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Date: June 30, 2017
Account #: 34986
Journal #: 68370
Our File #: 5617675

Attn: CYNTHIA FORMANIUK

Re: Application for Design Registration

The design, as detailed in your, ABSA Tracking No: 2017-02751, for a Fitting is accepted for registration as follows:

Registered To: SWAGELOK COMPANY **CRN:** 0A17712.21

Drawing #: SS-FLANGE-2017

Drawing Revision: 6

Conditions Of Registration:

Reg'n update of 316SS Flange Adapters as per scope of registration (attachment B pages 1-3).

This design was registered based on a technical review performed by the province of initial registration in accordance with the Association of Chief Inspectors policy on reciprocal recognition of design review.

Reviewer's Notes:

Codes of construction indicated as ASME B31.1 & B31.3. Registration includes 15 mfg locations per Attachment A. As required by CSA B51 4.2.1, this registration expires on June 09, 2027. This CRN is valid until the expiry date as long as the Manufacturer maintains a valid Q.C. program verified by an acceptable third-party agency until that date. Should the certification of the Q.C. program lapse before the expiry date, this registration shall become void.

Contact me if you have any questions. The invoice for registration will be forwarded under separate cover.

SHARON PETERS

boiler.designregistration@safetyauthority.ca
Design Administration

cc:

Attachment B: Scope of Registration for 316 SS ASME (ANSI) Flange Adapters (Category A)

Product Scope

The table below presents the scope of Swagelok ANSI Flange Adapters with tube connections covered by this submission for CRN approval. The referenced product catalogues do not represent the full scope of the submission but rather detail some of the most common options..

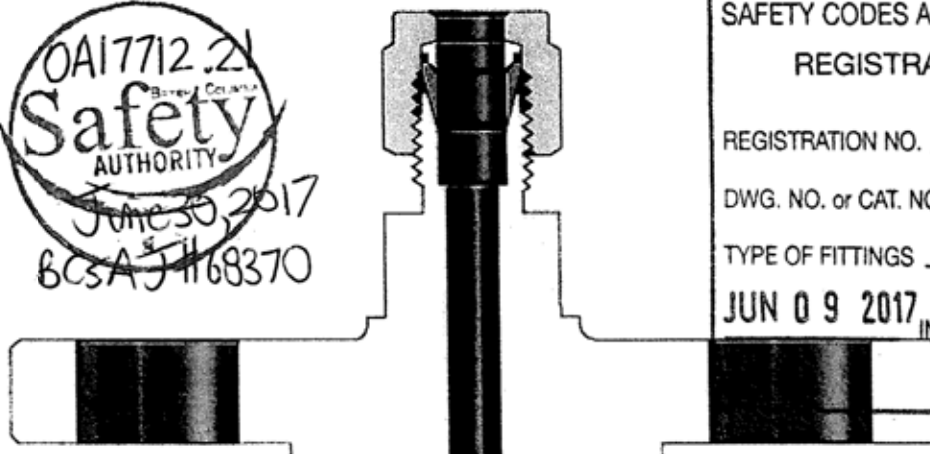
Summary Table

Product Description or Series	Material	Port Connections and Sizes	Maximum Allowable Working Pressure		Design Code of Construction
			Up to 100°F	At maximum temperature	
Swagelok Flange Adapters	F316 SS ASTM A182	Swagelok End Connection 1/16 - 2 inch (Fractional) 3mm - 50 mm (Metric)	As documented in ASME B16.5 Class and pressure ratings. See "Swagelok SS Tube Fitting Pressure Rating Table" on p.2 as the fitting end may be a limiting factor.		<ul style="list-style-type: none"> • ASME B16.5 • ASME B31.1 for unlisted components • ASME B31.3 for unlisted components

Product Description And Ratings

The Swagelok Flange Fitting body is a combination of a flange end designed and machined to ASME B16.5 dimensions and requirements, and Swagelok's proprietary design tube fitting end which is identical to the design approved in Swagelok SS Tube Fitting CRN 0A12577.5 (0A10622.2 for Alberta). Flange pressure ratings are based on Class and pressure-temperature ratings as documented in ASME B16.5-2013. Actual flange product ratings may be reduced due to the tube fitting end acting as the limiting factor (see table below for Tube fitting pressure ratings)

An example flange adapter section view is shown below. All Swagelok Flange Fitting wall thicknesses are the same or thicker than those noted in the above Swagelok SS Tube Fitting CRNs.



ASQA	
SAFETY CODES ACT - PROVINCE OF ALBERTA	
REGISTRATION OF FITTINGS	
REGISTRATION NO.	0A17712.2
DWG. NO. or CAT. NO.	Attachment B
TYPE OF FITTINGS	Flange Adapters
JUN 09 2017	INITIALS <i>Keith Rudolf</i>
KEITH RUDOLF, P.Eng. DESIGN SURVEY ENGINEER	

"See Acceptance Letter for the comments
and/or conditions of registration"

Swagelok SS Tube Fitting Pressure Rating Table

Swagelok End Connection Size	Maximum Allowable Working Pressure (1)	
	-60°F to 100°F	At maximum temperature 1000°F (537°C) (2)
1/16"	12 000 psig	9120 psig
1/8"	10 900 psig	8284 psig
3/16"	10 200 psig	7752 psig
1/4"	10 200 psig	7752 psig
5/16"	8 000 psig	6080 psig
3/8"	7500 psig	5700 psig
1/2"	6700 psig	5092 psig
5/8"	6000 psig	4560 psig
3/4"	5800 psig	4408 psig
7/8"	4800 psig	3648 psig
1"	4700 psig	3572 psig
1 1/4"	4900 psig	3724 psig
1 1/2"	4900 psig	3724 psig
2"	3600 psig	2736 psig
3 mm	670 bar	509 bar
6 mm	710 bar	540 bar
8 mm	520 bar	395 bar
10 mm	580 bar	441 bar
12 mm	470 bar	357 bar
14 mm	430 bar	327 bar
15 mm	400 bar	304 bar
16 mm	400 bar	304 bar
18 mm	370 bar	281 bar
20 mm	380 bar	289 bar
22 mm	340 bar	258 bar
25 mm	320 bar	243 bar
28 mm	330 bar	251 bar
30 mm	310 bar	236 bar
32 mm	330 bar	251 bar
38 mm	310 bar	236 bar
50 mm	270 bar	205 bar



Note (1): Values based on thickest wall tubing. Thinner tubing may be used but in all cases the ratings are less than, or equal to, those shown in the table.

Note (2): The working pressure ratings for stainless steel Swagelok end connections are based on the allowable working pressure for stainless steel tubing (TP316 A269 listed in ASME B31.3), and are de-rated for use at 1000°F by a derating factor of 0.76 per the Swagelok Tubing Data publication MS-01-107.

Quality System

The Swagelok Company quality system complies with the requirements of BS EN 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 catalogs noted below do not represent the full scope of registration, but rather details some of the most common options.

- Flange Adapters MS-02-200
- Tubing Data Sheet MS-01-107



0A17712.2

JUN 09 2017

BCSA J#68370 "See Acceptance Letter for the comments and/or conditions of registration"

Attachment A. Swagelok Manufacturing Locations

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

Swagelok Company 29500 Solon Road Solon, Ohio 44139 USA	Swagelok Company (Falon 1) 348 Bishop Road Highland Heights, Ohio 44143 USA
Swagelok Company (Highland) 318 Bishop Road Highland Heights, Ohio 44143 USA	Swagelok Company (Falon 2) 358 Bishop Road Highland Heights, Ohio 44143 USA
Swagelok Company (OFC) 29495 F.A. Lennon Drive Solon, Ohio 44139 USA	Swagelok Company (HPF) 6050 Cochran Road Solon, Ohio 44139 USA
Swagelok Company (Atlantic) 26651 Curtiss Wright Parkway Willoughby Hills, Ohio 44092 USA	Swagelok Company (Snow Metal) 6060 Cochran Road Solon, Ohio 44139 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) 29900 Solon Industrial Parkway Solon, Ohio 44139	Swagelok Company (Strongsville) 15400 Foltz Road Strongsville, Ohio 44119
Swagelok (China) Fluid System Technologies Ltd. Changshu Export Process Zone Changshu Economic Development Zone Changshu, Jiangshu 215513 China	Swagelok Company A.G. (European Technology Center) St. GallerstraBe 84 Lachen, Switzerland 8853 Switzerland
Swagelok Limited Tromode IM4 4RA Isle of Man	

