### 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: Swagelok Company MANUFACTURERS ADDRESS: 29500 Solon Road, Solon, Ohio 44139 USA PLANT LOCATIONS: Headquarters: 29500 Solon Road, Solon, Ohio 44139 USA (See Attachment A) CATEGORY OF FITTINGS TO BE REGISTERED. CIRCLE ONE CATEGORY ONLY TITLE OF THE STANDARD OF CONSTRUCTION Pipe fittings, including couplings, tees, elbows, Ys, plugs, unions, pipe caps, or reducers Flanges: all flanges ASME B31.1 for C Valves: all line valves D Expansion joints, flexible connections, and hose assemblies: all types unlisted components, E Strainers, filters, separators, and steam traps ASME B31.3 for F Measuring devices, including pressure gauges, level gauges, sight glasses, levels, or unlisted components pressure transmitters G Certified capacity-rated pressure relief devices acceptable as primary over pressure protection on bollers, 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 ☐ Class 3 ☐, (Meeting AECB or ASME requirements) SHOW MANUFACTURERS NAME, TRADEMARK, OR LOGO AS IT WILL APPEAR ON THE PRODUCT TYPE OF CONSTRUCTION FORGED | WELDED | WROUGHT | CAST | OTHER | LIST OF SUPPORTING DOCUMENTATION AND IDENTIFICATION OF THE ACTUAL ITEMS TO BE REGISTERED: ISO 9001:2015 Certificate, Attachment A, Attachment B, Catalog Information and other Support Documents DECLARATION: | Joel Feldman, Vice President, Engineering (see note 3) employed by\_ Swagelok Company 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 BSI 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 un-Signature of Declarer: Declared before me at USE THIS SPA OFFICIA Commissioner of Oaths or Notary Public: (sign) (Affix Official seal to the right) New SNouveau This space for Regulatory Authority use This registration must be revalidated after ten (10) years from the company of th OA21840.5 DEPT OF JUSTICE PUBLIC SAFETY **BOILER & PRESSURE VESSEL ACT** 1214 REGISTRATION ONLY

AUTIMATIC TUBE WELD (ATW), MICRO-FIT (MW) NOTE TURE BUTTWELD (TB) FITTINGS 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 a maximum interval of five (5) years.

This

CRN:

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BLRs ☐ PVs

FITTINGS | NUCLEAR COMPONENTS

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# Attachment B: Scope of CRN Registration for Swagelok ATW, MW, and TB Series Weld Fittings (Category A)

This document represents the scope of Swagelok® Automatic Tube Weld (ATW), Micro-Fit Weld (MW), and Tube Butt Weld (TB) Fittings covered by this submission for CRN registration. These weld fittings were designed and evaluated in accordance with ASME B31.1-2016 for unlisted components and ASME B31.3-2016 for unlisted components.

Table 1 - Summary Table - ATW FITTINGS

Product Series* (Size)		End Connections and Sizes	Maximum Allowable Working Pressure (psig)		Design Code
	Material (Standard)		Up to 100°F	At Maximum Temperature (850°F)	of Construction
-4 ATW (1/4")	316L SS (ASTM A479) for straight fittings, hardware F316L SS (ASTM A182) for shaped fittings	Tube Fitting 1/4", 3/8",1/2" Tube Butt Weld 1/4"	5100	2390	
-6 ATW (3/8")		Tube Fitting 3/8" Tube Butt Weld 1/4" 3/8"	3300	1550	
-8 ATW (1/2")		Tube Fitting 1/4" 1/2" Tube Butt Weld 1/4",3/8",1/2"	3700	1730	
-12 ATW (3/4")		Tube Fitting 3/4"	2400	1120	ASME B31.1 (Unlisted Components)
-16 ATW (1")		Tube Fitting 1"	2400	1120	
-6 MATW (6mm)			6095	2860	ASME B31.3 (Unlisted
-8 MATW (8mm)			4499	2110	Components)
10 MATW ( <mark>10mm</mark> )		N/A	3483	1630	
12 MATW ( <mark>12mm)</mark>			2902	1360	
-18 MATW (18mm)			2902	1360	

<sup>\* &</sup>quot;MATW" denotes metric sized Automatic Tube Welds



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Table 2 - Summary Table - MW FITTINGS

Product Series*	Material	Maximum Allowable Working Pressure (psig)		Design Code	
(Size)	(Standard)	Up to 100°F	At Maximum Temperature (850°F)	°F) Construction	
-2MW (1/8")	316L SS (SEMI F20)	8500	3990		
-4MW (1/4")		5100	2390	1972 (0.044) (0.050)	
-6MW (3/8")		3300	1550	ASME B31.1 (Unlisted	
-8MW (1/2")		3700	1730	Components )	
-12MW (3/4")		2400	1120	and	
-16MW (1")		2400	1120	ASME B31.3	
-6MMW (6mm)		6095	2860	(Unlisted	
-8MMW (8mm)		4499	2110	Components)	
-10MMW (10mm)		3483	1630		
-12MMW (12mm)		2902	1360		

<sup>\*</sup> End connections are all micro-fit weld end connections. "MMW" denotes metric sizes.

Table 3 - Summary Table - TB FITTINGS

Product Series*	Material	Maximum Allowable Working Pressure (psig)		Design Code of	
(Size)	(Standard)	Up to 100°F At Maximum Temperature (850°F		Construction	
-2TB (1/8")	316L SS (ASTM A479) for straight fittings F316L SS (ASTM A182) for shaped fittings	8500	3990		
-4TB (1/4")		5100	2390		
-6TB (3/8")		3300	1550	ASME B31.1	
-8TB (1/2")		3700	1730	(Unlisted	
-12TB (3/4")		2400	1120	Components )	
-16TB (1")		2400	1120		
-6MTB (6mm)		6095	2860	ASME B31,3	
-8MTB (8mm)		4499	2110	(Unlisted Components)	
-10MTB (10mm)		3483	1630		
-12MTB (12mm)		2902	1360		
-18MTB (18mm)		2902	1360		

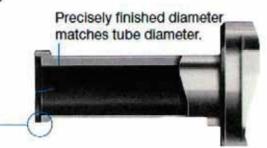
<sup>\*</sup> End connections are all tube butt weld end connections. "MTB" denotes metric sizes.



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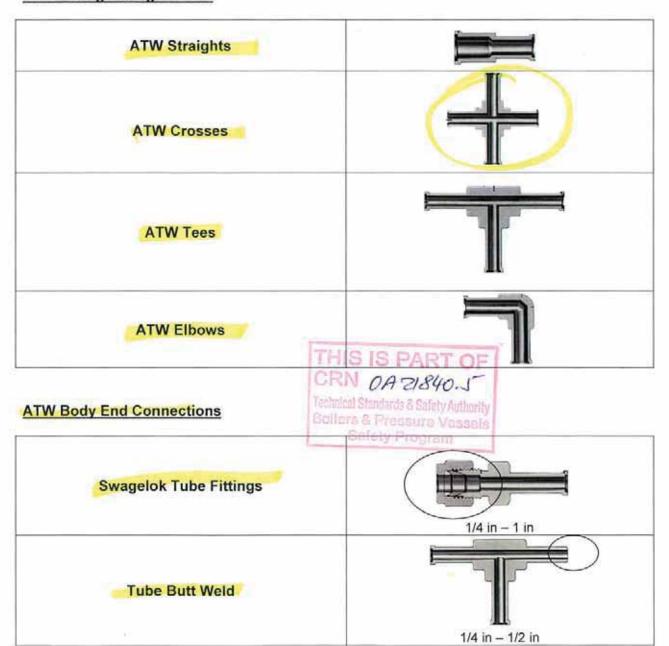
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## Figure 1 – ATW Product Illustration



Integral filler ring aids in alignment.

## **ATW Fitting Configurations**

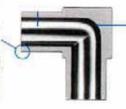


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Figure 2 - MW Product Illustration

Square, sharp, burrfree tube weld ends enhance alignment, maintain tube wall uniformity, and promote weld repeatability.



Radius junction allows for a smooth flow transition and eliminates pockets and entrapment zones. Date: June 10, 2019

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## MW Fitting Configurations

MW Straights	
MW Tees	
MW Elbows	
MW Tribows and Quadbows	
MW Crosses	#

## Figure 3 - TB Product Illustration

Tube ends are machined with a square face and corners to enhance alignment and maintain tube wall uniformity.



### **TB Fitting Configurations**

TB Straights	
TB Tees	
TB Crosses	
TB Elbows	



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### Quality System

The Swagelok Company quality system complies with the requirements of ISO 9001:2015. Swagelok Company maintains BSI Certificate of Registration Number FM 01729, which applies to all locations listed on the Certificate.

#### References

The product catalog does not represent the full scope of the registration but rather details some of the most common options.

Weld Fittings Product Catalog MS-01-149 Rev. M



## Attachment A. Swagelok Manufacturing Locations

This document lists the Swagelok locations where end item or component level manufacturing activities take place.

Swagelok Company	Swagelok Company (Falon 1)
29500 Solon Road	348 Bishop Road
Solon, Ohio 44139	Highland Heights, Ohio 44143
USA	USA
Swagelok Company (Highland)	Swagelok Company (Falon 2)
318 Bishop Road	358 Bishop Road
Highland Heights, Ohio 44143	Highland Heights, Ohio 44143
USA	USA
Swagelok Company (OFC)	Swagelok Company (HPF)
29495 F.A. Lennon Drive	6050 Cochran Road
Solon, Ohio 44139	Solon, Ohio 44139
USA	USA
Swagelok Company (Atlantic)	Swagelok Company (Snow Metal)
26651 Curtiss Wright Parkway	6060 Cochran Road
Willoughby Hills, Ohio 44092	Solon, Ohio 44139
USA	USA
Swagelok Company (Micro) 26653 Curtiss Wright Parkway Willoughby Hills, Ohio 44092 USA	Swagelok Company (Alfred) 29500 Ambina Drive Solon, Ohio 44139
Swagelok Hose Services Company (SHSC)	Swagelok Company (Strongsville)
29900 Solon Industrial Parkway	15400 Foltz Road
Solon, Ohio 44139	Strongsville, Ohio 44119
Swagelok (China) Fluid System Technologies Ltd.	Swagelok Limited
Changshu Export Process Zone	Ballafletcher Road
Changshu Economic Development Zone	Tromode
Changshu, Jiangshu	IM4 4RA
215513 China	Isle of Man

