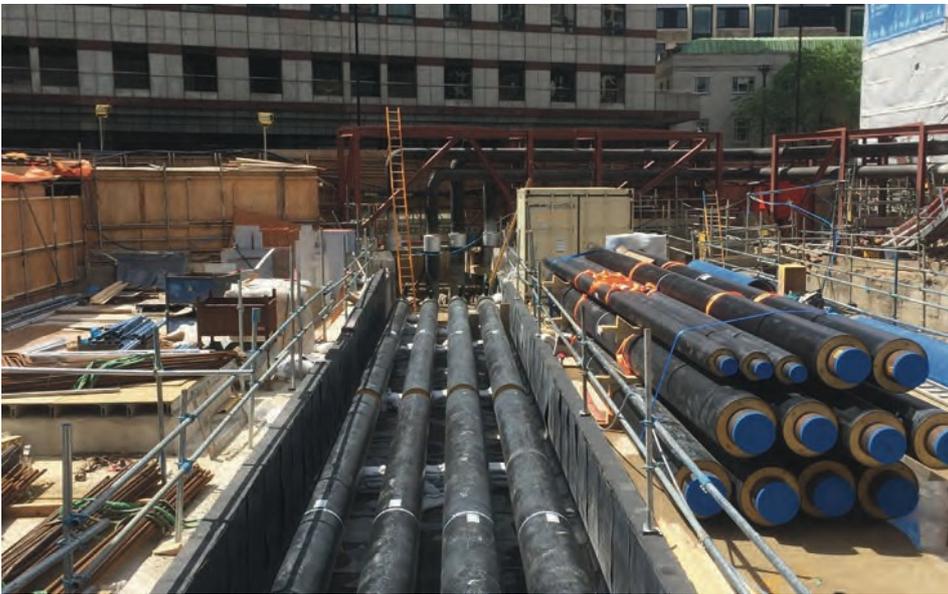


LONDON WALL PLACE

Highly complex design and installation of pre-insulated district heating, cooling pipes and two heat sub stations crossing new residential and commercial buildings, forming part of the prestigious Eon CitiGen network in Central London.



CLIENT: E.ON

CONTRACT VALUE: £1M



THIS INSTALLATION WAS A REINSTATEMENT OF PIPE PREVIOUSLY DIVERTED BY OTHER CONTRACTORS TO PERMIT THE CONSTRUCTION OF THE NEW BUILDING

Due to the project complexity and technical constraints of the site, a unique combination of competencies delivered by Powerpipe, Mittel and Eneteq, made Eneteq Services Ltd the only contractor prepared to commit to design and installation work in the required timeframe. The pre-insulated pipes were to be installed into a new pre-cast concrete culvert crossing the basement with deep highways connections at either end. Both connections were more than 5m deep in live trafficked roads with access only possible by using the adjacent tower crane managed by the main site principle contractor.

CAPABILITY OF DESIGN

The pre-insulated pipes were to be installed into a new pre-cast concrete culvert crossing the basement with deep highways connections at either end. Both connections were more than 5m deep in live trafficked roads with access only possible by using the adjacent tower crane managed by the main site Principal Contractor, Brookfield Multiplex (PC).

Having been provided with only an indicative line diagram by the customer, Eneteq, in collaboration with Powerpipe, developed the complex routing and alignment of the pre-

insulated pipe, incorporating this with the main Contractor BIM Modelling. The complexity of the routing and the significant time limitation put significant demands on the pre-insulated pipe delivery schedule, which could only be met by Powerpipe's flexible supply chain philosophy; ability to shorten lead times for critical deliveries.

The extreme constraints of the pipe alignment caused a substantial number of pipe jackets and outer casings to be bespoke. The incorporation of Mittel's fusion jointing technology not only made it possible to eliminate vulnerabilities typical for the weakest points of every pre-insulated network i.e. joints, but also enabled fabrication of all bespoke fittings on site, keeping the project on schedule and saving costs.

PROGRAMME MANAGEMENT

Daily meetings ensured key stakeholder engagement and included coordinating design works, site access, materials, other contractors and interested third parties.

As connections were excavated, Eneteq also held daily briefings with the client-appointed designers to coordinate the changing requirements and provided technical support regarding material capability, expansion, heat loss and physical accommodation of the components.

Project complexity, mainly due to space constraints with the excavations resulted in a compromise solution of pre-insulated and standard pipe fittings which then needed to be insulated with bespoke outer casings cut and fabricated onsite using Mittel TSC jointing technology. The continuous design evolution required a technically capable team able to detail, amend and reinvent solutions. Eneteq also designed, developed and fabricated bespoke lifting equipment to resolve non-penetrating lifting requirement within the culvert.

The central London site had many constraints; the excavations at each end of the culvert were 5m deep in a main thoroughfare and required confined space working methods and specially trained operatives which Eneteq were able to provide.

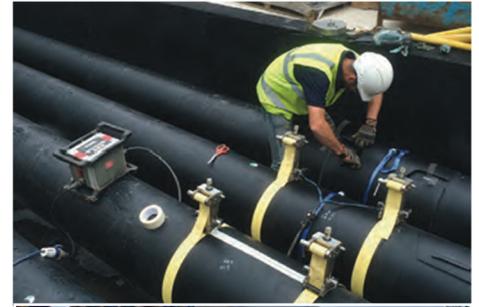
QUALITY

Eneteq employed its comprehensive quality processes for jointing and welding. All joints are photographed 10 times throughout installation and these photographs form part of the handover documentation along with GPS coordinated joints, air, hydraulic, weld records and Mittel TSC joint logs.

SUPPLY CHAIN MANAGEMENT AND LOGISTICS

Eneteq, Mittel and Powerpipe staff have extensive experience managing complex supply chains and supplying projects characterised by stringent delivery demands. This, in combination with implemented, streamlined corporate structure enables the collaborative working of Eneteq, Powerpipe and Mittel to offer a flexible supply package, unmatched by their competitors.

On this particular project, Eneteq's logistics specialists successfully coordinated all deliveries with the main contractor. Due to site constraints, all material had to be pre-slung for delivery by tower crane and arrive within a 30-minute time slot with all necessary safety and quality information



For more information relating to this project or to discuss your own district heating network engineering requirements, please call **01327 770170** or email enquiries@eneteq.co.uk



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