

Retractable System Operation & Maintenance Manual

Metal Samples Company

A Division of Alabama Specialty Products, Inc.

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Chapter 1

Length Calculation and Accessories for Retractable Systems

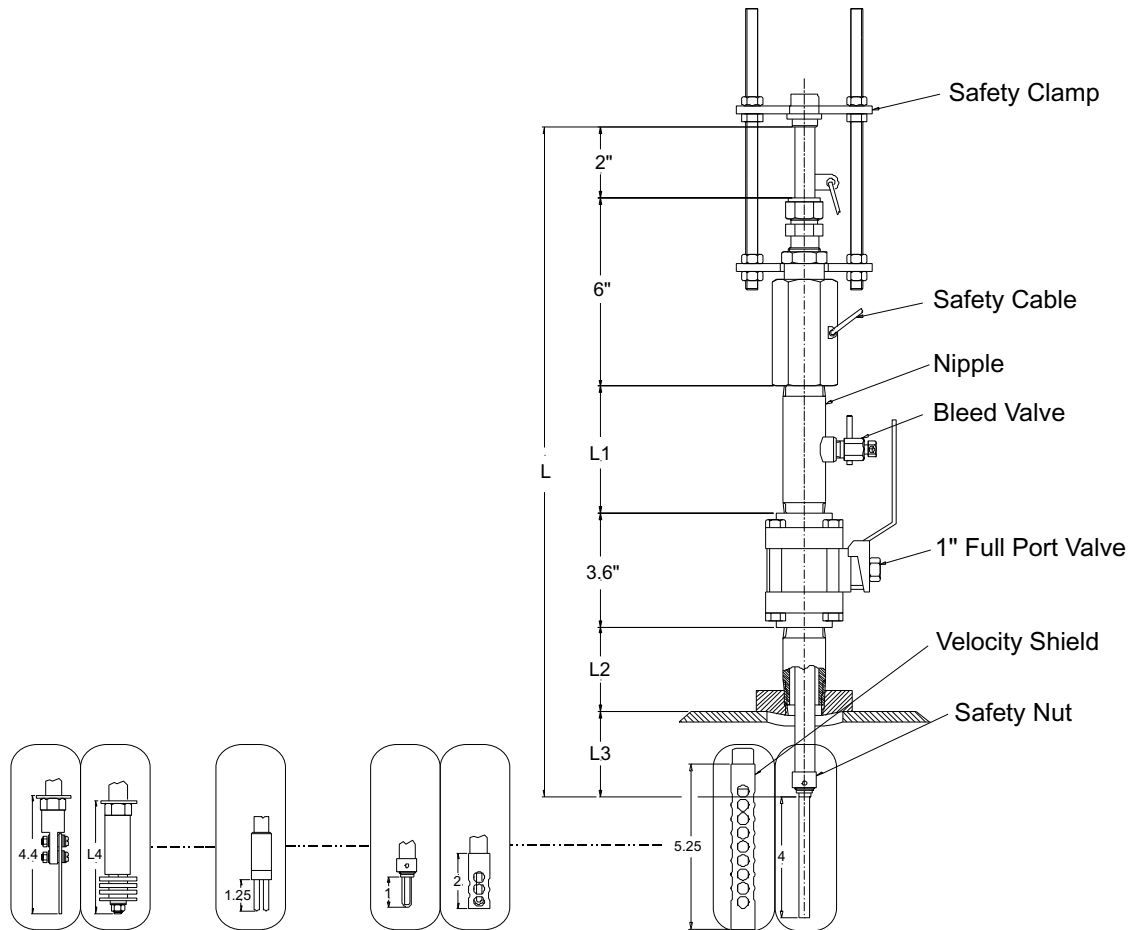


Figure 1. Retractable Probe / Coupon Holder Assembly

The length of a retractable probe or coupon holder assembly is calculated by adding the required lengths of its various accessories.

Electrical resistance probes, two electrode linear polarization probes, and coupon holder assemblies require a **1" (minimum) full port valve** and **nipple** for mounting. Three electrode linear polarization probes require a **1½" (minimum) full port valve** and nipple for mounting.

The **insertion rod** extends 2" above the packing gland when fully inserted.

A **packing gland** is used with the probe for insertion or retraction from a system without process shutdown. Standard length of the packing gland is 6".

Note: Installation of a probe with a packing gland requires a certified fitter. When removed from the process environment, the end of the insertion rod retracts into the

nipple. This allows the full port valve to be closed. Standard nipple length (L1) is 4", but may vary depending on the length of accessories attached to probes or the length and number of coupons attached to coupon holder assemblies.

The **bleed valve** (optional) is used to release pressure and drain any process fluid/gas that accumulates within the nipple after the probe is retracted from the process and the port valve is closed.

The length from the top of the valve to the process environment (L2) is determined by the customer.

The portion of the probe or coupon holder assembly that enters the process will vary in length depending on the type of element, electrode, or coupon being used. **Figure 1** shows some of the various types and their lengths.

A **velocity shield** may be added to fit over the element at the end of an electrical resistance probe. The shield reduces fluid velocity around the element and protects the element from floating debris. If a shield (which is longer than the element it covers) is used, the nipple will need to be longer to allow for the total retraction of the probe from the process environment. The shield also provides protection against accidental blowout. If the safety cable is not hooked in place or if the cable fails, the packing gland will catch on the velocity shield preventing blowout. To ensure that this added safety feature is provided to customers who do not order shields, Metal Samples provides a **safety nut** with all probes which can be attached to the end of the probes in place of shields.

A **coupon adaptor** may be attached to the threads on the end of the safety shield, allowing for the addition of coupons. The nipple length would then need to be longer to compensate for the length of the added adaptor and coupons. Example: If an adaptor with a coupon extended 2" beyond the 5" safety shield to which it was attached, the required nipple length would be 7". **Figure 2** shows two coupon adaptors attached to safety shields.

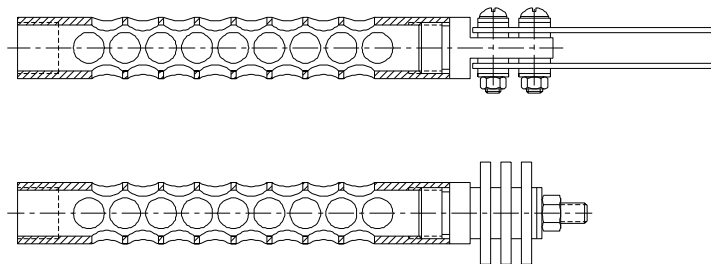


Figure 2. Coupon Adaptors attached to Safety Shields

A **safety cable** is provided with every retractable probe to prevent accidental blowout of the insertion rod. Optional **safety clamps** may be ordered to provide additional protection against blowout. The clamps are put in place after the probe has been inserted to the required depth.

A **six-pin connector** is mounted to the top of electrical resistance and linear polarization probes. Coupon holding probes are capped with either a mushroom knob or an Easy Tool adaptor head.

The Easy Tool is required for probe insertion in systems with pressure over 150 pounds.

Chapter 2

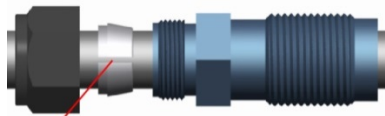
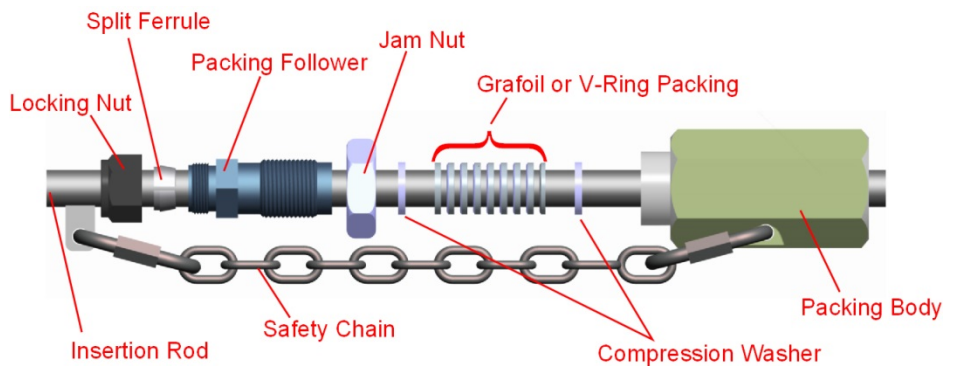
Packing Gland Adjustment Procedure

Safety Notice: This document is intended to provide guidance for safe and proper operation of a Metal Samples Packing Gland and retractable device (probe, coupon holder, injection system, etc.) Failure to adhere to this procedure could result in physical injury to personnel and/or damage to plant equipment. Do not attempt to operate a Metal Samples Packing Gland and associated hardware unless you have read and understood these instructions. If you have any questions, please contact our offices prior to attempting to use these products.

System Overview

The Metal Samples *Packing Gland* is designed to achieve and maintain a seal on the insertion rod of a retractable device such as a corrosion probe, coupon holder, or injection system, while still allowing it to move freely. This allows the device to be installed and removed from a system while it is under pressure. (NOTE: This requires the use of an isolation valve which is sold separately.)

It is important to familiarize yourself with the components of the *Packing Gland* and retractable system before attempting to use it. The diagram to the right illustrates the components of the Metal Samples *Packing Gland* assembly.



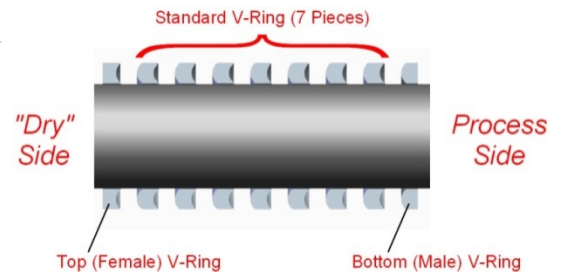
Split allows removal and readjustment. (Ferrule is not intended to seal.)

It is also important to note that the *Ferrule* is not responsible for achieving a seal. It serves as a mechanical stop (discussed later) and is split to prevent it from locking permanently onto the rod. If a leak occurs, tightening the *Locking Nut* and *Ferrule* will not stop it.

Packing is available in two materials: Teflon® and Grafoil®. Table 1 lists key points of each material.

Table 1. Packing Materials

Material	Service Temperature	Special Notes
PTE (Teflon®) Packing*	500° F (260° C)	Excellent Chemical Resistance. Can be used repeatedly. Must be oriented properly (see diagram).
Grafoil® Packing	850° F (454° C)	High Temperature Service. One-time use (typical). Orientation does not matter.



In either case, it is imperative to ensure that you have the correct number of packing rings installed to achieve the proper compression. Table 2 lists the number of packing rings for each type of packing, and for each rod size.

Table 2. Packing Ring Quantity

Rod Size	3/8" Diameter	1/2" Diameter	5/8" Diameter
PTE (Teflon®) Packing*	5	6	9
Grafoil® Packing	6	7	7

*Includes top and bottom ring.

Adjustment Procedure

The basic tools¹ required to adjust and mount a Metal Samples Packing Gland are listed in Table 3.

Table 3. Tools and Supplies

Quantity	Tool or Supply	Quantity	Tool or Supply
2	1" Open-End Wrench ²	1	Pipe Wrench
1	1.5" Open-End Wrench ²	N/A	Pipe Sealant (tape or paste)
1	1.75" Open-End Wrench ²	N/A	Anti-Seize Compound

Notes:

¹ Additional tools may be required for associated equipment (such as flange bolts).

² If the correct sized open-end wrenches are not available, two adjustable wrenches may be used.

The adjustment procedure for a Metal Samples Packing Gland is as follows:

Note: The Packing Gland must be adjusted prior to installation onto the system.

Note: Apply anti-seize compound to threaded components to prevent galling.

- 1) Loosen the *Locking Nut*. Slide the *Locking Nut* and *Ferrule* away from the *Packing Follower*.
- 2) Thread the *Jam Nut* to the top of the *Packing Follower*.



- 3) Slide the *Compression Washers* and *Packing* into the *Packing Body*.
- 4) Slide the *Packing Follower* down and begin to thread it into the *Packing Body*. After a few turns, you should start to feel resistance as the *Packing* begins to compress.
- 5) Using the hexagonal wrench flats on the top of the *Packing Follower*, tighten the *Packing Follower* to the torque specified in the table below.

Caution! MAKE SURE the Jam Nut does not bottom out against the Packing Body at this time.

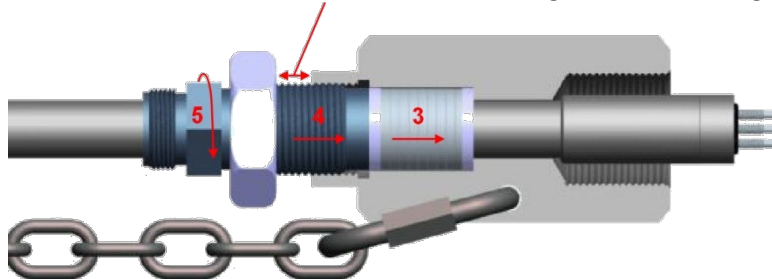


Table 4. Recommended Torque Settings

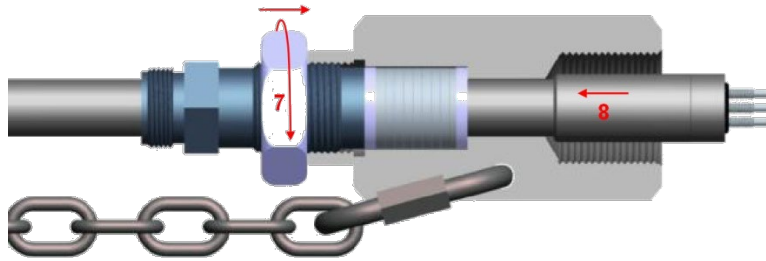
Pressure Rating	150 psi	500 psi	1000 psi	2000 psi
PTFE (Teflon®) Packing	240 in-lb 20 ft-lb	240 in-lb 20 ft-lb	300 in-lb 25 ft-lb	300 in-lb 25 ft-lb
Grafoil® Packing	180 in-lb 15 ft-lb	180 in-lb 15 ft-lb	240 in-lb 20 ft-lb	240 in-lb 20 ft-lb

Caution! Do not over-tighten the packing. This will result in damage to the packing or the gland.

- 6) After tightening the *Packing Follower* to the specified torque, the *Insertion Rod* should be held tightly in the *Packing Gland*, but you should still be able to push it in and out of the *Packing Gland* by hand with some effort. NOTE: Some resistance should be felt when sliding the *Insertion Rod*. It should not slide freely. If the *Insertion*

Rod will slide freely through the *Packing Gland*, the *Packing* has not been adjusted properly and a seal will not be achieved.

- 7) Once you have confirmed that the *Packing* has been properly adjusted, tighten the *Jam Nut* against the *Packing Body*. This will lock the *Packing Follower* in place.
- 8) Retract the *Insertion Rod* completely. The probe head should bottom-out inside the *Packing Body*.



- 9) The *Packing Gland* is now ready for installation. Do NOT install the *Ferrule* and *Locking Nut* at this time. Keep them near the top of the *Insertion Rod*, clear of the *Packing Follower*.



Note: The following steps may require a certified pipe fitter for complete installation.

- 10) If using an NPT mounted packing gland, coat the male threads of the mating nipple with an appropriate pipe sealant.
- 11) Mount the *Packing Gland* on the *Nipple* or *Flange* and secure in place. The rod should be fully retracted at this time with the *Locking Nut* and *Ferrule* clear of the *Packing Follower*.
- 12) Open the isolation valve and check the *Packing Gland* for leaks. *NOTE: The Insertion Rod may move when the valve is opened. Stay clear.*
- 13) If a packing leak is found, close the isolation valve immediately and attempt to correct the problem using the following procedure:
 - a. Loosen the *Jam Nut*.
 - b. Tighten the *Packing Follower* one-quarter turn.
 - c. Tighten the *Jam Nut* and return to step 12.If the leak cannot be stopped by continued tightening of the *Packing Follower*, cease installation and contact Metal Samples for support.
- 14) Once the *Packing Gland* has been confirmed to be leak-free, insert the device to the desired length. *See Safety Note 2 below.*
- 15) Hold the *Insertion Rod* in position and secure it using the *Locking Nut* and *Ferrule*. The *Locking Nut* should be hand-tightened, then wrench-tightened an additional one-quarter to one-half turn.
- 16) Adjust the *Safety Chain* following the safety chain installation instructions (<https://www.alspi.com/chain.htm>).
- 17) If a supplementary safety device (such as a *Safety Clamp*) is being used, mount it at this time.

Safety Notes

- 1) *For replaceable rod assemblies, a Safety Nut or Shield must be used.*
- 2) *At operating pressures greater than 150 psi, Metal Samples requires the use of an Easy Tool Retracting System to ensure safe operation.*
- 3) *All retractable Packing Gland components and related equipment must be evaluated periodically for leaks, wear, or any unsafe conditions.*

*Teflon® is a registered trademark of DuPont.
GRAFOIL® is a registered trademark of NeoGraf Solutions.*

Chapter 3

The Easy Tool Retracting System

Mounting the Easy Tool

Refer to *Figure 4*.

1. Using the HANDLES move the SPINNER NUT assembly to the TOP most position.
2. Loosen the WING NUT and open the SWING ARM near the bottom of the Easy Tool.
3. Slide the Easy Tool onto the PROBE so that the PACKING BODY of the PROBE is held between the Easy Tool's MIDDLE PLATE and LOWER BASE.
4. Close the SWING ARM and tighten the WING NUT to secure the arm in place.
5. Move the INSERT SLIDE to the RETRACTED POSITION by pulling back on the KNOB. (See **Figure 5**.)
6. Turning the HANDLES on the SPINNER NUT, align the TOP LEG of the INSERT SLIDE to just above the SHOULDER OF THE CONNECTOR on the PROBE.
7. Push in the INSERT SLIDE to the ENGAGED POSITION, so that the TOP LEG rests on the SHOULDER OF THE CONNECTOR. (See **Figure 6**.)

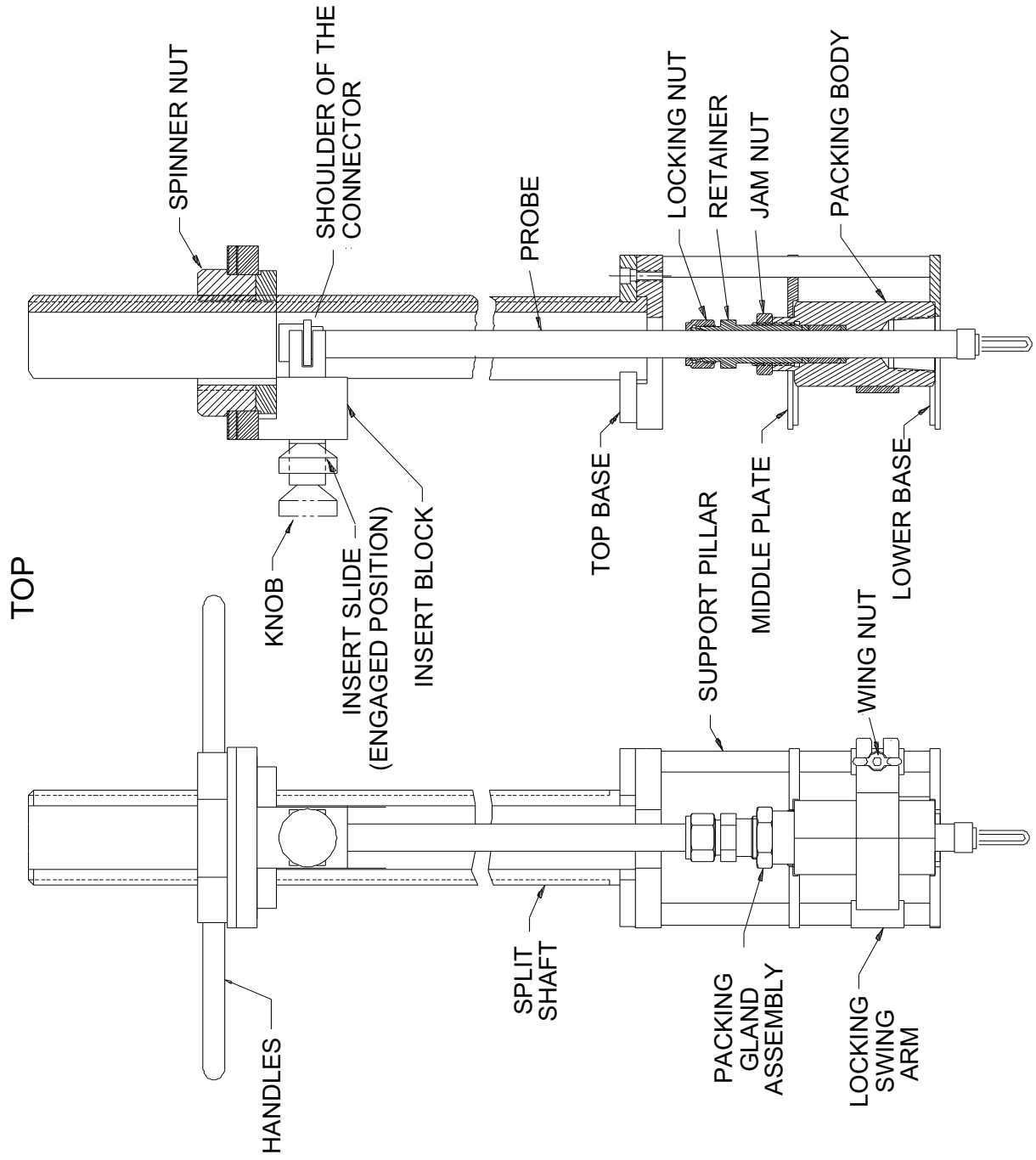


Figure 4. Easy Tool Retracting System

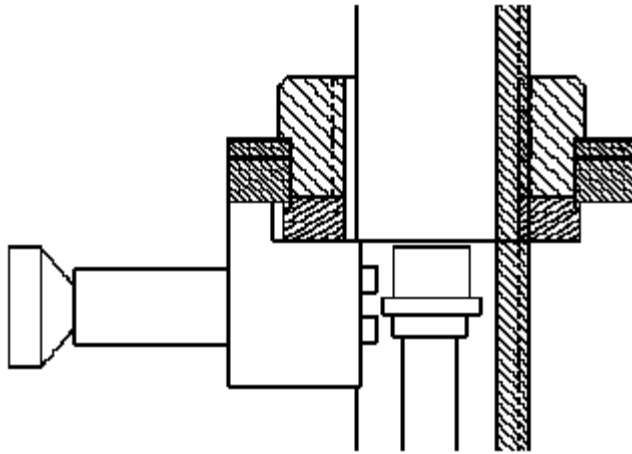


Figure 5. Insert Slide (Retracted Position)

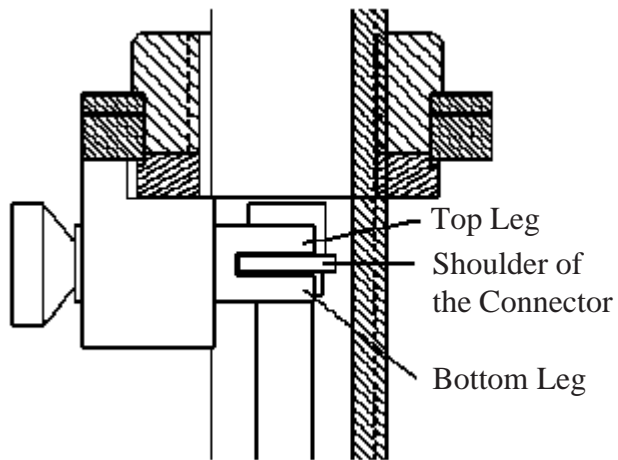


Figure 6. Insert Slide (Engaged Position)

Easy Tool Insertion

1. Check to see if the RETAINER NUT on the PACKING BODY is tight, and adjust it as necessary. (See **Chapter 2: Packing Gland Instructions.**)
2. Open the valve. If leakage occurs through the PACKING GLAND, tighten the RETAINER NUT. If leakage continues, close the valve, remove the PACKING GLAND from the system, and consult the FACTORY.
3. Tighten the JAM NUT on the PACKING BODY. (See **Chapter 2: Packing Gland Instructions.**)
4. Insert the PROBE by turning the HANDLES on the SPINNER NUT clockwise until the PROBE reaches the desired depth. Insertion depth can be measured by using the scale on the Easy Tool.
5. Tighten the LOCKING NUT on the PACKING BODY. (See **Chapter 2: Packing Gland Instructions.**)
6. Raise the SPINNER NUT until the BOTTOM LEG of the INSERT SLIDE is just below the SHOULDER OF THE PROBE CONNECTOR.

CAUTION: IF THE PROBE MOVES OUTWARD AS THE SPINNER NUT IS RAISED, THE LOCKING NUT REQUIRES FURTHER TIGHTENING. IF AFTER FURTHER TIGHTENING THE PROBE CONTINUES TO MOVE OUTWARD, RETRACT THE PROBE FROM THE SYSTEM. ONCE THE PROBE HAS CLEARED THE VALVE, SHUT THE VALVE AND CALL THE FACTORY.

7. Move the INSERT SLIDE to the RETRACTED POSITION. (See **Figure 5.**) Raise the SPINNER NUT until it clears the PROBE. Unlock the SWING ARM, and remove the Easy Tool from the PACKING BODY.

Easy Tool Retraction

1. Re-install the Easy Tool (refer to **Mounting the Easy Tool**).
2. Move the INSERT SLIDE to the ENGAGED POSITION so that the SHOULDER of the PROBE CONNECTOR is held by the INSERT SLIDE. (See **Figure 6**.)

CAUTION: CONFIRM THAT THE INSERT SLIDE IS PROPERLY MOUNTED ON THE PROBE. IMPROPER MOUNTING OF THE EASY TOOL ON TO THE PROBE COULD RESULT IN UNCONTROLLED RELEASE OF THE PROBE.

3. With the INSERT SLIDE properly mounted on the SHOULDER of the PROBE CONNECTOR, loosen the LOCKING NUT.
4. Retract the PROBE by turning the HANDLES on the SPINNER NUT counterclockwise until the PROBE has cleared the valve.
5. Once the PROBE has cleared the valve, close the valve. If the valve does not close, make sure the rod has been fully retracted.
6. If there is a bleed valve in place, open it to release pressure in the PACKING GLAND.
7. Move the INSERT SLIDE to the RETRACTED POSITION. (See **Figure 5**.) Raise the SPINNER NUT until it clears the PROBE. Unlock the SWING ARM and remove the Easy Tool.

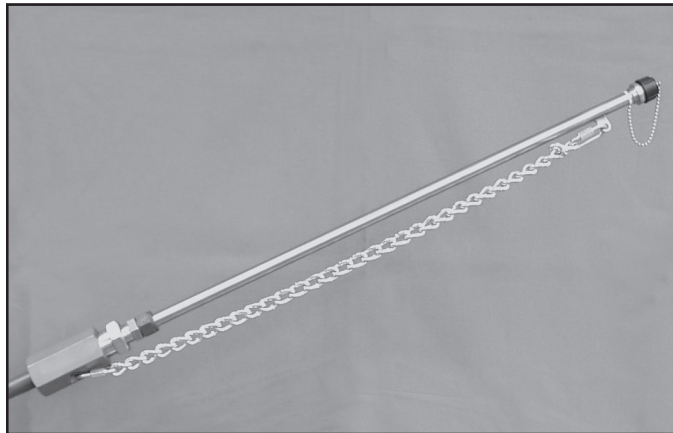
CAUTION: IF THE PROBE MOVES OUTWARD AS THE SPINNER NUT IS RAISED, MAKE SURE THE VALVE IS FULLY CLOSED AND THE PRESSURE IN THE NIPPLE HAS BEEN RELEASED.

8. Remove the PACKING GLAND from the system.

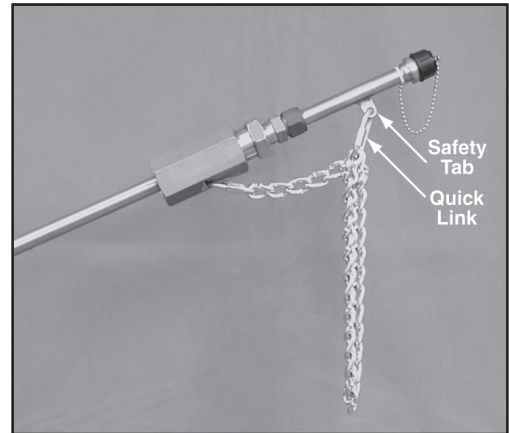
NOTE: Apply lubricating oil or grease on threaded and moving parts to prevent seizure of these components.

Chapter 4

Safety Chain Installation



Fully retracted probe with safety chain installed



Inserted probe with safety chain installed

1. To adjust the safety chain, unscrew the quick link at the safety tab end of the insertion rod.
2. Without removing the last link of the chain, take up as many links as possible and fit chain link onto quick link.
3. Screw the quick link back together. Tighten greater than hand tight with a wrench.

Some free play of the safety chain will be present after adjustment. This is normal.

Safety Notices

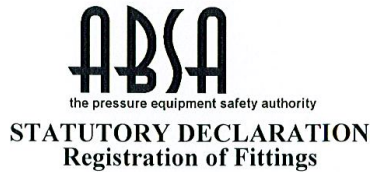
1. Upon completion of adjustment, ensure both quick links are fully screwed together greater than hand tight.
2. Ensure that loose end of chain does not interfere with equipment in the surrounding area.
3. Replace either quick links or chain, if they become damaged.
4. The safety chain is not to be used in any manner to aid the user in controlling the insertion rod while removing or inserting the probe.
5. If the safety chain is subjected to a sudden impact event, the chain and quick links must be replaced prior to reinstallation of the probe.
6. If the system pressure is greater than 150 psi., Metal Samples requires the use of an “*Easy Tool Retracting System*” to install and remove any retractable system and the use of a “*Safety Clamp*” once the retractable system has been installed.

Chapter 5

Certifications (CRNs - Canadian Registration Numbers)

CRN - Alberta

AB-41 2005-02



I, Don Johnson,
Chief Executive Officer
(company title, e.g. vice president, plant manager, chief engineer) (must be in a position of authority)
of Alabama Specialty Products Incorporated
(name of manufacturer)

located at 152 Metal Samples Road Munford, Alabama 36268
(plant address)

do solemnly declare that the fittings listed hereunder, which are subject to the Safety Codes Act (check one)

- comply with the requirements of NACE MR-0175; ASME B31.3 Boile which specifies the dimensions, (title of recognized North American Standard) materials of construction, pressure/temperature ratings and identification marking of the fittings, or
- are not covered by the provisions of a recognized North American standard and are therefore manufactured to comply with _____ as supported by the attached data which identifies the dimensions, materials of construction, pressure/temperature ratings and the basis for such ratings, and the marking of the fittings for identification.

I further declare that the manufacture of these fittings is controlled by a quality control program which has been verified by the following authority, ISO 9001:2008 as being suitable for the manufacture of these fittings to the stated standard. The fittings covered by this declaration, for which I seek registration, are Category H

In support of this application, the following information, calculations and/or test data are attached:

Drawing # PR5585 and calculations.

DECLARED before me at 152 Metal Samples R in the State of Alabama
this 21st day of March, 2011
(Month) (Year)
(print) Nicole Finley
(sign) Nicole Finley
(A Commissioner for Oaths)

[Handwritten Signature]
(Signature of Applicant)

For Office Use Only Renewal -
To the best of my knowledge and belief, the application meets the requirements of the Safety Codes Act and CSA Standard B51, Clause 4.2, and is accepted for registration in Category H
Registration Number: OH01449.72
Date Registered: JUN 19 2011

[Handwritten Signature]
(For the Administrator/Chief Inspector of Alberta)
Expiry Date: April 07, 2021

The information you provide is necessary only for the administration of the programs as required by the Alberta Safety Codes Act and Regulations in the Boiler Discipline.



STATUTORY DECLARATION
Registration of Fittings

In this space, show facsimile of manufacturer's logo or trademark as it will appear on the fitting. Metal Samples.

I, Don Johnson, Chief Executive Officer, (company title, e.g. vice president, plant manager, chief engineer) (must be in a position of authority) of Alabama Specialty Products Incorporated (name of manufacturer)

located at 152 Metal Samples Road Munford, Alabama 36268 (plant address)

do solemnly declare that the fittings listed hereunder, which are subject to the Safety Codes Act (check one)

- comply with the requirements of NACE MR-0175; ASME B31.3 Boile which specifies the dimensions, (title of recognized North American Standard) materials of construction, pressure/temperature ratings and identification marking of the fittings, or are not covered by the provisions of a recognized North American standard and are therefore manufactured to comply with as supported by the attached data which identifies the dimensions, materials of construction, pressure/temperature ratings and the basis for such ratings, and the marking of the fittings for identification.

I further declare that the manufacture of these fittings is controlled by a quality control program which has been verified by the following authority, ISO 9001:2008 as being suitable for the manufacture of these fittings to the stated standard. The fittings covered by this declaration, for which I seek registration, are Catagory H

In support of this application, the following information, calculations and/or test data are attached: Catalogue cut sheets, individual part drawings, and a calculation sheet.

DECLARED before me at 152 Metal Samples R in the State of Alabama this 27 day of July, 2011 (Month) (Year) (print) Nicole Finley (sign) Nicole Finley (A Commissioner for Oaths) (Signature of Applicant)

For Office Use Only * SEE ACCEPTANCE LETTER. To the best of my knowledge and belief, the application meets the requirements of the Safety Codes Act and CSA Standard B51, Clause 4.2, and is accepted for registration in Category H. Registration Number: OH 12003-2 (For the Administrator/Chief Inspector of Alberta) Date Registered: JAN 13 2012 Expiry Date: JAN 13, 2012

The information you provide is necessary only for the administration of the programs as required by the Alberta Safety Codes Act and Regulations in the Boiler Discipline.

CRN - New Brunswick

UNIFORM STATUTORY DECLARATION FORM FOR THE REGISTRATION OF FITTING DESIGNS

NEW BRUNSWICK NOVA SCOTIA PRINCE EDWARD ISLAND NEWFOUNDLAND AND LABRADOR
 NUNAVUT YUKON NORTHWEST TERRITORIES

MANUFACTURERS NAME: Alabama Specialty Products Incorporated
 MANUFACTURERS ADDRESS: P.O. Box 8 152 Metal Samples Road Munford Alabama 36268 USA
 PLANT LOCATIONS: 152 Metal Samples Road Munford Alabama 36268 USA

CATEGORY OF FITTINGS TO BE REGISTERED. CIRCLE ONE CATEGORY ONLY	TITLE OF THE STANDARD OF CONSTRUCTION
A Pipe fittings, including couplings, tees, elbows, Ys, plugs, unions, pipe caps, or reducers B Flanges: all flanges C Valves: all line valves D Expansion joints, flexible connections, and hose assemblies: all types E Strainers, filters, separators, and steam traps F Measuring devices, including pressure gauges, level gauges, sight glasses, levels, or pressure transmitters G Certified capacity-rated pressure relief devices acceptable as primary over pressure protection on boilers, pressure vessels, piping and fusible plugs **H Pressure retaining components that do not fall into one of the above categories** N Nuclear components: Class 1 <input type="checkbox"/> Class 2 1=1 Class 3 <input type="checkbox"/> , (Meeting CNSC or ASME requirements)	NACE MR-0175; ASME B31.3 Boiler and Pressure Vessel Code Section IX, Welding & Brazing Qualification Articles 2 & 3

SHOW MANUFACTURERS NAME, TRADEMARK, OR LOGO AS IT WILL APPEAR ON THE PRODUCT	TYPE OF CONSTRUCTION
	FORGED <input type="checkbox"/> WELDED <input type="checkbox"/> WROUGHT X CAST <input type="checkbox"/> OTHER <input type="checkbox"/> DESCRIBE OTHER:

LIST OF SUPPORTING DOCUMENTATION AND IDENTIFICATION OF THE ACTUAL ITEMS TO BE REGISTERED:

ISO Certification; PR5585 drawing; Design calculations; Catalogue Technical Data Sheet

DECLARATION:

I Fredrick Douglas (see note 3) employed by Alabama Specialty Products Incorporated and being the person having full authority and responsibility for the quality of the end product do solemnly declare that the information contained in this form is true and to the best of my knowledge represents the product for which registration is sought. The dimensions, materials of construction, pressure temperature ratings, and identification markings are in accordance with the herein named standards. I further declare that the manufacture of these fittings is regulated by a Quality Control Program which extends to each plant where fabrication occurs in whole or in part and has been verified by Det Norske Veritas Certification Inc as being suitable for that purpose and I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath.

Signature of Declarer: *Fredrick Douglas*

Declared before me at Munford, Alabama USA

This 16th _____ day of March _____ AD 2011 _____


Commissioner of Oaths or Notary Public: (sign) *Nicole Jenkins*



This space for Regulatory Authority use This registration must be revalidated after ten (10) years from the date of acceptance.	DEPT OF PUBLIC SAFETY BOILER & PRESSURE VESSEL ACT
CRN: <u>OH1449.7 REV.1</u> FID# <u>1112</u>	REGISTRATION ONLY CRN <u>OH1449.7 Rev 1</u>
Notes: 1. All fittings shall be registered in the name of the Manufacturer. 2. Each category shall be supported with two Statutory Declaration forms and one copy of supporting documentation. 3. The declaration shall be made by the person having full authority and responsibility for the quality of the end product. 4. Quality control programs shall be resubmitted for validation at a maximum interval of five (5) years.	RECEIVED MAY 12 2011 BY: _____ EXAMINER: <u><i>Shawn C...</i></u> for CHIEF BOILER INSPECTOR DATE: <u>04/07/2011</u>
	<input type="checkbox"/> BLRs <input type="checkbox"/> PVs Sect. 1.0 - Fittings Rev. 1 06/2003 <input checked="" type="checkbox"/> FITTINGS <input type="checkbox"/> COMPONENTS

CRN - Nova Scotia

UNIFORM STATUTORY DECLARATION FORM FOR THE REGISTRATION OF FITTING DESIGNS

NEW BRUNSWICK NUNAVUT	NOVA SCOTIA YUKON	PRINCE EDWARD ISLAND NORTHWEST TERRITORIES	NEWFOUNDLAND AND LABRADOR
MANUFACTURERS NAME: Alabama Specialty Products Incorporated			
MANUFACTURERS ADDRESS: P.O. Box 8 152 Metal Samples Road Munford Alabama 36268 USA			
PLANT LOCATIONS: 152 Metal Samples Road Munford Alabama 36268 USA			
CATEGORY OF FITTINGS TO BE REGISTERED. CIRCLE ONE CATEGORY ONLY		TITLE OF THE STANDARD OF CONSTRUCTION	
A Pipe fittings, including couplings, tees, elbows, Ys, plugs, unions, pipe caps, or reducers B Flanges: all flanges C Valves: all line valves D Expansion joints, flexible connections, and hose assemblies: all types E Strainers, filters, separators, and steam traps F Measuring devices, including pressure gauges, level gauges, sight glasses, levels, or pressure transmitters G Certified capacity-rated pressure relief devices acceptable as primary over pressure protection on boilers, pressure vessels, piping and fusible plugs **H Pressure retaining components that do not fall into one of the above categories** N Nuclear components: Class 1 <input type="checkbox"/> Class 2 1=1 Class 3 <input type="checkbox"/> (Meeting CNSC or ASME requirements)		NACE MR-0175; ASME B31.3 Boiler and Pressure Vessel Code Section IX, Welding & Brazing Qualification Articles 2 & 3	
SHOW MANUFACTURERS NAME, TRADEMARK, OR LOGO AS IT WILL APPEAR ON THE PRODUCT		TYPE OF CONSTRUCTION	
		FORGED <input type="checkbox"/> WELDED <input checked="" type="checkbox"/> WROUGHT <input checked="" type="checkbox"/> CAST <input type="checkbox"/> OTHER <input type="checkbox"/> DESCRIBE OTHER:	
LIST OF SUPPORTING DOCUMENTATION AND IDENTIFICATION OF THE ACTUAL ITEMS TO BE REGISTERED:			
ISO Certification; PR5585 drawing; Design calculations; Catalogue Technical Data Sheet			

DECLARATION:

I Fredrick Douglas (see note 3) employed by Alabama Specialty Products Incorporated and being the person having full authority and responsibility for the quality of the end product do solemnly declare that the information contained in this form is true and to the best of my knowledge represents the product for which registration is sought. The dimensions, materials of construction, pressure temperature ratings, and identification markings are in accordance with the herein named standards. I further declare that the manufacture of these fittings is regulated by a Quality Control Program which extends to each plant where fabrication occurs in whole or in part and has been verified by Det Norske Veritas Certification Inc as being suitable for that purpose and I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath.

Signature of Declarer: Fredrick Douglas

Declared before me at Munford, Alabama USA

This 16th _____ day of March _____ AD 2011 _____

Commissioner of Oaths
or Notary Public: (sign) Michelle Jenkins

USE THIS SPACE FOR OFFICIAL SEAL



This space for Regulatory Authority use This registration must be revalidated after ten (10) years from the date of acceptance.	
CRN: <u>OH1449.7 REV.1</u>	RECEIVED MAY 12 2011 BY: _____
FID# <u>1112</u>	
Notes: 1. All fittings shall be registered in the name of the Manufacturer. 2. Each category shall be supported with two Statutory Declaration forms and one copy of supporting documentation. 3. The declaration shall be made by the person having full authority and responsibility for the quality of the end product. 4. Quality control programs shall be resubmitted for validation at a maximum interval of five (5) years.	Date <u>April 27/11</u> C.R.N. <u>OH1449.78 REV.1</u> Dwg. <u>as described</u> Signed <u>Yvonne Perry</u> _____ Part of _____ Sec. 1.0 Fittings Rev. 1 05/2003

CRN - Ontario



TECHNICAL STANDARDS &
SAFETY AUTHORITY
14th Floor, Centre Tower
3300 Bloor Street West
Toronto, Ontario
Canada M8X 2X4

Show facsimile of manufacturer's logo or trademark, as it will appear on the fitting, in the space below



STATUTORY DECLARATION
Registration of Fittings

I, Don Johnson, Chief Executive Officer
(Name and Position, e.g. President, Plant Manager, Chief Engineer)

of Alabama Specialty Products, Inc.
(Name of Manufacturer)

Located at 152 Metal Samples Road, Munford, Alabama 36268, USA 256-358-4202 256-358-4515
(Plant Address) (Telephone No.) (Fax No.)

do solemnly declare that the fittings listed hereunder, which are subject to the **Technical Standards and Safety Act**, Boilers and Pressure Vessels Regulation, comply with all of the requirements of ASME B31.3 Boiler & Pressure Vessel Code Sec.IX; NACE MRO-175; Welding & Brazing Qualification, Artcls. 2 & 3
(Title of recognized North American Standard)
which specifies the dimensions, materials of construction, pressure/temperature ratings, identification marking the fittings and service;

or are not covered by the provisions of a recognized North American standard and are therefore manufactured to comply with Drawing #PR5585 as supported by the attached data which identifies the dimensions, material of construction, pressure/temperature ratings and the basis for such ratings, the marking of the fitting for identification and service.

I further declare that the manufacture of these fittings is controlled by a quality system meeting the requirements of ISO 9001:2008 which has been verified by the following authority, Det Norske Veritas Certification B.V.

The items covered by this declaration, for which I seek registration, are category H type fittings. In support of this application, the following information and/or test data are attached as follows:
Drawing #PR5585, Pressure Boundary Outline, Calculations, QC verification Certificate, National Design Registration Form.
(drawings, calculations, test reports, etc.)

Declared before me at MUNFORD in the STATE of ALABAMA
the 25TH day of JULY AD 20 13.

Commissioner for Oaths:
Nicole Finley
(Printed name)
Nicole Finley
My Commission Expires Oct. 5, 2014

[Signature]
(Signature of Declarer)

FOR OFFICE USE ONLY

To the best of my knowledge and belief, the application meets the requirements of the **Technical Standards and Safety Act**, Boilers and Pressure Vessels Regulation, and CSA Standard B51 and is accepted for registration in Category H.

CRN: CSA-OH16311.56
Registered by: B. SANDHU
Dated: OCT. 08. 2013

NOTE: This registration expires on: Sept 18, 2023

CSA INTERNATIONAL
REGISTERED
C.R.N.: CSA-OH16311.56
Signed: Bikramjit Sandhu
Date: 08 Oct. 2013
178 Rexdale Blvd., Toronto, ON M9W 1R3

PV 09553 (11/12)

* Note: Scope of registration is for packing Body (Dwg #PR5585, Rev B)
Design Pressure = 1500 psi @ 850 F; Material = A351 CF3M.



TECHNICAL STANDARDS & SAFETY AUTHORITY
14th Floor, Centre Tower
3300 Bloor Street West
Toronto, Ontario
Canada M8X 2X4

Show facsimile of manufacturer's logo or trademark, as it will appear on the fitting, in the space below

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Registration of Fittings

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the 25TH day of JULY AD 20 13.

Commissioner for Oaths:
Nicole Finley
(Printed name)
Nicole Finley
My Commission Expires Oct. 5, 2014

[Signature]
(Signature of Declarer)

FOR OFFICE USE ONLY
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Date: 08 Oct. 2013
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PV 09553 (11/12)
* Note: Scope of registration is for Packing Body (Dwg #PR5585, Rev. B)
Design Pressure = 1500 psi @ 850 F; Material = A351 CF3M.