



Project: E Wood – Utilities water quality improvement works

Challenge: Since the early 1990's E Wood have produced coatings for the renovation of water mains to meet the needs of the UK Water Industry in meeting their commitments to improve water quality. Early coatings produced were epoxy resin systems where the coatings were sprayed along pipe walls to a depth of 1mm to seal pipe walls from further deterioration. However, a 16-hour air cure period was required before return to supply. This invariably involved customers and property occupiers in having their water supply shut off for 36 hours. Obviously, this caused considerable inconvenience and distress to customers typically provoked considerable customer complaint levels.

Solution: In the mid 1990's E Wood embarked upon a development programme to produce a new generation of materials for these ongoing water mains rehabilitation programmes. The objective was to produce a coating system for these works that offered all the benefits and advantages of spray lining of water mains but without the extended water supply shut down period. E Wood used their extensive knowledge of polyurethane technology to develop a new product, Copon Hycote 169. This material could be sprayed inside water mains but, uniquely, required only a 30-minute curing period before water contact could be re-established. This enabled all customers to have their water supply returned within a 12-hour period. May Gurney, were amongst the first UK lining contractors to adopt use of this new lining technology and, through their endorsement, practicalities and skills in application of the product, enabled South West Water to make the decision in 2001 to change their entire water mains rehabilitation programme to use of this material.

- Benefits:**
- A further stage of research and development to produce a lining material that could be sprayed within mains in much the same way as previously but would also structurally enhance the host pipe in order to extend the working life of a deteriorated pipeline was supported by May Gurney. The resultant product of this programme is the Copon Hycote 169HB. This material is generally sprayed through water mains at a thickness of 3mm. Due to its' physical properties, it is able to withstand energy forces released when Cast iron mains ring fracture and continue to bridge the resulting crack ensuring the main remains water tight. The product can also bridge corrosion holes and voids that may subsequently form as a result of ongoing corrosion
 - May Gurney began working with this material in mid 2005 by carrying out a trial in conjunction with South West Water to assess the benefits of use in Asbestos Cement mains. The trial was very successful and was the subject of a paper written by May Gurney titled "Copon Hycote 169HB – The Holy Grail for Asbestos Cement?" This paper was winner of category at the UKSTT awards in Birmingham earlier in 2006. The paper prompted much interest and set May Gurney as a leading pipeline rehabilitation specialist in the use of this product.
 - May Gurney and E Wood continue to work closely together to identify new contract opportunities within the UK, Water Industry, both in the current AMP period and to promote the process as a preferred technique of upgrading water networks in the next 5 year AMP period.