



The Company

Freeflow Pipesystems is a global operation, supplying coated carbon steel pipework and fittings to the Water Industry throughout the UK and overseas from its UK based manufacturing facility in the Midlands. Originally established in 1988, when it began supplying pipework, fittings and joints to the UK Water Industry, the company expanded rapidly to meet demand, becoming Freeflow Pipesystems in 2002

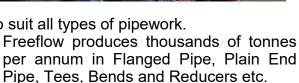
The company today remains a division of Priory Woodfield Engineering Ltd, a leading supplier of flanges and fittings since 1966. This association provides Freeflow with the backing and support of a long established and highly reputable company and providing immediate access to expansive stocks of tube, flanges and buttweld fittings.

Product range consists:

Coated carbon steel pipework and fittings with capacity to produce

diameter ranges of 80 mm through to 3000mm and to suit all types of pipework.





Couplings, Stepped Couplings and Flange Adaptors
End Closures
Dismantling Joints
Flange converters
Wall Couplings
'Fabriweld' Jointing Systems

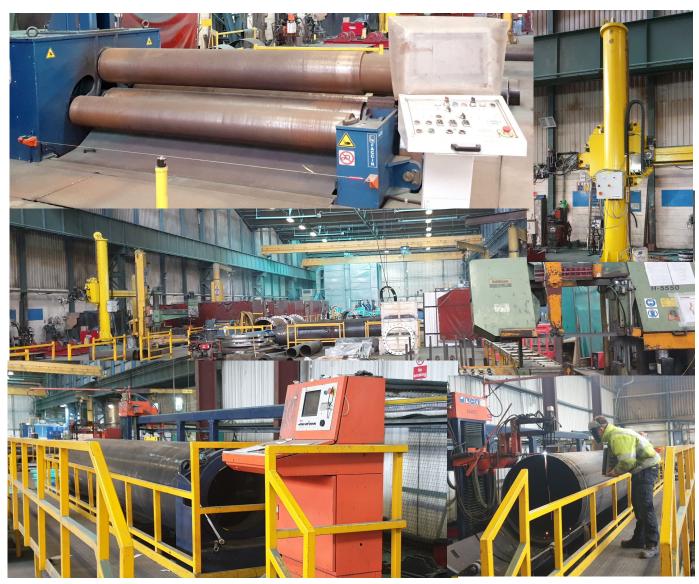




Manufacturing Facility

Freeflows Manufacturing Facility, covering approximately 4000 square metres, is fully equipped for the fabrication and Fusion Bonded Epoxy coating of Carbon Steel Pipework and fittings of any size or complexity.

In addition to producing standard fittings compatible with most pipe materials, Including steel, Ductile Iron, GRP, Concrete, MDPE & HDPE, Freeflow manufactures fabricated steel pipework of any size and complexity to clients specific requirements. All pipework is manufactured from prime, fully certified materials and fully coated, internally and externally, with Fusion Bonded Epoxy for maximum corrosion protection.



Quality and Service First

Manufacturing Facility

<u>Tube Rolling</u> From 700mm NB upwards.

(up to 3 metre long x 32mm thick)

Section Rolling Flats, Tees, Angle, Channel, from 250mm dia. upwards,

depending on section size.

Profiling CNC operated multi head Oxy/Propane profile cutting

(computer generated development)

CNC operated Oxy/Propane pipe profiler up to 1200NB.

Welding MMA (Manual Metal Arc)

MIG (Metal Inert Gas)

FCAW-SS (Self Shielding Cored Wire) FCAW-GS (Gas Shielded Cored Wire)

TIG (Tungsten Inert Gas)
SAW (Submerged Arc welding)

Machining Vertical Borers (up to 2 metre diameter)

CNC Lathes (up to 500mm swing)
Radial Drilling (up to 3 metre swing)

Other Power Presses (100, 150 & 500 tonne)

Guillotine (up to 2 metre wide x 15mm thick)

Overhead Cranes - 10 tonne SWL Fabricator Jibs - 0.5 to 1 tonne SWL

Coating Plant 2 Shotblasting Booths

2 Pre Heat Oven

Fluidised Bed (3m x 3m x 3.5m)







Quality Control

Freeflow Pipesystems is an ISO 9001 :2015 accredited company and operate an Approved Quality System which ensures specification compliance throughout production of a single item up to the complete project.

Freeflow Pipesystems is also a DWI (Drinking Water Inspectorate) approved applicator of Fusion Bonded Epoxy, Resicoat R4 which is a WRAS approved product.

Freeflow Pipesystems can comply to most standards and specifications, including the following but not restricted to—
CESWI, WIMES, BS EN ISO 3840,BS EN 10224

Standard Procedures Include:-

Fabrication Material Verification (Traceability)

Procedure Qualification Record (PQR), to a agreed standard

Welder Approval (certificate), to an agreed standard

Weld Procedure Specification (WPS)
Visual and Dimensional Inspection
N.D.E. - Magnetic particle inspection

Ultrasonic Inspection
Dye Penetration
Hydraulic Testing

Radiography (External)

All NDE inspection is under taken by a third party company, all welds tested will have a report issued to Freeflow. Any weld inspection criteria/standard can be implemented, by prior arrangement.

Coating Surface Profile Inspection (After blasting)

Coating Thickness Holiday Testing Cure Testing Adhesion Testing Visual Inspection









Coating

Freeflow Pipesystems is a DWI (Drinking Water Inspectorate) approved applicator of Fusion Bonded Epoxy Resicoat R4.



Resicoat R4 is a WRAS approved product and is a one-part, heat curable, thermosetting powdered epoxy coating that provides maximum corrosion protection of line pipe and fittings.

The epoxy is applied to preheated steel as a dry powder which melts and cures to form a continuous, insulative corrosion barrier.

This bonding process provides excellent adhesion and coverage on pipes, fittings and other equipment. The coating is resistant to corrosive soils, hydrocarbons, harsh chemicals and sea water.



The epoxy coating is unaffected by soil forces and is highly resistant to moisture penetration, bacteria and fungus attack, soil acids, alkalies and salts and other chemicals associated with underground and underwater use.

Freeflow Pipesystems limited will undertake sub-contract coating upon request, with agreed inspection criteria.



Coating Quality Control





Thickness check, Resicoat R4 applied to 300 microns Minimum standard coating thickness, or to a requested minimum to align with customer requirements or specification.

This Inspection is to detect if there are any defects in the coating, where the steel remain uncoated or where material protrudes through the coating surface.







Freeflow Pipesystems can supply a coating report for all items coated in our facility,
This is available on request from the purchaser.

Specifications

The following Specifications are generally used as a Minimum Standard unless otherwise specified by the Client.

Tube: up to and including 1200mm – BS EN 10217-1:2019 or API 5L Grade B ERW

700mm and above - Rolled & Submerged Arc Welded from Plate to BS EN10025 minimum Grade S275

Flanges: BS EN 1092-1:2002/BS4504 plus BS10 ASME B16.47 &

B16.5 other standard available on request

Welding Fittings: BSEN 10253:2007

Bolts: BS 4190 Gr.4.6 Min or to customer spec (galvanized)

Gaskets: BS 2494:1990 (3mm thick EPDM) WRAS approved

Welding: BS 2971 Class II (Up to and inc. 24 bar)

BS 2633 Class 1 (Above 24 bar)

other standards available

Non-Destructive Examination:

Below is some of the common standards that are used in conjunction with our NDE.

BS EN ISO 17637:2011—Visual examination.

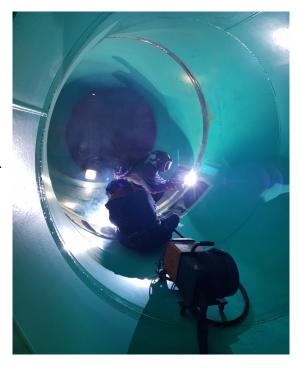
BS EN 1435—Radiographic testing.

BS EN ISO 17640:2018—Ultrasonic testing.

BS EN—571-1 Dye Penetrant testing.

BS EN ISO 17638—Magnetic Particle testing.

BS EN ISO 5817, BS 2971-1991—Weld quality criteria.



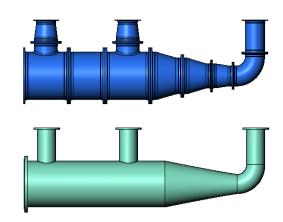


Design Layout/Detailing & Engineering Capabilities

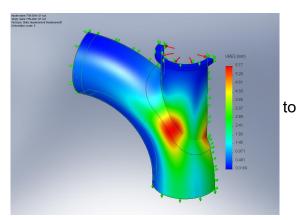
Using the very latest versions of AutoCAD and Solidworks 3D modeling, simulation in linear and non-linear and study report generation, we have a highly skilled and qualified team of Pipework Engineers, all with many years experience especially in the Water and Waste Water Industries. This dedicated team will work closely with your Engineering staff to ensure you always receive the best technical and cost effective solution to your pipework needs.

By fully utilizing our comprehensive manufacturing and coating facility our experienced engineers can revise your drawings to achieve an optimized, cost effective solution.

This is a simple example, in this case flanges are eliminated while still maintaining the design requirements



This is an example, of a Freeflow internal case study examine the reinforcement around a branch where it attaches to a bend. (Checks carried out for duty of care)





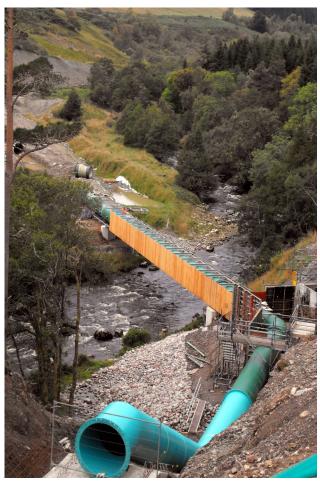
Project Photos













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