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www.tssa.org

June 22, 2016

JONATHAN SEEWALD SWAGELOK COMPANY 6565 DAVIS INDUSTRIAL PKWY SUITE A **SOLON OH 44139** US

Service Request Type: BPV-Fitting Registration

Service Request No.: 1883222

Your Reference No.: STH (SAE/MS) FITTING UNIONED WITH SWAGELOK TUBE ADAPTERS & TUBE

FITTINGS

Registered to: SWAGELOK

Dear JONATHAN SEEWALD,

Technical Standards and Safety Authority (TSSA) is pleased to inform you that your submission has been reviewed and registered as follows:

0A18544.5

Main Design No.: STH (SAE/MS) FITTING UNIONED WITH SWAGELOK TUBE ADAPTERS & TUBE

FITTINGS - SEE ATTACHMENT B FOR SCOPE OF REGISTRATION

Expiry Date:

22-Jun-2026

Please be advised that a valid quality control system must be maintained for the fitting registration to remain valid until the expiry date.

A stamped copy of the approved registration and invoice for engineering services will be mailed to you shortly. Should you have any questions or require further assistance, however, please contact a Customer Service Advisor at 1.877.682.TSSA (8772) or e-mail customerservices@tssa.org. We will be happy to assist you. When contacting TSSA regarding this file, please refer to the Service Request number provided above.

Yours truly,

Zivko Gacevic P. Eng. Mechanical Engineer, BPV

Tel.: 416-734-3429 Fax: 416-231-6183

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Email: zgacevic@tssa.org



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

Swagelol

STATUTORY DECLARATION Registration of Fittings David H. Peace, Vice President of Engineering (Name and Position, e.g. President, Plant Manager, Chief Engineer) of Swagelok Company (Name of Manufacturer) Located at 29500 Solon Road, Solon, Ohio 44139 USA (440) 248-4600 (440) 349-5970 (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 Chapter IX, for unlisted components where applicable (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 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, BSI The items covered by this declaration, for which I seek registration, are category A (Swagelok IPT Series Fitting) type fittings. In support of this application, the following information and/or test data are attached as follows: ISO 9001:2008 Certificate, Sales Drawings and oher Support Documents, Attachment B, Attachment A (drawings, calculations, test reports, etc.) Declared before me at Commissioner for Oaths: Jamie L. Ristau amie L Resident Pertage County (Printed name) Notary Public, State of Ohio My Commission Expires: 03/06/2019 (Signature) (Signature of Declarer) Technical FOR OFFICE USE ONLY Boilers and Standards Pressure Vessels To the best of my knowledge and belief, the application meets the requirements of the and Safety Safety Program Technical Standards and Safety Act, Boilers and Pressure Vessels Regulation, and Authority CSA Standard B51 and is accepted for registration in Category "A" REGISTERED CRN: CRN. 0A185495 Registered by: JUN 22, 2016 NOTE: This registration expires on: 74 N 22, 2026

Attachment B. Scope of Registration for Swagelok Tube Fittings to SAE MS Ends (Category A)

Product Scope

This document represents the scope of Swagelok 1/2" and 3/4" Tube Fittings with 1/2" Medium Pressure SAE/MS ends, covered by this submission for CRN approval. The Medium Pressure Fittings have been evaluated in accordance with ASME B31.3 for unlisted components and ASME B31.1 for unlisted components.

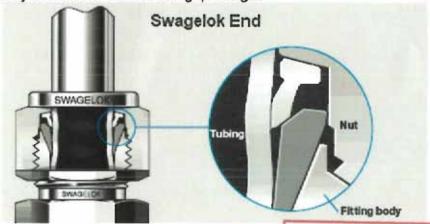
Summary Tables

Product Description or Series	Material	Port Connections and Sizes	Maximum Allowable Working Pressure		Design Code
			Ambient temperature	At maximum temperature	Construction
Tube fitting*	316 Stainless Steel (ASTM A479)	Tube Fitting, Tube Adapter 1/2"	6,700 PSI	5,092 PSI @ 1000°F	ASME B31.3 (Unlisted Components) ASME B31.1 (Listed Components)
		Tube Fitting, Tube Adapter 3/4"	5,800 PSI	4,408 PSI @ 1000°F	

^{*} Note: 1/2" SAE MS port connection rated at 9,137 psi at ambient temperature according to SAE J1926-2, Rev. MAR2010. The tube fitting port connections are thus considered the limiting factor.

Product Description

Swagelok SAE / MS Medium Pressure Fittings coupled with the tube fittings identified above are furnished as straight shaped fittings. Swagelok Tube Fittings consist of at least one Swagelok End – a proprietary two-ferrule mechanical-grip design.



THIS IS PART OF CRN OA18544.5 Technical Standards & Safety Authority Boilers & Pressure Vessels Safety Program

2.6. 6/22/16

Quality System

The Swagelok Company quality system complies with the requirements of BS EN ISO 9001:2008. Swagelok Company maintains BSI Certificate of Registration Number FM 01729, which applies to all locations listed on the Certificate.

References

The product catalogs do not represent the full scope of registration, but rather details some of the most common options.

- Medium and High Pressure Valves, Fittings and Tubing Catalog MS-02-472
- Gaugeable Tube Fittings and Adapter Fittings MS-01-140
- Tubing Data Sheet MS-01-107

THIS IS PART OF CRN 0A18549.5

Technical Standards & Safety Authority Boilers & Pressure Vessels Safety Program

7.6. 6/22/16