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April 07, 2017

RYAN ZISKA
SWAGELOK COMPANY
31400 AURORA ROAD
SOLOH OH 44139
US

Service Request Type.: BPV-National AB
Service Request No.: 2012558
Your Reference No.: SPECIAL ALLOY VALVES: SERIES 60, 83, BLEED VALVES, CH, N & HN - NAT'L SERV.
Registered to.: SWAGELOK

Dear RYAN ZISKA,

Please find enclosed the original response from AB, registered under the CRN No.: 0C18924.52.

As all jurisdictional fees are handled by the Technical Standards and Safety Authority (TSSA), you do not pay any jurisdictions directly.

Should you have any questions or require further assistance, I will be happy to assist you.
For general enquiries, please contact a Customer Service Advisor at 1.877.682.TSSA (8772) or e-mail customerservices@tssa.org. When contacting TSSA regarding this file, please refer to the Service Request number provided above.

Yours truly,

Joanna Karpinski

Tel: 416-734-3377
Fax: 416-231-6183
Email: jkarpinski@tssa.org



the pressure equipment safety authority

9410 - 20 Ave N.W.
Edmonton, Alberta, Canada T6N 0A4
Tel: (780) 437-9100 / Fax: (780) 437-7787

February 16, 2017

Attention: Tanya Francis
TECHNICAL STANDARDS & SAFETY AUTHORITY
345 CARLINGVIEW DRIVE
TORONTO, ON M9W 6N9

Email: tfrancis@tssa.org

The design submission, tracking number 2017-00640, originally received on February 02, 2017 was surveyed and accepted for registration as follows:

CRN : 0C18924.52 **Accepted on:** February 16, 2017
Reg Type: New Design **Expiry Date:** November 14, 2026
Drawing No. : ATTACHMENTS B1 TO B5 - SCOPE FOR SWAGELOK VALVES
Fitting type: SPECIAL ALLOY BALL, BLEED, CHECK & NEEDLE VALVES
Design registered in the name of : SWAGELOK COMPANY

The registration is conditional on your compliance with the following notes:

TSSA Service Request No.: 2012558

This registration includes sixteen manufacturing locations as per Attachment A.

*The scope of this registration is as per Attachments B1 to B5 and includes the following special alloy valves:
- 60 and 83 series ball valves, BV series bleed valves, CH series check valves, N and HN series needle valves.
The sizes, materials, and pressure/temperature ratings of the valves are as per the tables in the attachments.*

As indicated on the AB-41 Statutory Declaration form and submitted documentation the codes of construction are ASME B31.1 and B31.3.

This registration is valid only for fittings fabricated at the location(s) covered by the QC certificate attached to the accepted AB-41 Statutory Declaration form.

This registration is valid only until the indicated expiry date and only if the Manufacturer maintains a valid quality management system approved by an acceptable third-party agency until that date. Should the approval of the quality management system lapse before the expiry date indicated above, this registration shall become void.

An invoice covering survey and registration fees will be forwarded from our Revenue Accounts.

Enclosed are stamped prints for your reference.

Sincerely,

RUDOLF, KEITH, P. Eng.



the pressure equipment safety authority

STATUTORY DECLARATION
Registration of Fittings

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

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



I, David H. Peace,

Vice President of Engineering

(company title, e.g. vice president, plant manager, chief engineer) (must be in a position of authority)

of Swagelok Company

(name of manufacturer)

located at Headquarters: 29500 Solon Road, Solon, Ohio 44139-3492 (See Attachment A)

(plant address)

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

[X] comply with the requirements of ASME B31.1 and ASME B31.3 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, British Standards Institution 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 C Type Fittings

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

ISO 9001:2008 Certificate, Support Documents, Attachment B, Catalog Information, Attachment A

DECLARED before me at Solon in the State of Ohio

this 01st day of April, 2015 (Month) (Year)

(print) Jamie L. Ristau Jamie L. Ristau Resident Portage County Notary Public, State of Ohio My Commission Expires: 03/06/2019 (A Commissioner for Oaths)

(Signature of Applicant)

For Office Use Only

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 C

Registration Number: 0C18924.52

(For the Administrator/Chief Inspector of Alberta)

Date Registered: FEB 16 2017

Expiry Date: Nov 14 2026

Attachment B1. Scope for Swagelok Special Alloy 60 Series Ball Valves (Category C)

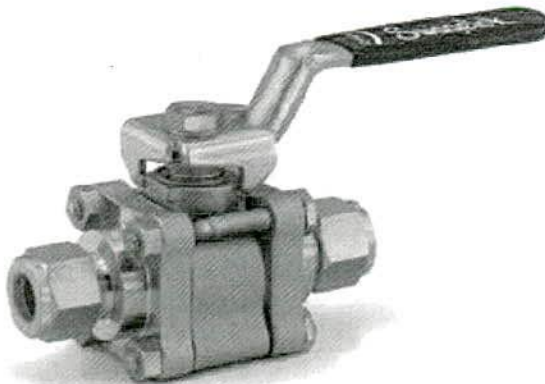
This document represents the scope of the Swagelok Special Alloy 60 Series Ball Valves covered by this submission for CRN approval. The Swagelok Special Alloy 60 Series Valves were designed and evaluated in accordance with ASME B31.1 for unlisted components and ASME B31.3 for unlisted components.

Summary Table

Product Description or Series	Main Pressure Bearing Component	Main Pressure Bearing Material (Standard)	Port Connections and Sizes	Maximum Rated Pressure		Design Code of Construction
				At ambient temperature	At maximum temperature	
63	Body	Stainless Steel 6MO (ASTM A276 UNS S31254)	Swagelok Tube Fitting 1/2" Female NPT 1/2"	2,200 psi @ 100 °F	100 psi @ 450 °F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
		Stainless Steel 2507 (ASTM A479 UNS S32750)	Swagelok Tube Fitting 1/2" Female NPT 1/2"	2,200 psi @ 100 °F	100 psi @ 450 °F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
		Alloy 825 (ASTM B425 UNS N08825)	Swagelok Tube Fitting 1/2" Female NPT 1/2"	2,200 psi @ 100 °F	100 psi @ 450 °F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
		Alloy 625 (ASTM B446 UNS N06625)	Swagelok Tube Fitting 1/2" Female NPT 1/2"	2,200 psi @ 100 °F	100 psi @ 450 °F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)

For more information about pressure ratings of valves with tube fitting end connections, see Swagelok Tubing Data, MS-01-107.

Product Illustrations



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

ABSA

SAFETY CODES ACT - PROVINCE OF ALBERTA
REGISTRATION OF FITTINGS

REGISTRATION NO. 0C18924.52

DWG. NO. or CAT. NO. Attachments B1 to B5

TYPE OF FITTINGS Special Alloy Valves

FEB 16 2017

Date INITIALS Keith Rudolph

KEITH RUDOLF, P.Eng.
DESIGN SURVEY ENGINEER

Product Options:

The product options listed below affect pressure and/or temperature ratings shown in the above Summary Table, but in all cases the ratings are less than those shown in the table.

Flange Seal Material Options

Fluorocarbon, FKM
Buna N
Buna C
Ethylene Propylene
Neoprene
Grafoil
PTFE

Stem Seal Material Options

PTFE, virgin
Fluorocarbon, FKM
Buna C
Ethylene Propylene
Grafoil

Seat Material Options

PTFE, virgin
PTFE, reinforced
PTFE, carbon glass filled
PEEK
UHMWPE

Additional options and non-pressure boundary alterations that do not affect pressure-temperature ratings may be made available within the scope of this registration. Examples of these would include the following:

Handle options
Actuators (e.g. pneumatic, electric)
Panel mounting
Low dead space inserts

All of the above options, those that affect pressure and/or temperature ratings and those that do not, are within the scope of this approval.

Quality System

The Swagelok Company quality system complies with the requirements of BS EN ISO 9001:2008. The Swagelok Company maintains British Standards Institution Certificate of Registration Number FM 01729, which applies to all locations listed on the Certificate. The Special Alloy 60 Series Ball Valves products are made at a Swagelok Company location in Solon, Ohio.

References

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

- 60 Series Ball Valves – Special-Alloy Fluid System Components Catalog MS-02-439

Attachment B2. Scope for Swagelok Special Alloy 83 Series Ball Valves (Category C)

This document represents the scope of the Swagelok Special Alloy 83 Series Ball Valves covered by this submission for CRN approval. The Swagelok Special Alloy 83 Series Ball Valves were designed and evaluated in accordance with ASME B31.1 for unlisted components and ASME B31.3 for unlisted components.

Summary Table

Product Description or Series	Main Pressure Bearing Component	Main Pressure Bearing Material (Standard)	Port Connections and Sizes	Maximum Rated Pressure		Design Code of Construction
				At ambient temperature	At maximum temperature	
83	Body	Stainless Steel 2507 (ASTM A479 UNS S32750)	Swagelok Tube Fitting 1/4", 3/8", 1/2", 6MM, 8MM, 10MM, 12MM Female NPT 1/8", 1/4", 1/2"	6,000 psi @ 100 °F	500 psi @ 450 °F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
		Alloy 825 (ASTM B425 UNS N08825)	Swagelok Tube Fitting 1/4", 3/8", 1/2", 6MM, 8MM, 10MM, 12MM Female NPT 1/8", 1/4", 1/2"	6,000 psi @ 100 °F	500 psi @ 450 °F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)

For more information about pressure ratings of valves with tube fitting end connections, see Swagelok Tubing Data, MS-01-107.

Product Illustrations



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

Product Options

Additional options that do not affect pressure-temperature ratings may be made available within the scope of this registration. Examples of these would include 3-way valves, seat materials, stem seal materials, actuators.

Quality System

The Swagelok Company quality system complies with the requirements of BS EN ISO 9001:2008. The Swagelok Company maintains British Standards Institution Certificate of Registration Number FM 01729, which applies to all locations listed on the Certificate. Special Alloy 83 Series Ball Valves products are made at a Swagelok Company location in Solon, Ohio.

References

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

- 83 Series Ball Valves – Special-Alloy Fluid System Components Catalog MS-02-357

Attachment B3. Scope for Swagelok Special Alloy Bleed Valves (Category C)

This document represents the scope of the Swagelok Special Alloy Bleed Valves covered by this submission for CRN approval. The Swagelok Special Alloy Bleed Valves were designed and evaluated in accordance with ASME B31.1 for unlisted components and ASME B31.3 for unlisted components.

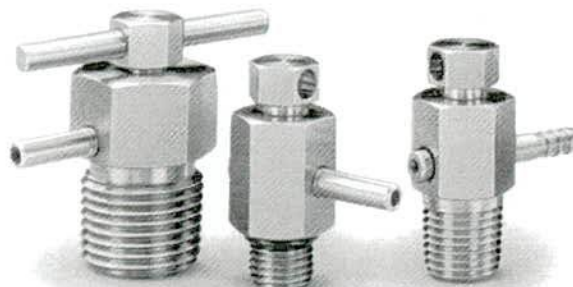
Summary Table

Product Description or Series	Main Pressure Bearing Component	Main Pressure Bearing Material (Standard)	Port Connections and Sizes	Maximum Rated Pressure		Design Code of Construction
				At ambient temperature	At maximum temperature	
BV	Body	Stainless Steel 2507 (ASTM A479 UNS S32750)	Male NPT 1/4", 3/8", 1/2"	10,000 psi @ 100 °F	8,965 psi @ 482 °F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
		Alloy 625 (ASTM B446 UNS N06625)	Male NPT 1/4", 3/8", 1/2"	10,000 psi @ 100 °F	7,490 psi @ 850 °F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
		Alloy 825 (ASTM B425 UNS N08825)	Male NPT 1/4", 3/8", 1/2"	10,000 psi @ 100 °F	7,295 psi @ 850 °F (Note 1)	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
		Hastelloy C (ASTM B574 UNS N10276)	Male NPT 1/4", 3/8", 1/2"	10,000 psi @ 100 °F	6,155 psi @ 850 °F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)

Notes:

(1) For ASME B31.1 applications, this product is rated to 7,295 psi @ 800°F.

Product Illustrations



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Typical Product Characteristics:

Some of the product options listed below affect the pressure-temperature ratings shown in the Summary Table, but in all cases the ratings are less than those shown in the Summary Table. All of the following options are within the scope of this registration:

Typical Options

Handles
Vent Tubes

Additional options and non-pressure boundary alterations that do not affect pressure-temperature ratings may be made available within the scope of this registration. Examples of these would include handle options, actuator options, etc.

Quality System

The Swagelok Company quality system complies with the requirements of BS EN ISO 9001:2008. The Swagelok Company maintains British Standards Institution Certificate of Registration Number FM 01729, which applies to all locations listed on the Certificate. The Special Alloy Bleed Valves products are made at a Swagelok Company location in Solon, Ohio.

References

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

- BV Bleed Valves - Special Alloy Materials Catalog MS-02-356

Attachment B4. Scope for Swagelok Special Alloy CH Series Check Valves (Category C)

This document represents the scope of the Swagelok Special Alloy CH Series Check Valves covered by this submission for CRN approval. The Swagelok Special Alloy Check Valves were designed and evaluated in accordance with ASME B31.1 for unlisted components and ASME B31.3 for unlisted components.

Summary Table

Product Description or Series	Main Pressure Bearing Component	Main Pressure Bearing Material (Standard)	Port Connections and Sizes	Maximum Rated Pressure		Design Code of Construction
				At ambient temperature	At maximum temperature	
CH	Body	Alloy 625 (ASTM B446 UNS N06625)	Swagelok Tube Fitting 1/4", 3/8", 1/2" Female NPT 1/4", 3/8", 1/2" Male NPT 1/4", 3/8", 1/2"	6,000 psi @ 100 °F	5070 psi @ 400 °F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
		Alloy 825 (ASTM B425 UNS N08825)	Swagelok Tube Fitting 1/4", 3/8", 1/2" Female NPT 1/4", 3/8", 1/2" Male NPT 1/4", 3/8", 1/2"	6,000 psi ① @ 100 °F	4995 psi @ 400 °F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
		Stainless Steel 2507 (ASTM A479 UNS S32750)	Swagelok Tube Fitting 1/4", 3/8", 1/2" Female NPT 1/4", 3/8", 1/2" Male NPT 1/4", 3/8", 1/2"	6,000 psi @ 100 °F	5455 psi @ 400 °F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)

For more information about pressure ratings of valves with tube fitting end connections, see Swagelok Tubing Data, MS-01-107.

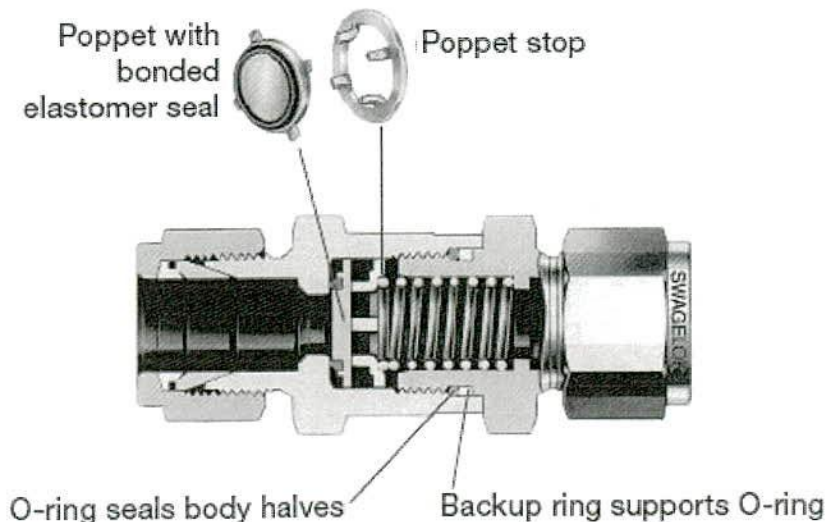
① Pressure ratings for valves with 1/2 in. female NPT end connections limited to 5700 psig (392 bar).

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Product Illustrations

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Product Options:

Additional options that do not affect pressure-temperature ratings may be made available within the scope of this registration. Examples of these would include poppet springs and body seal materials.

Quality System

The Swagelok Company quality system complies with the requirements of BS EN ISO 9001:2008. The Swagelok Company maintains British Standards Institution Certificate of Registration Number FM 01729, which applies to all locations listed on the Certificate. The Special Alloy Bleed Valves products are made at a Swagelok Company location in Solon, Ohio.

References

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

- Check Valves – Special Alloy Materials – CH Series Catalog MS-02-440

Attachment B5. Scope for Swagelok Special Alloy N and HN Series Needle Valves (Category C)

This document represents the scope of the Swagelok Special Alloy N and HN Needle Valves covered by this submission for CRN approval. The Swagelok Special Alloy N and HN Needle Valves were designed and evaluated in accordance with ASME B31.1 for unlisted components and ASME B31.3 for unlisted components.

Summary Table

Product Description or Series	Main Pressure Bearing Component	Main Pressure Bearing Material (Standard)	Port Connections and Sizes	Maximum Rated Pressure		Design Code of Construction
				At ambient temperature	At maximum temperature	
3N	Body	Stainless Steel 2507 (ASTM A479 UNS S32750)	Female NPT 1/8", 1/4" Male NPT 1/4" Swagelok Tube Fitting 1/4", 6MM	6,000 psi @ 100 °F	5,370 psi @ 482 °F	ASME B31.1 (Unlisted Components) ASME B31.3 (Unlisted Components)
		Alloy 825 (ASTM B425 UNS N08825)	Female NPT 1/8", 1/4" Male NPT 1/4" Swagelok Tube Fitting 1/4", 6MM	6,000 psi @ 100 °F	4,250 psi @ 1000 °F (Note 1)	ASME B31.1 (Unlisted Components) ASME B31.3 (Unlisted Components)
6N	Body	Alloy 825 (ASTM B425 UNS N08825)	Female NPT 1/4", 3/8" Swagelok Tube Fitting 3/8", 1/2", 10MM, 12MM	6,000 psi @ 100 °F	4,250 psi @ 1000 °F (Note 1)	ASME B31.1 (Unlisted Components) ASME B31.3 (Unlisted Components)
		Stainless Steel 6MO (ASTM A182 UNS S31254)	Female NPT 1/4", 3/8" Swagelok Tube Fitting 3/8", 1/2", 10MM, 12MM	6,000 psi @ 100 °F	3,860 psi @ 750 °F	ASME B31.1 (Unlisted Components) ASME B31.3 (Unlisted Components)
12N	Body	Alloy 825 (ASTM B425 UNS N08825)	Female NPT 1/2", 3/4", 1" Male NPT 1/2", 3/4", 1" Swagelok Tube Fitting 1/2", 3/4", 12MM	6,000 psi @ 100 °F	4,250 psi @ 1000 °F (Note 1)	ASME B31.1 (Unlisted Components) ASME B31.3 (Unlisted Components)
		Stainless Steel 6MO (ASTM A182 UNS S31254)	Female NPT 1/2", 3/4", 1" Male NPT 1/2", 3/4", 1" Swagelok Tube Fitting 1/2", 3/4", 12MM	6,000 psi @ 100 °F	3,860 psi @ 750 °F	ASME B31.1 (Unlisted Components) ASME B31.3 (Unlisted Components)

Notes:

(1) For ASME B31.1 applications, this product is rated to 4,380 psi @ 800°F.

For more information about pressure ratings of valves with tube fitting end connections, see Swagelok® Tubing Data, MS-01-107.

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Product Description or Series	Main Pressure Bearing Component	Main Pressure Bearing Material (Standard)	Port Connections and Sizes	Maximum Rated Pressure		Design Code of Construction
				At ambient temperature	At maximum temperature	
3HN	Body	Stainless Steel 2507 (ASTM A479 UNS S32750)	Female NPT 1/8", 1/4" Male NPT 1/4" Swagelok Tube Fitting 1/4", 6MM	10,000 psi @ 100 °F	8,960 psi @ 482 °F	ASME B31.1 (Unlisted Components) ASME B31.3 (Unlisted Components)
		Alloy 825 (ASTM B425 UNS N08825)	Female NPT 1/8", 1/4" Male NPT 1/4" Swagelok Tube Fitting 1/4", 6MM	10,000 psi @ 100 °F	7,080 psi @ 1000 °F (Note 1)	ASME B31.1 (Unlisted Components) ASME B31.3 (Unlisted Components)
6HN	Body	Stainless Steel 2507 (ASTM A479 UNS S32750)	Female NPT 1/4", 1/2" Male NPT 1/2" Swagelok Tube Fitting 3/8", 1/2"	10,000 psi @ 100 °F	8,960 psi @ 482 °F	ASME B31.1 (Unlisted Components) ASME B31.3 (Unlisted Components)

Notes:

(1) For ASME B31.1 applications, this product is rated to 7,295 psi @ 800°F.

For more information about pressure ratings of valves with tube fitting end connections, see Swagelok® Tubing Data, MS-01-107.

Product Illustrations

Typical Product Characteristics

Some of the product options listed below affect the pressure-temperature ratings shown in the Summary Table, but in all cases the ratings are less than those shown. All of the following options are within the scope of this registration:

Typical Options

Handles
Vent Tubes

Additional options and non-pressure boundary alterations that do not affect pressure-temperature ratings may be made available within the scope of this registration. Examples of these would include handle options, actuator options, etc.

Product Options

Additional options that do not affect pressure-temperature ratings may be made available within the scope of this registration. Examples of these would include stem packing seal materials, stem tip, and handle options.

Quality System

The Swagelok Company quality system complies with the requirements of BS EN ISO 9001:2008. The Swagelok Company maintains British Standards Institution Certificate of Registration Number FM 01729, which applies to all locations listed on the Certificate. Special Alloy N and HN Needle Valve products are made at a Swagelok Company location in Solon, Ohio.

References

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

- N, HN Bleed Valves - Special Alloy Materials Catalog MS-02-365

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and/or conditions of registration"**