on the long term performance of the pipe. We are installing assets which are designed to serve the state for 80 to 100 years therefore we all have a responsibility to see that it is given every opportunity to last that long.

SA Water's Code of Practice DS 9 Clause 4.2.3 states :-

'PVC pipes shall be stored, transported and handled in accordance with the relevant provisions of AS 2032 and in a manner and with equipment designed to preserve their dimensional and physical properties and to avoid damage to the pipes'.

Future incidences of improper unloading will result in the total rejection of the pipes concerned with the party responsible for the damage paying for the replacements. You are therefore requested to ensure that suitable provisions are made for the correct unloading of PVC pipe, upon its arriving on site, at the time of purchase.

Unacceptable Unloading Practice