Metal Samples
Corrosion Monitoring Systems

Retractable System Operation & Maintenance Manual

Metal Samples Corrosion Monitoring Systems
A Division of Alabama Specialty Products, Inc.
152 Metal Samples Rd., Munford, AL 36268 Phone: (256) 358-4202
E-mail: msc@alspi.com Internet: www.metalsamples.com

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Chapter 1
Length Calculation and Accessories for Retractable Systems

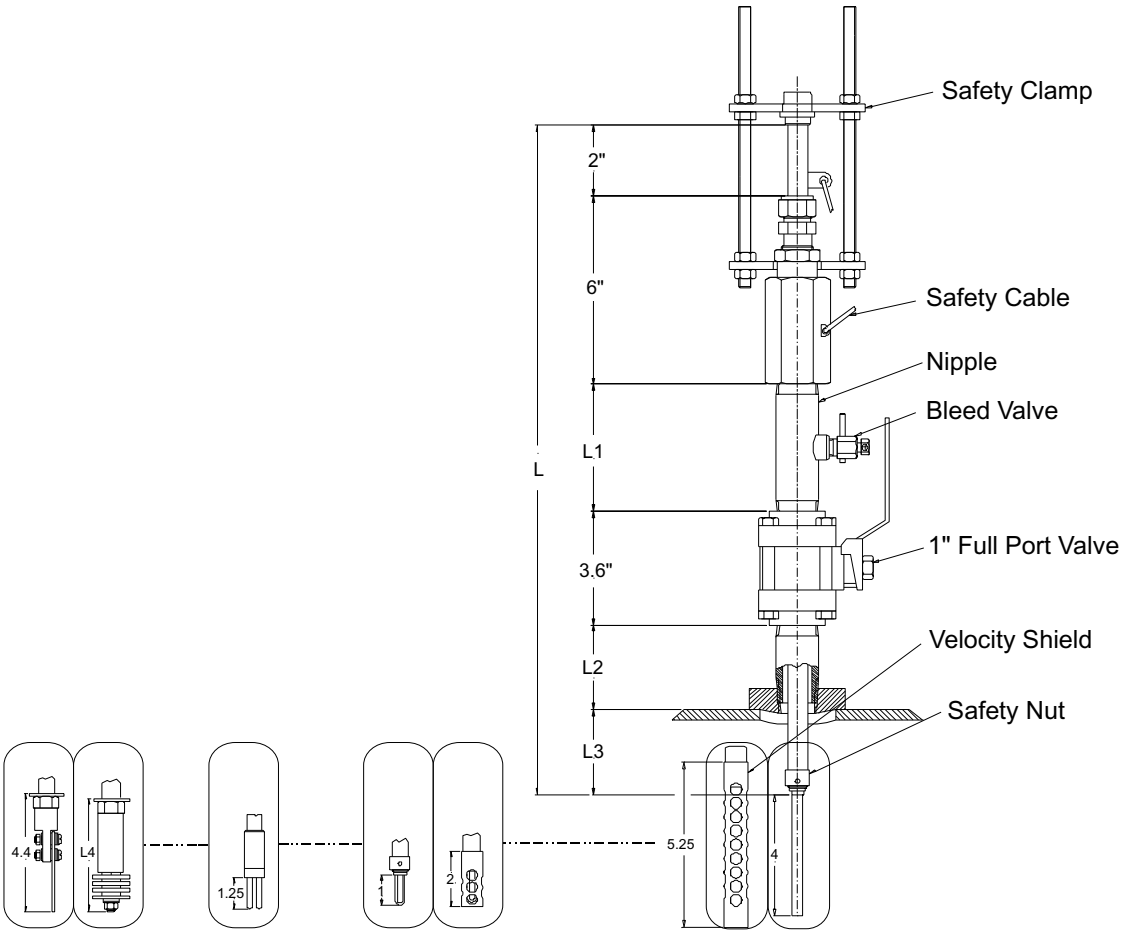


Figure 1. Retractable Probe / Coupon Holder Assembly

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.

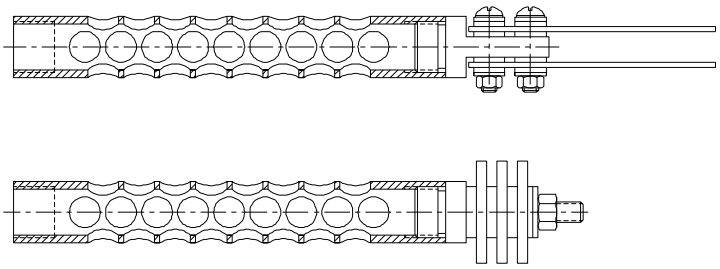


Figure 2. Coupon Adaptors attached to Safety Shields

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
Retractable Packing Gland Adjustment & Installation

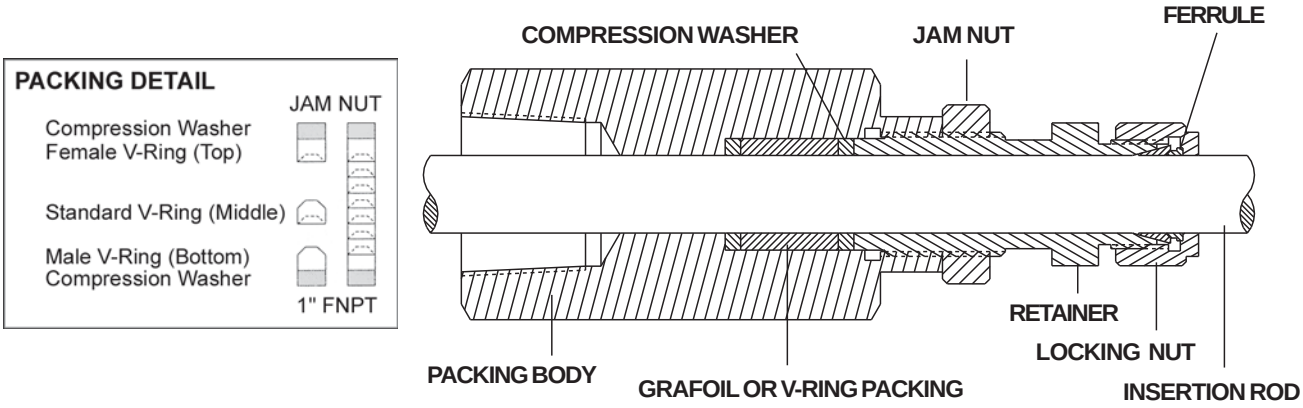


Figure 3. Packing Gland

1. If PACKING GLAND is not already installed, slide the PACKING GLAND over the INSERTION ROD or PROBE.

The packing must be adjusted prior to mounting packing gland to process.

2. Loosen the LOCKING NUT. Slide LOCKING NUT and FERRULE away from the RETAINER.

3. Loosen the JAM NUT. Turn RETAINER clockwise to tighten the packing. The packing should be tightened until there is a resistance felt while sliding the INSERTION ROD in and out. The following table summarizes the recommended torque for ambient temperature against water:

Pressure Rating	150 psi	500 psi	1,000 psi	1,500 psi
PTE (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

Do not over tighten packing. This will result in damage to the gland.

4. Tighten the JAM NUT, thereby locking the RETAINER in place.

5. Mount the PACKING GLAND on the NIPPLE or FLANGE and secure in place. An approved sealant or flange gasket should be used when attaching the retractable system to the process. The rod should be fully retracted at this time with the LOCKING NUT and FERRULE clear of the RETAINER.

The following steps may require a certified pipe fitter for complete installation. Use of Easy Tool required if system pressure is greater than 150 psi.

6. Open the process valve and check for packing leaks. If packing is leaking, shut the process valve, remove the PACKING GLAND, and readjust the PACKING GLAND using steps 3-5.

The packing may be tightened as long as the rod will slide in and out of the gland.

7. Insert to desired length. To lock the ROD in place, secure the LOCKING NUT and FERRULE.

8. Mount the safety plates or safety cap in place if applicable.

Apply **Anti-Seize Compound** to prevent seizure of packing gland parts.
"Chevrons" of Teflon® packing should be in the direction of open to process.

Packing Rings per Gland

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

Safety Notices

1. A SAFETY NUT or SHIELD must be installed on retractable probe(s) after inserting the PROBE into the PACKING GLAND and prior to mounting the PACKING GLAND in the process. If the SAFETY NUT or SHIELD is subjected to a sudden impact event, the probe must be inspected by qualified personnel prior to reinstallation.

2. If the system is greater than 150 psi, Metal Samples Corrosion Monitoring Systems requires the use of an "*Easy Tool Retracting System"* to install and remove any retractable PACKING GLAND system and the use of a "*Safety Clamp*" once the retractable PACKING GLAND system has been installed.

3. All retractable PACKING GLAND components, especially safety devices, must be evaluated periodically for proper installation. Special care must be taken when evaluating components which are subject to high corrosion environments for structural integrity.

Failure to follow the above safety measures can result in physical injury to personnel and/or damage to plant equipment. If there are any questions concerning these safety notices, please contact our offices prior to attempting to use these products.

Teflon® is a registered trademark of DuPont.

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**.)

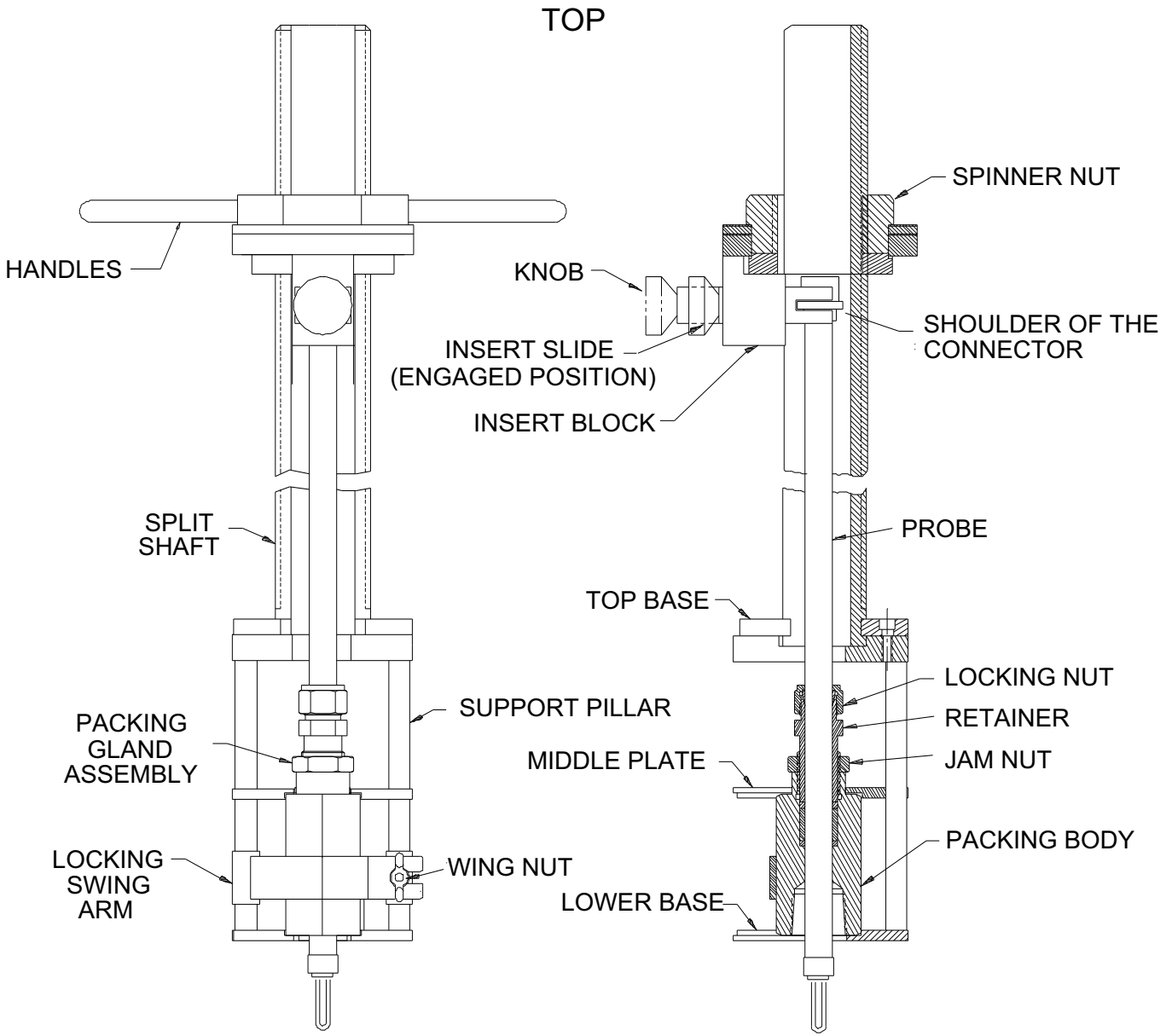


Figure 4. Easy Tool Retracting System

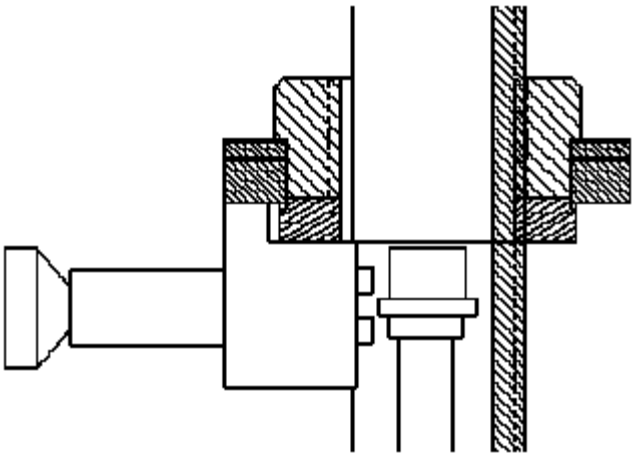


Figure 5. Insert Slide (Retracted Position)

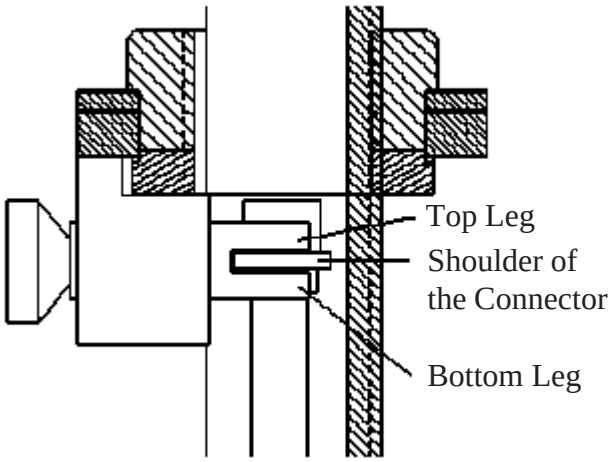


Figure 6. Insert Slide (Engaged Position)

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.

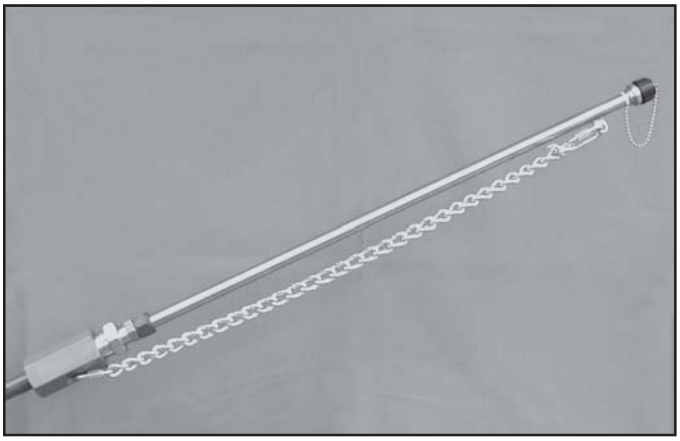
7. Move the INSERT SLIDE to the RETRACTED POSITION. (See **Figure 5**.) Raise the SPINNER NUT until it clears the PROBE. Unlock the SWING ARM and remove the Easy Tool.

   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.

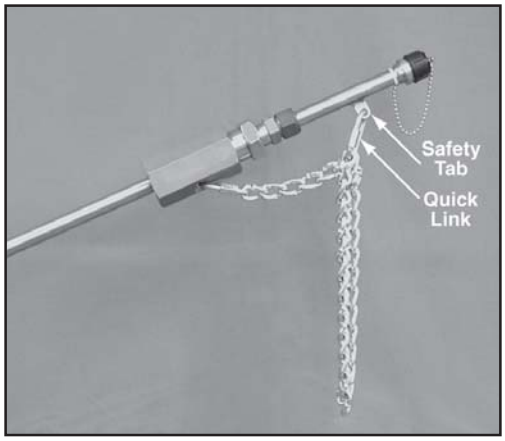
8. Remove the PACKING GLAND from the system.

   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 Corrosion Monitoring Systems 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

Alberta
MUNICIPAL AFFAIRS

ABSA
the pressure equipment safety authority

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:
Drawing # PR5585 and calcultations.

DECLARED before me at 152 Metal Samples R in the State of Alabama

this 21st day of March (Month), 2011 (Year)

(print) Nicole Finley

(sign) Nicole Finley
(A Commissioner for Oaths)

(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

(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.

CRN - Alberta

AB-41 2005-02

Alberta
MUNICIPAL AFFAIRS

ABSA
the pressure equipment safety authority

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 (Month), 2011 (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: OH12003.2

(For the Administrator/Chief Inspector of Alberta)

Date Registered: JAN 13 2012

Expiry Date: JAN 13, 2022

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 ☐ Class 2 1=1 Class 3 ☐, (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
Metal Samples®	FORGED ☐ WELDED X WROUGHT X CAST ☐ OTHER ☐ 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 Smiley

USE THIS SPACE FOR OFFICIAL SEAL

NOTARY PUBLIC ALABAMA AT LARGE

New Brunswick

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
REGISTRATION ONLY

CRN: OH1449.7 REV.1

FID# 1112

RECEIVED
MAY 12 2011
BY:

CRN OH1449.7Rev 1

EXAMINER:

for CHIEF BOILER INSPECTOR

DATE: 04/07/2011

☐ BLRs ☐ PVs

Sect. 1.0 - Fittings Rev. 1 06/2003

☑ FITTINGS ☐ COMPONENTS

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.

CRN - Nova Scotia

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 ☐ Class 2 1=1 Class 3 ☐, (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
Metal Samples	FORGED ☐ WELDED X WROUGHT X CAST ☐ OTHER ☐ 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 Frehley

USE THIS SPACE FOR OFFICIAL SEAL

0170

This space for Regulatory Authority use

This registration must be revalidated after ten (10) years from the date of acceptance.

CRN: OH1449.7 REV.1

FID# 1112

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.

BOILER PRESSURE VESSEL NOVA SCOTIA

Date April 27/11

C.R.N. OH1449.78 REV.1

Dwg. as described

Signed Yvonne Perry

1 of 1 Part

ACT & REGULATIONS

RECEIVED MAY 12 2011 BY:

Sec. 1.0 Fittings Rev. 1 06/2003

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

Metal Samples

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
(Signature)
My Commission Expires Oct. 5, 2014

(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.

CRN - Quebec

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

Metal Samples

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
(Signature)

My Commission Expires Oct. 5, 2014

(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

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