ABSA
the pressure equipment safety authority

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

January 25, 2019

Attention: Roger Wenige
ENDRESS + HAUSER SE + CO KG
HAUPTSTRASSE 1
MAULBURG, 79689

Email: Roger.Wenige@endress.com

The design submission, tracking number 2019-00243, originally received on January 14, 2019 was surveyed and accepted for registration as follows:

CRN : 0F12978.52
Reg Type: RENEWAL
Drawing No. : 960008564, SCOPE 961003390
Fitting type: PROBES

Accepted on: January 25, 2019
Expiry Date: January 25, 2029

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

- The design pressure for probes with flanges is limited to the ANSI class 150 lb flanges at design temperature.

- CRN Renewal covers six (6) locations attached to the Statutory Declaration form.

As indicated on AB-41 Statutory Declaration form and submitted documentation, the code of construction is ASME 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.

If you have any question don't hesitate to contact me by phone at (780) 433-0281 ext 3369 or fax (780) 437-7787 or e-mail Radisavljevic@absa.ca.

Sincerely,

Zana Radisavljevic

RADISAVLJEVIC, ZANA, P. Tech. (Eng.)
DOP Cert. No. D00003136

Alberta Municipal Affairs

ABSA
the pressure equipment safety authority

AB-41 2016-01

STATUTORY DECLARATION
Registration of Fittings

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

Endress+Hauser
People for Process Automation

I, MICHAEL FREI (name of applicant), Quality Management Representative, responsible for the Integrated QM System (position title) (must be in a position of authority)

of ENDRESS+HAUSER SE+Co.KG (name of manufacturer)

located at see attached worldwide locations appendix (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 _____ (title of recognized North American Standard) which specifies the dimensions, 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 ASME B31.3 (title of code of construction or other applicable document) 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, SQS 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

CAT. F - SOLICAP M (brief description of fittings)

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

SCOPE OF REGISTRATION, REPORTS, DRAWINGS, CALCULATIONS

DECLARED before me at _____ (city) in the _____ of _____ (province or state)

this _____ day of _____ (Month), _____ (Year)

(print) _____ (a Commissioner of Oaths or Notary Public)

(sign) _____ (a Commissioner of Oaths or Notary Public)

Michael Frei (signature of applicant)

For ABSA Office Use Only:

NOTES: See Acceptance Letter for the comments and/or conditions of registration.

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 F

Registration Number: 0F12978.52

Fawn R. [redacted] (Signature of the Administrator/SCO)

Date Registered: JAN 25 2019

Expiry Date: Jan. 25, 2029

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 Pressure Equipment Discipline.

Endress+Hauser
People for Process Automation

WORLDWIDE LOCATIONS APPENDIX – PAGE 1 OF 2

ENDRESS+HAUSER SE+Co. KG MANUFACTURING LOCATIONS & CERTIFYING AUTHORITIES

(rev. 28/November/2018)

Endress+Hauser SE+Co. KG
Hauptstrasse 1
79689 Maulburg
Germany
ISO 9001 Certified by SQS

Endress+Hauser (Suzhou) Automation Instrumentation Co. Ltd.
China – Singapore
Suzho Industrial Park (SIP)
Su Hong Zhong Lu No. 491
Jiangsu Province
215021 Suzhou, P.R. China
ISO 9001 Certified by SQS

Endress+Hauser (India)
Automation Instrumentation Pvt. Ltd.
M-192, Waluj MIDC
Aurangabad – 431136,
Maharashtra State, India
ISO 9001 Certified by SQS

Endress+Hauser Yamanashi Co., Ltd.
862-1 Mitsukunugi
Sakaigawa-cho
Fuefuki-shi
406 0846 Yamanashi, Japan
ISO 9001 Certified by SQS

Endress+Hauser (USA)
Automation Instrumentation Inc.
2340 Endress Place
Greenwood, Indiana 46143, USA
ISO 9001 Certified by SQS

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Endress+Hauser (Brazil)
Instrumentacao e Automacao Ltda.
Estrada Municipal Antonio Sesti
600 Bairro Recreio Costa Verde
Itatiba/SP – 13254-085, Brazil
ISO 9001 Certified by SQS

Endress+Hauser
People for Process Automation

WORLDWIDE LOCATIONS APPENDIX – PAGE 2 OF 2

ENDRESS+HAUSER SE+Co. KG MANUFACTURING LOCATIONS & CERTIFYING AUTHORITIES

(rev. 28/November/2018)

Endress+Hauser SE+Co. KG
Miramstrasse 87
34123 Kassel
Germany
ISO 9001 Certified by SQS

Endress+Hauser SE+Co. KG
Queremathe 2
14532 Stahnsdorf
Germany
ISO 9001 Certified by SQS

0F12978.52
JAN 25 2019

A2 Evaluation based on proof pressure tests or calculations

The following table shows the overview for Solicap M, the process connections refer to a calculation or to a proof test.
Note: The correlation between the drawing and the associated process connection is defined in the first column. For e.g. No.1.1 drwg. 960008564 → 1.X and X.1 = thread R1 ½ and thread 1 ½ NPT.

A2.1 SOLICAP M FTI55/56 rod and rope (see drawing Solicap M SCAP 960008564)

No.	type of test specimen	process connec-tion	classification of material	temp. range [°C]	process pressure [bar]	verified through
1.1	Solicap M FTI55	R 1 1/2"	**thread** 316L (A-479)	PPS -50 to +180 PE -50 to +80	20(1)	Solicap-thread-R 1 1/2.pdf
		NPT 1 1/2"				Solicap-thread-NPT 1 1/2.pdf
1.2	Solicap M FTI55	ASME flange 2" to 4"	**Adapter:** 316L (A-479) **flange** Dual rated material 316/316L	PPS -50 to +180 PE -50 to +80	20(1) 20(2)	**Adapter/flange** Solicap-flange-size-class150.pdf
2.1	Solicap M FTI55	R 1 1/2"	**thread** 316L (A-479) **tube** A-312 TP316L wld & smls pipe	PPS -50 to +180 PE -50 to +80	20(1)	**thread:** Solicap-thread-R 1 1/2.pdf Solicap-thread-NPT 1 1/2.pdf **tube** Solicap-tube-external-pressure-25bar.pdf
		NPT 1 1/2"				
2.2	Solicap M FTI55	ASME flange 2" to 4"	**Adapter:** 316L (A-479) **flange** Dual rated material 316/316L	PPS -50 to +180 PE -50 to +80	20(1) 20(2)	**Adapter/flange** Solicap-flange-size-class150.pdf
3.1	Solicap M FTI55	R 1 1/2"	**thread** 316L (A-479)	PPS -50 to +180 PE -50 to +80	20(1)	Solicap-thread-R 1 1/2.pdf
		NPT 1 1/2"				Solicap-thread-NPT 1 1/2.pdf
3.2	Solicap M FTI55	ASME flange 2" to 4"	**Adapter:** 316L (A-479) **flange** Dual rated material 316/316L	PPS -50 to +180 PE -50 to +80	20(1) 20(2)	**Adapter/flange** Solicap-flange-size-class150.pdf
4.1	Solicap M FTI56	R 1 1/2"	**thread** 316L (A-479)	PTFE -50 to +180 PA -50 to +120	20(1)	Solicap-thread-R 1 1/2.pdf
		NPT 1 1/2"				Solicap-thread-NPT 1 1/2.pdf
4.2	Solicap M FTI56	ASME flange 2" to 4"	**Adapter:** 316L (A-479) **flange** Dual rated material 316/316L	PTFE -50 to +180 PA -50 to +120 -80 to +200	20(1) 20(2)	**Adapter/flange** Solicap-flange-size-class150.pdf
5.1	Solicap M FTI56	R 1 1/2"	**thread** 316L (A-479)	PTFE -50 to +180 PA -50 to +120 -80 to +200	20(1)	Solicap-thread-R 1 1/2.pdf
		NPT 1 1/2"				Solicap-thread-NPT 1 1/2.pdf
5.2	Solicap M FTI56	ASME flange 2" to 4"	**Adapter:** 316L (A-479) **flange** Dual rated material 316/316L	PTFE -50 to +180 PA -50 to +120 -80 to +200	20(1) 20(2)	**Adapter/flange** Solicap-flange-size-class150.pdf

1) Derating for PE or PA fully insulated version (see instruction manual)
2) Depending on flange size see ASME B16.5-2003, table2-2.2, p.37, "pipe flanges and flange fittings"

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FTI55

FTI56

	a	b	c	d
	Laufende Nr. consecutive work no.	Wanddicke wall thickness (ISO 2553)	Kennzeichnung der Fertigungsnaht marking of the production seam acc. to ISO 13920	Grundwerkstoff base material
A1	1.5	V		1.4404 or 1.4435 or 316L with 1.4404 or 1.4435 or 316/316L
A2	1.5	V		1.4404 or 1.4435 or 316L with 1.4404 or 1.4435 or 316/316L
A3	1.5	V		1.4404 or 1.4435 or 316L with 1.4404 or 1.4435 or 316/316L
A4	1.5	V		1.4404 or 1.4435 or 316L with 1.4404 or 1.4435 or 316/316L
A5	1.5	V		1.4404 or 1.4435 or 316L with 1.4404 or 1.4435 or 316/316L
A60	2.0	II		1.4404 or 1.4435 or 316L with 1.4404 or 1.4435 or 316/316L
A63	2.0	II		1.4404 or 1.4435 or 316L with 1.4404 or 1.4435 or 316/316L
A64	2.0	II		1.4404 or 1.4435 or 316L with 1.4404 or 1.4435 or 316/316L
A65	2.5	II		1.4404 or 1.4435 or 316L with 1.4404 or 1.4435 or 316/316L

① rod: 1.4404 or 1.4435 or 316L
1.0715 or 1213 or Y15
② rod insulation: PPS or PE
③ process adapter: threads 1.0715 or 1213 or Y15
1.4404 or 1.4435 or 316L
flanges 1.4404 or 1.4435 or 316/316L
flange adapter 1.4404 or 1.4435 or 316L

④ tubes: 1.4404 or 1.4435 or 316L
⑤ Guard: 1.4404 or 1.4435 or 316L
⑥ insulation: PPS
⑦ insulation: PPS
⑧ bolt: 1.4404 or 1.4435 or 316L
⑨ screw nut: 1.0715 or 1213 or Y15
⑩ housing adapter: 1.4404 or 1.4435 or 316L
1.0715 or 1213 or Y15

L1 = Aktive Sondenlänge/aktiv probe length
L2 = Länge der Teilisolation/length of partial insulation
L3 = Abschirmungslänge/screen shield

Schutzvermerk ISO 16016 beachten — Refer to protection notice ISO 16016

Benennung / title: Solicap M FTI55/56
Solicap M FTI55/56

Material / material: -

Maßstab / scale: 1:1

Gezeichnet / drawn: 22.01.2009 ABJINT
Geprüft / checked: 23.01.2009 STEFFANA
Freigegeben / released: 23.01.2009 ABJINT
Ersetzt durch / replaced by: 23.01.2009 SCHMUTH

Dokument-Nr. / No. of document: 960008564 - -

Blatt / sheet 1

Agency controlled drawing.
No changes without prior Agency approval.

Endress+Hauser

See Acceptance Letter for the comm and/or conditions of registration.

ABSA

SAFETY CODES ACT - PROVINCE OF ALBERTA

REGISTRATION OF FITTINGS

REGISTRATION NO. 0 F 1 2 9 7 8 . 5

DWG. NO. or CAT. NO. 960008564

TYPE OF FITTINGS Probes

JAN 25 2019 INITIALS

Date

ZANA RADISAVLJEVIC,
DESIGN SURVEYOR