

## **Access Plug Flange (APF) Inspection Ports Installation Procedure**

<b>ID</b>	<b>Installation</b>
<b>Number</b>	<b>APF 102</b>
<b>Date</b>	<b>15 Nov. 2007</b>

### **1.0 Purpose**

Provide a method for installation of APF Inspection Ports.

### **1.1 Basis for Design**

Inspection port assemblies are designed for installation using common hand tools not requiring a hole saw or special "Hot Work Permit".

### **1.2 Recommended Installation Procedure**

**1.1.1** Locate exact location of test point and mark ID of APF inspection port assembly on surface of insulation jacket.

**1.1.2** Using a utility knife and sheet metal shears to cut hole in insulation jacket. A hole saw is not required, but will make the job easier to cut the insulation jacket; however, exercise extreme caution to avoid cutting into the wall of piping, equipment, or other objects hidden from view such as steam or electrical tracing.

Diameter of APF Assy.	Diameter of Hole Req'd.
1 1/2"	1 9/16"
1 3/4"	1 3/4"
2 1/2"	2 9/16"
4"	4 1/8"
5"	5"

**1.1.3** Clean out insulation as required to provide clear access to test point.

**1.1.4** Fill backside of flange with silicone adhesive sealant and insert assembly into hole-cut.

**1.1.5** Install two (2) #10 self-taping stainless steel screws across from each other, one for the stainless steel safety lanyard and the other for holding an optional ID tag. Screws will also serve to hold flange to insulation jacket while silicone adhesive sealant cures. Installers may want to use aluminum or stainless steel pop rivets in lieu of self-taping screws as an alternate fastening method.

**1.2.6** For Cold Temperature Service refer to Access Plug Flange, Inc.'s Installation Procedure for APF Cold Check Inspection Port Assembly.

## **Access Plug Flange (APF) Inspection Ports Installation Procedure**

<b>ID</b>	<b>Cryogenic CC Installation</b>
<b>Number</b>	<b>APF 103</b>
<b>Date</b>	<b>15 Nov. 2007</b>

### **1.0 Purpose**

Provide a method for installation of APF Cryogenic Cold Check Inspection Ports.

### **1.1 Basis for Design**

APF's Cryogenic Cold Check Inspection port assemblies are designed for installation using common hand tools not requiring a hole saw or special "Hot Work Permit". They are typically installed during a shutdown period when cold service systems are not in service where ice accumulation can interfere with installation.

### **1.2 Recommended Installation Procedure for APF Cryogenic Cold Check inspection Port Assembly**

**1.1.6 1.2.1** Locate exact location of test point and mark ID of APF inspection port assembly on surface of insulation jacket. Using a utility knife and sheet metal shears to cut hole in insulation jacket. A hole saw is not required, but will make the job easier to cut the insulation jacket; however, exercise extreme caution to avoid cutting into the wall of piping, equipment, or other objects hidden from view such as steam or electrical tracing. Remove the foam insert from the assembly until after APF cold check assembly installation is complete. Use a serrated knife to cut away insulation inside to provide clear access for installation of the assembly extension tube and silicone rubber saddle allowing approximately 1/16" clearance around the silicone rubber saddle.

Diameter of APF Assy.	Diameter of Hole Req'd.
2 1/2"	2 9/16"

**1.2.2** Clean out insulation debris as required to provide clear access to test point.

**1.2.3** Pre-fit the entire assembly in advance to make sure it is the correct length for the particular test point location. If required, cut and deburr the extension tube (not on the machined end) 1/8" longer than outside edge of insulation jacket to allow for a compression fit, before proceeding with the installation. Trim the silicone rubber saddle, if necessary, to fit flush on the contour of outside diameter of the pipeline to eliminate any air gap. Align the flange so the band slots are parallel to the pipeline and adjust the silicone rubber saddle contour so that it is in the proper orientation with respect to the pipeline.

**Access Plug Flange (APF) Inspection Ports  
Installation Procedure**

<b>ID</b>	<b>Cryogenic CC Installation</b>
<b>Number</b>	<b>APF 103</b>
<b>Date</b>	<b>15 Nov. 2007</b>

- 1.2.4** Apply approximately 1/8” thick of low temperature sealant suitable for cold service along the outside surface of the extension tube and silicone rubber saddle. More or less sealant may be required depending on length of the extension tube. Apply a small amount of low temperature sealant to the bottom edge of the silicone rubber saddle to seal it on the pipeline. The low temperature sealant applied between the extension tube and insulation should provide an airtight seal.
- 1.2.5** Apply approximately 1/4” thick layer of silicone adhesive sealant completely filling the backside of the aluminum flange. The silicone adhesive sealant will serve to bond the aluminum flange to the insulation jacket for a weather-tight seal.
- 1.2.6** Make sure the silicone rubber saddle contour on the assembly is in the correct orientation with respect to the pipeline and flange band slots are parallel, and then carefully insert the assembly into the pre-cut hole.
- 1.2.7** Secure the assembly in position by installing 1/2” metal banding and locking wing seals. Tighten enough to compress silicone rubber saddle against the pipeline. In some cases banding may be installed on the assembly before applying sealant.
- 1.2.8** Secure stainless steel safety lanyard to the flange with either a pop rivet or screw installed through a hole from underneath the flange in order to prevent puncturing the insulation membrane barrier. Avoid using screws in vacant holes of the flange to further secure flange onto the insulation jacket. Silicone adhesive sealant and banding will sufficiently secure the cryogenic inspection port in place.