



PRE-TAP CONNECTORS

Case Study



DAEMCO, LIVING UP TO ITS INNOVATIVE PRODUCT DEVELOPMENT AND SECOND TO NONE SERVICE REPUTATION, WITH THE FIRST PRETAP CONNECTOR ON THE MARKET COMPLIANT TO AMENDMENT 1.



What was the Problem?

A number of water authorities had identified an issue where corrosion was occurring in the area where there was no "FBE coating" on the tapping area of the threaded connections of pre-tapped connectors. The effect of this corrosion resulted in water infrastructure requiring to be replaced well before the expected asset design life. These are unexpected and non-budgeted costs for the water authority which ultimately affect the rate payer.

How the problem was addressed.

Pre-Tapped connectors are required to be designed and manufactured in accordance to the Australian and New Zealand standard, AS/NZS2280. The standard committee responsible for AS/NZS2280, WS-016 Cast Iron Pressure Pipe and Fittings, discussed and implemented Amendment 1. 2021 to the standard and, for Pre-Tapped connectors, added a statement within Clause 2.5.4 "The corrosion protection system shall be fully effective for all internally wetted surfaces".

Understanding the new clause.

Understanding the statement within Clause 2.5.4 was critical to be able to work through potential solutions. Discussions and meetings were held with Water Services Association of Australia along with our Conformity Assessment Body, IAPMO, to determine what would and wouldn't comply.



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Innovating a solution.

Essentially corrosion could occur in the area where this is no fusion bonded epoxy coating on the tapping areas of the threaded connection on the current design of Pre-Tapped connectors. If the fusion bonded epoxy coating in the tapped area on the inside is compromised, damaged or chipped there is the potential for corrosion to occur.

Our engineering team used our 3D Printing capabilities to order rapidly produce numerous prototype designs, and assembly techniques to test, assess and revise. This innovative process greatly reduced the overall product development time and eliminated potential manufacturing production issues.

A number of possible solutions were identified before settling on one design. This innovative solution needed to not just be compliant but also be easily manufactured, and cost effective, in order to remain competitive against other property service connection products. Consultation with IAPMO, our certifier, WSAA and numerous Water Authorities to incorporate feedback, and ensure compliance, was critical to a successful design.

It was identified that a bush or other additional component was going to be necessary in order to adhere to the new standard. The use of a bush meant that other compliance requirements had to be taken into consideration. We decided to use a copper alloy bush which would be manufactured to comply with The Plumbing Code of Australia, NCC 2022 Vol 3, Clause A5G4 having a weighted average lead content of not more than 0.25%.

The solution.

A unique design of a low lead bush, fitted with sealing o-rings, that is assembled into the fusion bonded epoxy coated Pre-Tapped connector where the O-rings seal against the inside walls of the coated area eliminating any potential for corrosion to occur. Assembly of the bush into the pre-tapped connector is undertaken at our Warehouse and Distribution Centre in Tullamarine Victoria by our Quality Control team. Daemco Australia is proud to have developed a unique design for eliminating potential corrosion at a known point. A design we are proud to say is currently Patent Pending.



First to market.

Well done on a fantastic effort by the Product Development and Sales Teams at Daemco for having the first Pre-Tapped connector published in a WSAA Product Appraisal, the first to be approved in SA Water, (SA Water lead the charge by only accepting compliant Pre-Tapped connectors from 1st July 2024) with many other water authorities following suit and including Greater Western Water, South East Water, Yara Valley Water, Unity water, Sydney Water, Hunter Water with more approval applications currently being processed around the country.

Don't hesitate to contact Daemco, to discuss your product requirements and needs, we're sure to have an innovative solution for you.



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65 Assembly Drive, Tullamarine VIC 3043
1800 323 626 | enquiries@daemco.com.au

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