

Engineered Solutions – From Concept to Completion

Re-Engineering of 'Pendolino' Toilet Installations

Following service introduction, passengers using Class 390 'Pendolino' trains regularly reported defective toilets and unpleasant smells inside and outside the toilet modules on these units. These problems rapidly became a 'high-profile' issue being reported in trade and national press.

Working with Alstom Transportation, Flowonics Limited undertook a complete re-design of the toilet pipework systems, which has dramatically reduced the number of leaks and blockages. This has resulted in a significant improvement in the reliability of the toilets, greater unit availability and a more pleasant travelling experience for passengers.



Flowonics was quickly able to identify the critical issues with the original toilet system design which caused the reported problems. Having done so, the original pipework components were redesigned as one-piece silicone items rather than the multi-piece hoses originally fitted. The new components were successfully trialled and Flowonics has supplied complete modifications kits to enable the installation of the new system on the entire 'Pendolino' fleet.

In addition to supporting the modification of the existing units, Flowonics is now preferred supplier to Alstom Transportation for pipework systems fitted to Controlled Emission Toilets (CET) on their vehicles. In line with this, Flowonics is currently supplying BFG in Bahrain who are manufacturing new CET modules for the new 'Pendolino' vehicles currently being built.

The development of the new pipework system and components demonstrates the application of Flowonics' expertise in Engineered Solutions for the rail industry.

For further information regarding this and other Flowonics solutions, please contact:

Andrew Hawker
Flowonics Limited,
Unit 9b, Hurst Business Park,
Brierley Hill, West Midlands.
DY5 1UT

Tel: 01384 472820
Fax: 01384 472821
Mobile: 07968 576995
E-Mail: andyh@flowonics.co.uk
Web: www.flowonics.co.uk