

# Double Walled Piping Systems

## Double Containment Pipe System



*A complete range of solutions in double walled piping for various applications in variety of process industries*

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## What is Double Walled Pipe System?

A double-walled pipe is a secondary contained piping system. It is a pipe within a pipe, or encased in an outer covering, with an annulus (interstitial space) between the two diameters. The inner pipe is the primary or carrier pipe and the outer pipe is called the secondary or containment pipe.

**FT Series:** Fuel Transport

**CT Series:** Chemical Transport

**ST Series:** Steam Transport



# Double Walled Piping Systems

Double containment piping systems are one of the most economical and reliable methods for protecting against leaks of hydrocarbon liquid fuels, corrosive or hazardous fluids from primary piping. When designed and applied correctly, double wall systems can be expected to have a long service life. Double contained systems constructed from carbon steel significant cost savings and & Stainless offer superior chemical resistance over longer service time.

A combination of government regulations, increased concern over environmental and personal safety, and a growing fear of litigation has hastened the development and improvement of double contained piping components into highly engineered systems. The carrier pipe (the inner pipe, also known as the product pipe) material is selected based on common piping practices using variables such as:

- ✓ The fluid to be carried in the pipeline
- ✓ What are chemical characteristics of fluid
- ✓ Temperature of the fluid
- ✓ Pressure of the fluid
- ✓ Rate of flow of the fluid
- ✓ Variation in process parameters
- ✓ Leak detection required for the fluid
- ✓ Maintenance and future extension required.

Westcal products are fabricated by WeldCut Middle East FZE under technical collaboration with Westcal Canada

### WME Westcal Advantages

- Pipe Sizes: The custom made design help to space management of pipe in site, providing further flexibility.
- Custom Fabrication: WME Westcal provides fully customized assemblies/design for your project.
- Standard Components: Standard components make shorter lead time for delivery.
- Modular Design: The components are designed in modular way which saves time on field assembly & fabrication.
- Leak Monitoring: All series of piping comes with most appropriate leak monitoring ports.
- Port for pressure testing

### WME Westcal Services

- Technical support in design as well as in field installation
- Prefabrication in spool pieces, elbow, bends, tee shapes
- Precision welding & machining
- Training to owner & operators

## FT Series: Fuel Transport

Westcal FT Series piping system is specially designed fully engineered for fuel as well as non-corrosive chemical applications. FT Series can be used for Effluent Treatment also. The pipe is made especially for the pressurized pipe lines, thus suitable for pumping systems too.

FT Series has a proven record in the Generator Fuel Supply System & application segments as under

- Hotel Industry
- Hospital Industry
- Military Applications
- Malls & Shopping Complexes
- Residential Complexes & Buildings
- Offshore fuel handling

### NOTES

- Higher pressure values states above shall void the manufacturer warranty.
- Leak Detection System shall be Pentair USA or equivalent.
- In case other leak detection system are used the test ports fittings shall be supplied by the client to suit the cable.

Career Pipe	Containment	Remarks
1.0 Inch	4.0 inch	LD Available
1.25 Inch	4.0 inch	LD Available
1.25 Inch	3.0 inch	LD Not Available
1.5 Inch	4.0 inch	LD Available
2.0 Inch	4.0 inch	LD Available
2.5 Inch	6.0 inch	LD Available
3.0 Inch	6.0 inch	LD Available
4.0 Inch	8.0 inch	LD Available

LD: Leak Detection System

## FT Series DW Piping System

### Applications

- Fuel Handling
- Non Corrosive Chemicals Handling
- Effluent Handling

### System Features

- Carrier: Seamless ASTM A53 Gr B Sch 40/80
- Containment: Seamless/ERW carbon steel.
- Coating: Single coat of metal primer (for metallic pipe only)

### Available Options

- Leak Detection (Pentair: Cable Type & Spot sensors type).
- Available with Test Ports for pressure testing.
- Carbon Steel Seamless for fuel & Effluent Handling.
- Stainless Steel for chemical handling.
- Fiberglass carrier pipe.

### Pressure Test Criteria

To avail the full benefits & longer operation life for FT Series please follow manufacturer's guidelines for pressure testing given as below

Test Media: Nitrogen/ Dry Compressed Air

Career Pipe: 60 PSI (1 Hour Duration)

Containment: 10 PSI (1 Hour Duration) Carbon Steel

Containment: 04 PSI (1 Hour Duration) FRP

### Pipe Fittings

All changes in direction shall be made with bent or weld fittings. All fittings shall be the same wall thickness as adjacent piping.

### End Seals

Terminal ends inside manholes, pits, or building walls shall be equipped with end seals consisting of a steel bulkhead plate welded to the pipe conduit.

### Field Tests

As per manufacturer recommendations, refer the brochure

### Backfill

The pipe shall be placed on properly compacted trenches, No rocks are allowed. The installation shall be minimum 2 feet below the grade surface.

### Field Installation

The installation shall be made in accordance with approved plans, consultant specifications, and manufacturers' installation recommendations/ instructions. Westcal will appoint authorized technical person to supervise the installation.