Access Plug Flange (APF) Inspection Ports Specification Standards

ID	**Aluminum**
Number	**APF 100**
Date	**30 January 2006**

1.0 Purpose

Provide a method of sealing test holes in insulation for ultrasonic testing of metal thickness or visual inspection for external corrosion of insulated equipment in hot or cold service.

1.1 Basis for Design

Inspection port assemblies are designed to be moisture resistance and to have water vapor permeability. They should be resistant to breakage, durable and suitable for the recommended temperature range.

1.2 Recommended Temperature Range

-185°F to 1200°F (-120°C to 648°C)

1.3 Material Description

Inspection port assembly consists of an aluminum flange, silicone plug, O-ring, and stainless steel safety lanyard.

1.4 Available Sizes

Inspection Port OD Size (Inches)	Recommended OD Insulation Size (inches)	Inspection Port Flange Description	Remarks
1 ½	≤ 6	Flat & Contoured Flange	Contoured Flange for 5” & 6” OD Insulation
1 ¾	> 6	Flat & Contoured Flange	Contoured Flange for 5” & 6” OD Insulation
2 ½	> 6	Flat Flange	
2 ½ x 12	> 6	Flat Flange	Elongated Flange
4	>12	Flat Flange	
4	>12	Flat x 1 ¼ Corrugated	Neoprene Transition Gasket
5	>18	Flat Flange	
5	>18	Flat x 1 ¼ Corrugated	Neoprene Transition Gasket

Notes: 1. Flat flanges can be easily cut in field to accommodate contoured surfaces.
2. No special tools or “Hot Work Permit” required for installation.
3. All APF inspection port assemblies come with stainless steel safety lanyards.
4. Neoprene transition Gaskets are used with inspection ports for standard corrugated insulation jacket.
5. APF inspection Port Samples are available from manufacturer.

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ID	**Aluminum**
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1.5 Specialty Inspection Ports

1.5.1 Heat Check

Recommended Temperature Range 800°F to 1200°F (426°C to 648°C)

APF **Heat Check** Cup Inspection Port Assembly comes in 2 ½" size, has an aluminum flange and plug, O-ring, and stainless steel safety lanyard. The Heat Check Cup inspection port has a mechanical seal and is designed for extreme heat.

1.5.2 Cryogenic Cold Check

Recommended Temperature Range to -185°F (-120°C)

APF Cryogenic **Cold Check** Inspection Port Assembly is available in 2 ½" size, has an Aluminum flange and extension tube, silicone saddle and plug, foam insert, and stainless steel safety lanyard. The Cold Check inspection port is designed for cold service on insulated equipment and pipelines. Installer should refer to APF's recommended installation procedure.

1.5.3 Fugitive Emissions

Recommended Temperature Range 35°F to 600°F (2°C to 315°C)

APF **Fugitive Emissions** Inspection Port Assembly has a 1 ¾" aluminum flange and extension tube, silicone plug, and stainless steel safety lanyard. Fugitive emission inspection port is designed for monitoring emissions around insulated flanged connections on pipelines and equipment.

1.6 Inspection Point & Vibration Checkpoint Labels

1.6.1 UT Inspection Point Labels for TML on non-insulated pipelines and equipment.

1.6.2 VCT Vibration Checkpoint Labels for equipment

Labels are 3.5 mil 3M™ #200 "high performance" acrylic strong bonding adhesive. Temperature ranges -40ºF (-40ºC) to >300ºF (149ºC). All Labels are temperature, chemical (chloride free to prevent chlorine embrittlement on stainless steel) and moisture resistant. Installer should refer to APF application instructions.

1.7 Approved Manufacturers

Access Plug Flange, Inc. (Houston & Irving, Texas)

Access Plug Flange (APF) Inspection Ports Specification Standards

ID	**Stainless Steel**
Number	**APF 101**
Date	**30 January 2006**

1.0 Purpose

Provide a method of sealing test holes in insulation for ultrasonic testing of metal thickness or visual inspection for external corrosion of insulated equipment in hot or cold service.

1.1 Basis for Design

Inspection port assemblies are designed to be moisture resistance and to have water vapor permeability. They should be resistant to breakage, durable and suitable for the recommended temperature range. Stainless steel inspection ports are provided for corrosive environments.

1.2 Recommended Temperature Range

35°F to 600°F (2°C to 315°C)

1.3 Material Description

Inspection port assembly consists of a stainless steel flange, silicone plug, O-ring, and stainless steel safety lanyard.

1.4 Available Sizes

Inspection Port OD Size (Inches)	Recommended OD Insulation Size (inches)	Inspection Port Flange Description	Remarks
1 ¾	> 6	Flat & Contoured Flange	Contoured Flange for 5" & 6" OD Insulation
2 ½	> 6	Flat Flange	
4	>12	Flat Flange	
4	>12	Flat x 1 ¼ Corrugated	Neoprene Transition Gasket
5	>18	Flat Flange	
5	>18	Flat x 1 ¼ Corrugated	Neoprene Transition Gasket

Notes: 1. Flat flanges can be easily cut in field to accommodate contoured surfaces.
2. No special tools or "Hot Work Permit" required for installation.
3. All APF inspection port assemblies come with stainless steel safety lanyards.
4. Neoprene transition Gaskets are used with inspection ports for standard corrugated insulation jacket.
5. APF inspection Port Samples are available from manufacturer.

1.5 Approved Manufacturers

Access Plug Flange, Inc. (Houston & Irving, Texas)