

# Field joint coating for the UK water industry

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For water and sewerage pipeline networks around the world, Canusa-CPS provides a variety of heat-shrinkable and adhesive-based products that provide excellent functionality across a broad range of applications and temperatures.

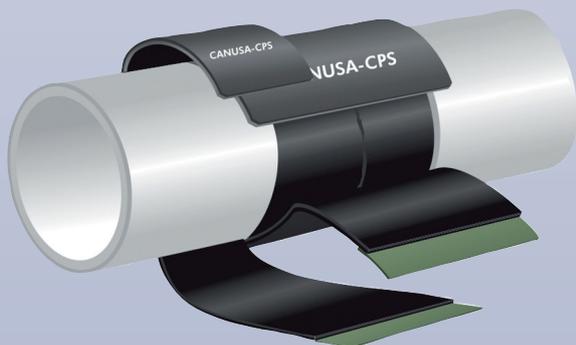
Heat-shrinkable sleeve technology is predominantly utilised for the coating of field joints, whether they be butt-welded, pushfit (such as tyton/socket joints) or flanged. There are also some applications where heat-shrinkable material can be used for coating line pipe where 3LPE factory coating was not possible.

In a world where, ever increasingly, clients and contractors face restrictions on the excavation of roads in built-up areas or face natural obstacles to pipe-lay such as rivers and lakes, or man-made obstacles like established highways, horizontal directional drilling (HDD) is often the chosen method to overcome these issues. There are several techniques available to either pull or push the pipe under these obstacles and all have their merits. However, the process of passing a pipe through the soil can have a detrimental effect on the coating of the pipe. In particular, the field joint coating can often appear to be the weakest point in the end-to-end coating. Designers ultimately specify appropriate coatings to cope with the terrain through which the pipe is pulled. With regard to steel pipe, typically the coating will be a three-layer Polyethylene (3LPE) or Polypropylene (3LPP) system. Canusa's core belief is that you should ultimately choose a field joint coating that matches the main line coating in design and performance where possible. Millions of heat-shrink sleeves from Canusa-CPS are installed on pipe networks around the world each year with this design intention.

With regard to field joint coating that will be subjected to the high shear and impact forces of HDD, careful consideration needs to be given to the selection of a heat-shrink system that will not only give excellent long-term corrosion and mechanical protection, but also remain in place during directional drilling.

For HDD projects, Canusa-CPS has a range of products to cope with these issues, ensure complete client confidence during installation and also give long-term coating integrity. Products developed over the years include the TBK range and the new DDX™ system to cope with HDD installations.

Essentially the systems are made up of three components: a two-component force-cured liquid epoxy, a high-density heat-shrink sleeve with a pre-impregnated adhesive, and a sacrificial leading-edge sleeve (as illustrated):



Components of a Canusa-CPS heat-shrink pipe sleeve

Recently, Canusa-CPS and its UK distributor FT Pipeline Systems (FTPS) demonstrated their capabilities as part of Wessex Water's Grid Mains upgrade. This involved a c.130-metre section of 250mm coated and lined steel pipe for a HDD scheme. The 250mm pipe, supplied to Alton Pancras near Cerne Abbas in Dorset, has been used to link water supply zones.

A vital part of the new pipeline was the joint corrosion protection across the field welded joints and for this, FTPS have supplied Canusa Thrust Bore Kits known as TBK-65. The kits take the form of a GTS-65 three-layer application with an additional sacrificial sleeve on the leading edge. The sleeves were installed by Kempster Welding, supervised by FTPS to great success.



DDX™ sleeved pipe for Wessex Water grid mains upgrade in Dorset

FTPS and Canusa-CPS have supplied some significant schemes over the years with some flagship projects for the water industry. These include: South East Water – Bray Main; Severn Trent Water – Gloucester SoS and Micheldean; Thames Water – The Olympic Park; United Utilities – West East Link Main; DoE NI – Dunmore; and Northumbrian Water – Abberton.

**For further information on Canusa Heat Shrink Sleeves please contact Ian Harding on**

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**or visit: [www.ftpipeline.com/canusa-heat-shrink-sleeves](http://www.ftpipeline.com/canusa-heat-shrink-sleeves)**



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