

Advanced Polymer Technology

Technical Symposium: Marina Fueling System
design, construction, and operation

June 26, 2002

Introduction

- ✓ Metallic Ducted(MD) Piping
- ✓ Flexible Entry Boots for MD Series Pipe
- ✓ Fittings
- ✓ Containment Sumps
- ✓ Installation Guidelines

Metallic Ducted Piping (MD)

- ✓ MD pipe consists of a double strip-wound galvanized steel liner for flexibility, and thermoplastic cover assuring water-tightness, fire protection, and UV resistance
- ✓ APT UL/ULC listed single or double wall pipe contained inside the flexible MD pipe
- ✓ Received from factory with product pipe installed into the MD jacket and cut to length

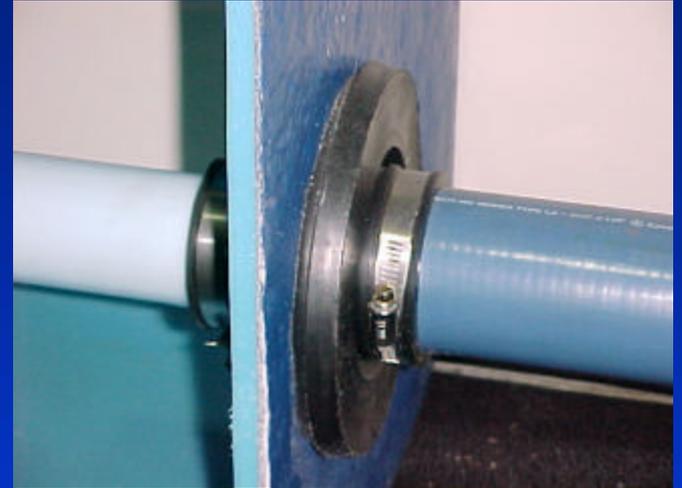


MD Piping Advantages

- ✓ Provides added fire protection
- ✓ Provides impact and crush resistance
- ✓ Provides UV protection
- ✓ Available in ½” through 2” product pipe sizes
- ✓ MD piping will float on top of the water when empty, provides fast and easy installation
- ✓ May be installed on fixed or floating docks
- ✓ Can be installed on the side or under docks, in the water & coiled for rise and fall of water levels

Flexible Entry Boots (MD)

- ✓ Made from gas and oil resistant nitrile rubber
- ✓ Double water-tight seal offers additional security from harsh conditions of marina applications
- ✓ Outside seal secures MD pipe to sump wall, while inner and outer seal both provide water-tight security



APT Fittings

- ✓ Three to choose from:
 - Male Swivel (MS)
 - Female Swivel (FS)
 - Male Non-Swivel (MN)
- ✓ Swivels Seal on 2 Viton "O" Rings
- ✓ NPT Threads
- ✓ Clam-Shell Mechanical fittings
- ✓ Strongest connection using no special tooling



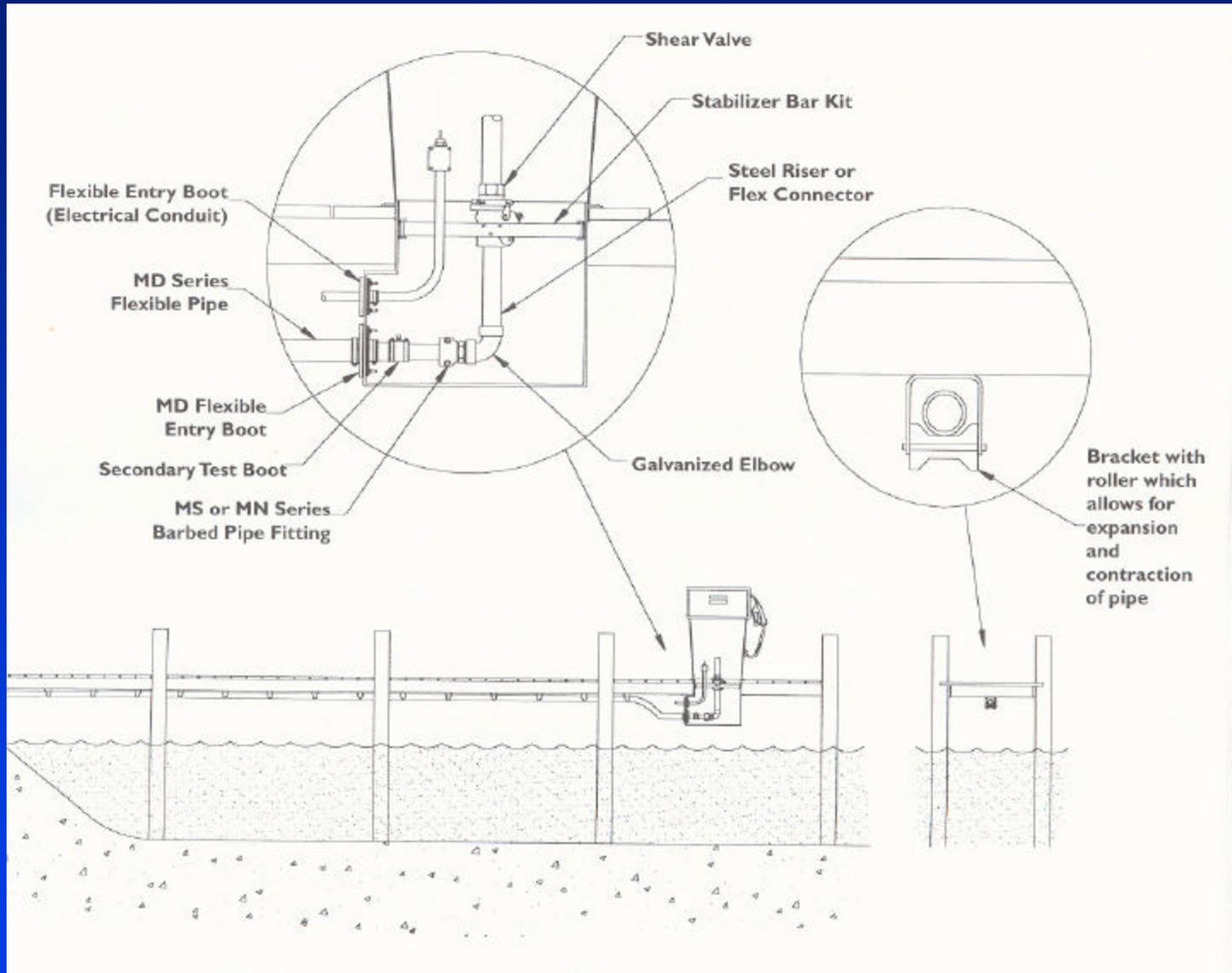
Containment Sumps

- ✓ AST-2922-underground at the shoreline transition
 - ✓ Access Panel for inspection
 - ✓ Large surface area for boot placement
 - ✓ Water-tight

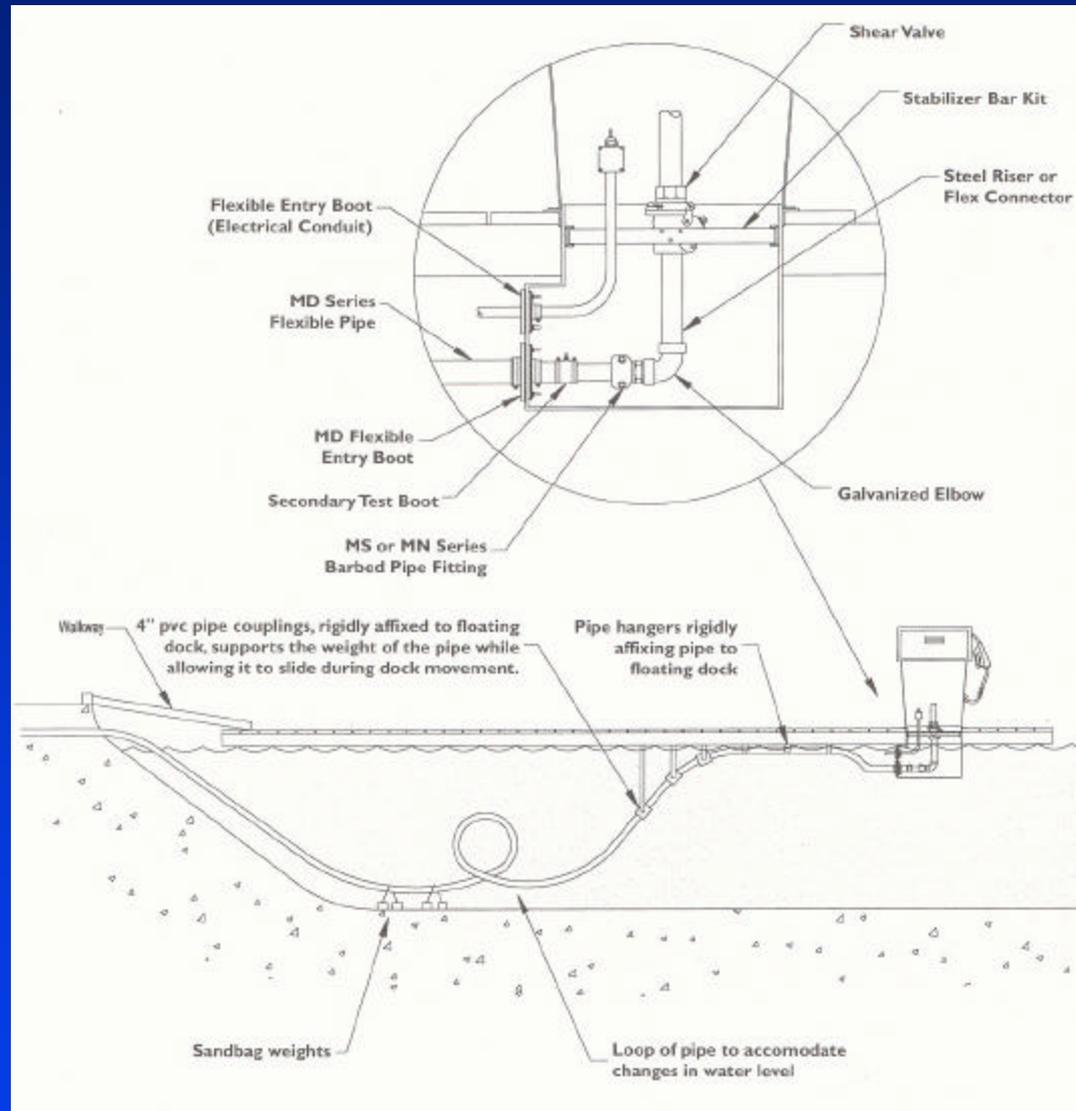
- ✓ Stainless Steel Sumps under the dock
 - ✓ Corrosion resistant
 - ✓ Additional fire protection
 - ✓ Water-tight
 - ✓ Manufactured per customer specifications



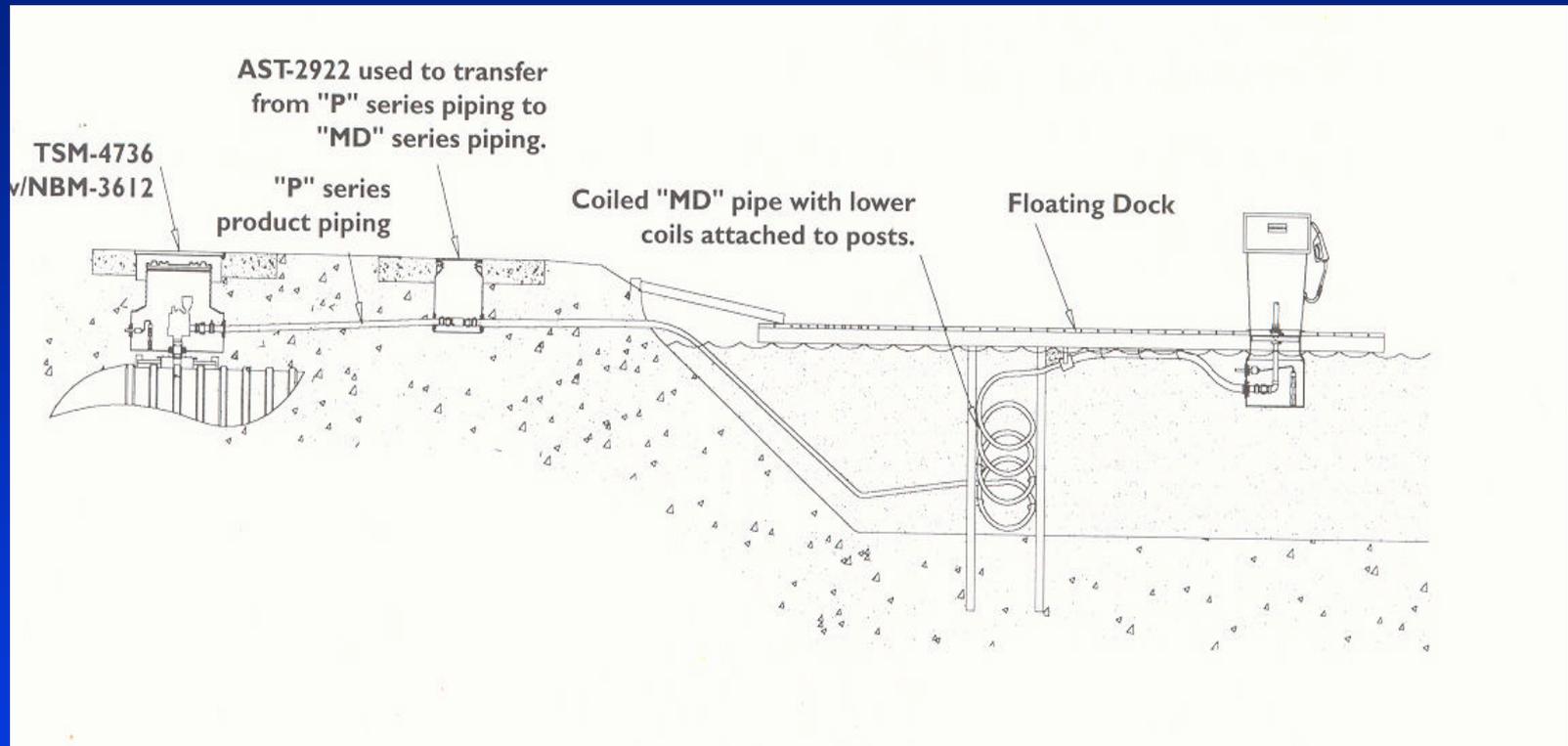
Installation Fixed Dock



Installation Floating Dock



Installation Floating Dock



Warranty

The seller warrants that all materials supplied by APT, Inc. will be free from defects for a period of (5) years. Seller will repair or replace, at it's option, components verified to have manufacturing defects. Seller will reimburse approved labor costs for repair or replacement of defective products. The system must be installed using all APT products, must be installed by factory certified installers, and an APT warranty form must be submitted. Warranty does not cover Acts of God, accidents, negligence or consequential damages arising from any defects in the components.

THE WARRANTIES DETAILED ABOVE ARE THE ONLY WARRANTIES MADE BY SELLER AND ARE EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR USE.

MD Series Product Features

- ✓ Utilizes APT UL/ULC listed product pipe
- ✓ Provides additional fire protection
- ✓ Resists UV radiation
- ✓ Impact and crush resistant
- ✓ Added flexibility, tighter bend radius
- ✓ Liquid-tight
- ✓ Available in sizes from 1/2" up to 2"
- ✓ 5 year system Warranty

Questions