

Montréal, 18 mai 2023.

MADAME TANYA FRANCIS
TECHNICAL STANDARDS & SAFETY AUTHORITY
345 CARLINGVIEW DRIVE
TORONTO ON
CANADA M9W 6N9

Fabricant : AFLEX HOSE LTD.
DYSON WOOD WAY
BRADLEY HUDDERSFIELD
ROYAUME UN HD2 1GZ

Numéro de dossier : 945982
Numéro(s) de dessin(s) : R-1319A REV 0

Objet : Enregistrement des plans et devis – Confirmation de l'enregistrement

Bonjour,

Nous vous informons que votre demande d'enregistrement de plans et devis a été traitée et que cette conception a été enregistrée sous le numéro d'enregistrement canadien (NEC\CRN) suivant : **0D24488.56**.

Nous portons votre attention sur certaines exigences réglementaires concernant les installations sous pression, ainsi que des codes et normes qui y sont associés :

- Le fabricant doit maintenir un programme de contrôle de la qualité valide pour fabriquer un équipement selon ce NEC;
- Ce numéro d'enregistrement demeure valide tant et aussi longtemps que les paramètres de conception demeurent inchangés. Dans le cas d'accessoires, l'enregistrement est valide pour une durée de 10 ans à partir de la date de conception doivent alors être resoumis pour validation;
- Le fabricant doit nous transmettre une copie de la *Déclaration de conformité du constructeur (Manufacturer's Data Report)* pour chaque appareil ou chaudière fabriqué selon ce NEC dans les 30 jours suivant la signature de cette déclaration;
- Le numéro de dessin enregistré et le numéro de révision doivent être indiqués sur la déclaration de conformité pour les équipements fabriqués selon ce NEC.

Le présent avis d'approbation ne dégage pas le fabricant de ses responsabilités quant à la conception ou à la construction des équipements ou d'accessoires fabriqués selon un NEC.

Bureau d'expertise et d'homologation en équipements sous pression

Montréal, le 18 mai 2023.

MRS. TANYA FRANCIS
TECHNICAL STANDARDS & SAFETY AUTHORITY
345 CARLINGVIEW DRIVE
TORONTO ON
CANADA M9W 6N9

Manufacturer : AFLEX HOSE LTD.
DYSON WOOD WAY
BRADLEY HUDDERSFIELD
ROYAUME UN HD2 1GZ

OUR REFERENCE : 945982
Design number : R-1319A REV 0

Subject: Design registration confirmation

Hi,

We wish to inform you that your design registration application has been evaluated and that it was registered under the following Canadian Registration Number (CRN): **0D24488.56.**

The following is a reminder of your obligations regarding certain requirements of the regulation respecting pressure vessels, and the referenced codes and standards:

- The manufacturer must maintain a valid quality control program to manufacture equipment according to the CRN.
- The CRN remains valid as long as there are no changes to the design calculations that might affect the pressure boundary. The design registration of fittings expires 10 years after acceptance. It must, therefore, be resubmitted for validation.
- The manufacturer shall submit a copy of the *Manufacturer's Data Report* to us for each equipment manufactured according to this CRN within 30 days following the signing of this report.
- The drawing number and the revision number registered under this CRN must be indicated on the *Manufacturer's Data Report* for equipment manufactured according to the CRN.

This notice of approval does not relieve the manufacturer of their responsibilities with respect to the design or fabrication of equipment manufactured according to this CRN.

Yours sincerely,

Bureau d'expertise et d'homologation en équipements sous pression

Montréal

545, boul. Crémazie Est, 7ième étage
Montréal (Québec) H2M 2V2
Téléphone : 514 873-6459
Sans frais : 1 866 262-2084
www.rbq.gouv.qc.ca

Statutory Declaration Registration of Fittings

Building Act (B-1.1)
Regulation respecting pressure vessels (B-1.1, r. 6.1)
Boiler, pressure vessel, and pressure piping code (CSA B51)

This declaration must be filled out and sent to the Régie du bâtiment du Québec (RBQ) by pressure fitting manufacturers when they make an application registration for fittings.

For more information on the application registration for fittings, consult the www.rbq.gouv.qc.ca/fittings-pv.

1. Fittings to register

List the fittings included in this declaration and that you wish to register.

N°	Description	Additional information (detail, calculations or approval sheets)
1	FLEXIBLE HOSE ASSEMBLIES	
2	SCOPE OF CRN, REPORTS	
3	DRAWINGS	
4	CALCULATIONS	
5	COMPANY LOGO - SEE RIGHT	



2. Declaration of the person in charge

The person in charge is someone in a position of authority, such as a vice-president, a plant manager or a chief engineer.

2.1 Design

I, the undersigned, Dr. Leigh Mulvaney-Johnson PHD CENG (MIMECHE) Technical Manager,
(Name of the person in charge) (Title of the person in charge)
from Aflex Hose Ltd., located at Bradley Business Park, Dyson Wood Way, Bradley, Huddersfield,
(Company's name) (Plant's address)
HD2 1GZ, United Kingdom
hereby declare that the above-mentioned fittings and subject to the Regulation respecting pressure installations:
☒ comply with the requirements of the ANSI/ASME codes as to their dimensions, identification, material and purpose
or ASME B31.3, ASME BPE, ARPM IP-2
☐ are not covered by the ANSI/ASME codes, but are in compliance with _____
(Name of code or standard)
code or standard and are designed according to the best current engineering practice, as proven by the enclosed approval report.

2.2 Manufacturing quality control

I further declare that the manufacture of these fittings is controlled by a quality control program that complies with the requirements of the following code: ISO 9001:2015, and has been verified by bsi, TUV.
(Name of code) (Authorized agency)


Signature of the person in charge: L. Mulvaney-Johnson

Date (yyyy-mm-dd): 2022-12-12

3. Declaration of commissioner for oaths

I certify that this declaration has been administered before me, at <u>Hebden Brian</u> , on <u>2022-12-12</u> .	
(Location)	(Date (yyyy-mm-dd)):
Signature of commissioner for oaths: <u>Mary Mahon</u>	Date (yyyy-mm-dd): <u>2022-12-12</u>
Stamp the seal:	
<p style="text-align: center;">mary mahon S O L I C I T O R TEL: 01422 844997 FAX: 01422 844797 EMAIL: mary@marymahonsolicitor.co.uk 8 WRAGLEY HOUSE, VALLEY ROAD HEBDEN BRIDGE, WEST YORKSHIRE HX7 7BN</p>	

4. Registration confirmation (for RBQ's use only)

As far as I know, this application complies with the requirements of the Act and with standard CSA B51, Part 1, section 4.2, and is accepted for registration in the class _____.	
This registration expires in ten (10) years after the date of registration indicated above, and it must be validated again after this period.	
Canadian registration number (CRN):	Registration date (yyyy-mm-dd):
	

Documents to attach

Any application registration for fittings must include these documents:

- Statutory Declaration Registration of Fittings (2 copies)
- Detailed calculations or burst test report (1 copy)
- Detailed technical drawings or catalogues (2 copies)
- Example of the manufacturer's marking (1 copy)
- Proof that a valid and approved quality control program has been implemented (1 copy)
- Form Application for design registration (1 copy)

Sending the form

This declaration is necessary to submit an application for design registration. Design registration applications must be sent by email only to enregistrementdesplans@rbq.gouv.qc.ca.

Documents must be in PDF format and in separate files.

AFLEX HOSE LTD.

BRADLEY BUSINESS PARK
DYSON WOOD WAY
BRADLEY, HUDDERSFIELD
HD2 1GZ, UNITED KINGDOM



30-Nov-22

SCOPE OF CRN REGISTRATION

PAGE 1 OF 8

Hose Type(s) Pharmaline N, stainless steel braid, silicone cover, non-lined fittings
Bioflex Ultra, stainless steel braid, silicone cover, non-lined fittings
Fabline, stainless steel braid, silicone cover, non-lined fittings

THIS IS PART OF CRN
0D24488.5
Technical Standards and Safety Authority
Boilers and Pressure Vessels Safety
Program

Important: The CRN Pressure-Temperature Ratings listed in this document are the hose maximum CRN ratings. Consult hose product literature for recommended hose maximum operating conditions.

The maximum CRN ratings are applicable to the following Service Types:

Service Type **Group 1**: Water and all other liquids, solid materials suspended in liquids or air, compressed air and other gases.

Service Type **Group 2**: Liquid media that immediately changes into gas under standard atmospheric conditions.

Service Type **Group 3**: Steam

Product Description	Design Code	Material Specifications	MDMT	Report Number
Flexible Hose Assemblies	ASME B31.3, ASME BPE, ARPM IP-2	ASTM A479-304/304L, ASTM A479-316/316L ASTM A240-304/304L, ASTM A240-316/316L Stainless Steel meeting the requirements of ASTM A478 and ASTM A580, PTFE Hose, Silicon Cover	- 73°C / -100°F	R-1319A Rev. 0

PRESSURE - TEMPERATURE RATINGS

Process Connections		Grooved Stand Pipe / Tube End, FNPT - Female, MNPT - Male				
Service Type	Group 1		Group 2		Group 3	
Size	MAWP at 400°F (psig)	MAWP at 204°C (barg)	MAWP at 400°F (psig)	MAWP at 204°C (barg)	MAWP at Steam Saturation Temperature (Note 2)	
1/4"	1160.32	80	928.26	64	232 psig at 400°F	16 barg at 204°C
3/8"	1160.32	80	928.26	64	232 psig at 400°F	16 barg at 204°C
1/2"	1015.28	70	812.22	56	232 psig at 400°F	16 barg at 204°C
5/8"	942.76	65	754.21	52	232 psig at 400°F	16 barg at 204°C
3/4"	870.24	60	696.19	48	232 psig at 400°F	16 barg at 204°C
1"	725.20	50	580.16	40	232 psig at 400°F	16 barg at 204°C
1-1/4"	652.68	45	522.14	36	232 psig at 400°F	16 barg at 204°C
1-1/2"	580.16	40	464.13	32	232 psig at 400°F	16 barg at 204°C
2"	435.12	30	348.10	24	174 psig at 377°F	12 barg at 192°C
2-1/2"	290.08	20	232.06	16	87 psig at 329°F	6 barg at 164°C
3"	217.56	15	174.05	12	87 psig at 329°F	6 barg at 164°C

SCOPE OF CRN REGISTRATION

PRESSURE - TEMPERATURE RATINGS						
Process Connections		CL150 ASME B16.5 Flanged Type 304SS				
Service Type	Group 1		Group 2		Group 3	
Size	MAWP at 100°F(psig)	MAWP at 38°C(barg)	MAWP at 100°F(psig)	MAWP at 38°C(barg)	MAWP at Steam Saturation Temperature (Note 2)	
1/2"	275.00	18.96	275.00	18.96	232 psig at 400°F	16 barg at 204°C
3/4"	275.00	18.96	275.00	18.96	232 psig at 400°F	16 barg at 204°C
1"	275.00	18.96	275.00	18.96	232 psig at 400°F	16 barg at 204°C
1-1/4"	275.00	18.96	275.00	18.96	232 psig at 400°F	16 barg at 204°C
1-1/2"	275.00	18.96	275.00	18.96	232 psig at 400°F	16 barg at 204°C
2"	275.00	18.96	275.00	18.96	174 psig at 377°F	12 barg at 192°C
2-1/2"	275.00	18.96	232.06	16.00	87 psig at 329°F	6 barg at 164°C
3"	217.56	15.00	174.05	12.00	87 psig at 329°F	6 barg at 164°C
Size	MAWP at 200°F(psig)	MAWP at 93°C(barg)	MAWP at 200°F(psig)	MAWP at 93°C(barg)	In all cases the Group 3 Pressure-Temperature Ratings are limited by ASME B16.5 Table II-2-2.1 Pressure-Temperature Ratings (Note 6)	
1/2"	230.00	15.86	230.00	15.86		
3/4"	230.00	15.86	230.00	15.86		
1"	230.00	15.86	230.00	15.86		
1-1/4"	230.00	15.86	230.00	15.86		
1-1/2"	230.00	15.86	230.00	15.86		
2"	230.00	15.86	230.00	15.86		
2-1/2"	230.00	15.86	230.00	15.86		
3"	217.56	15.00	174.05	12.00		
Size	MAWP at 300°F(psig)	MAWP at 149°C(barg)	MAWP at 300°F(psig)	MAWP at 149°C(barg)		
1/2"	205.00	14.13	205.00	14.13		
3/4"	205.00	14.13	205.00	14.13		
1"	205.00	14.13	205.00	14.13		
1-1/4"	205.00	14.13	205.00	14.13		
1-1/2"	205.00	14.13	205.00	14.13		
2"	205.00	14.13	205.00	14.13		
2-1/2"	205.00	14.13	205.00	14.13		
3"	205.00	14.13	174.05	12.00		
Size	MAWP at 400°F(psig)	MAWP at 204°C(barg)	MAWP at 400°F(psig)	MAWP at 204°C(barg)		
1/2"	190.00	13.10	190.00	13.10		
3/4"	190.00	13.10	190.00	13.10		
1"	190.00	13.10	190.00	13.10		
1-1/4"	190.00	13.10	190.00	13.10		
1-1/2"	190.00	13.10	190.00	13.10		
2"	190.00	13.10	190.00	13.10		
2-1/2"	190.00	13.10	190.00	13.10		
3"	190.00	13.10	174.05	12.00		

SCOPE OF CRN REGISTRATION

PRESSURE - TEMPERATURE RATINGS						
Process Connections		CL150 ASME B16.5 Flanged Type 316SS				
Service Type	Group 1		Group 2		Group 3	
Size	MAWP at 100°F(psig)	MAWP at 38°C(barg)	MAWP at 100°F(psig)	MAWP at 38°C(barg)	MAWP at Steam Saturation Temperature (Note 2)	
1/2"	275.00	18.96	275.00	18.96	232 psig at 400°F	16 barg at 204°C
3/4"	275.00	18.96	275.00	18.96	232 psig at 400°F	16 barg at 204°C
1"	275.00	18.96	275.00	18.96	232 psig at 400°F	16 barg at 204°C
1-1/4"	275.00	18.96	275.00	18.96	232 psig at 400°F	16 barg at 204°C
1-1/2"	275.00	18.96	275.00	18.96	232 psig at 400°F	16 barg at 204°C
2"	275.00	18.96	275.00	18.96	174 psig at 377°F	12 barg at 192°C
2-1/2"	275.00	18.96	232.06	16.00	87 psig at 329°F	6 barg at 164°C
3"	217.56	15.00	174.05	12.00	87 psig at 329°F	6 barg at 164°C
Size	MAWP at 200°F(psig)	MAWP at 93°C(barg)	MAWP at 200°F(psig)	MAWP at 93°C(barg)	In all cases the Group 3 Pressure-Temperature Ratings are limited by ASME B16.5 Table II-2-2.2 Pressure-Temperature Ratings (Note 6)	
1/2"	235.00	16.20	235.00	16.20		
3/4"	235.00	16.20	235.00	16.20		
1"	235.00	16.20	235.00	16.20		
1-1/4"	235.00	16.20	235.00	16.20		
1-1/2"	235.00	16.20	235.00	16.20		
2"	235.00	16.20	235.00	16.20		
2-1/2"	235.00	16.20	232.06	16.00		
3"	217.56	15.00	174.05	12.00		
Size	MAWP at 300°F(psig)	MAWP at 149°C(barg)	MAWP at 300°F(psig)	MAWP at 149°C(barg)		
1/2"	215.00	14.82	215.00	14.82		
3/4"	215.00	14.82	215.00	14.82		
1"	215.00	14.82	215.00	14.82		
1-1/4"	215.00	14.82	215.00	14.82		
1-1/2"	215.00	14.82	215.00	14.82		
2"	215.00	14.82	215.00	14.82		
2-1/2"	215.00	14.82	215.00	14.82		
3"	215.00	14.82	174.05	12.00		
Size	MAWP at 400°F(psig)	MAWP at 204°C(barg)	MAWP at 400°F(psig)	MAWP at 204°C(barg)		
1/2"	195.00	13.44	195.00	13.44		
3/4"	195.00	13.44	195.00	13.44		
1"	195.00	13.44	195.00	13.44		
1-1/4"	195.00	13.44	195.00	13.44		
1-1/2"	195.00	13.44	195.00	13.44		
2"	195.00	13.44	195.00	13.44		
2-1/2"	195.00	13.44	195.00	13.44		
3"	195.00	13.44	174.05	12.00		

SCOPE OF CRN REGISTRATION

PRESSURE - TEMPERATURE RATINGS						
Process Connections		CL300 ASME B16.5 Flanged Type 304SS				
Service Type	Group 1		Group 2		Group 3	
Size	MAWP at 100°F(psig)	MAWP at 38°C(barg)	MAWP at 100°F(psig)	MAWP at 38°C(barg)	MAWP at Steam Saturation Temperature (Note 2)	
1/2"	720.00	49.64	720.00	49.64	232 psig at 400°F	16 barg at 204°C
3/4"	720.00	49.64	696.19	48.00	232 psig at 400°F	16 barg at 204°C
1"	720.00	49.64	580.16	40.00	232 psig at 400°F	16 barg at 204°C
1-1/4"	652.68	45.00	522.14	36.00	232 psig at 400°F	16 barg at 204°C
1-1/2"	580.16	40.00	464.13	32.00	232 psig at 400°F	16 barg at 204°C
2"	435.12	30.00	348.10	24.00	174 psig at 377°F	12 barg at 192°C
2-1/2"	290.08	20.00	232.06	16.00	87 psig at 329°F	6 barg at 164°C
3"	217.56	15.00	174.05	12.00	87 psig at 329°F	6 barg at 164°C
Size	MAWP at 200°F(psig)	MAWP at 93°C(barg)	MAWP at 200°F(psig)	MAWP at 93°C(barg)	In all cases the Group 3 Pressure-Temperature Ratings are limited by ASME B16.5 Table II-2-2.1 Pressure-Temperature Ratings (Note 6)	
1/2"	600.00	41.37	600.00	41.37		
3/4"	600.00	41.37	600.00	41.37		
1"	600.00	41.37	580.16	40.00		
1-1/4"	600.00	41.37	522.14	36.00		
1-1/2"	580.16	40.00	464.13	32.00		
2"	435.12	30.00	348.10	24.00		
2-1/2"	290.08	20.00	232.06	16.00		
3"	217.56	15.00	174.05	12.00		
Size	MAWP at 300°F(psig)	MAWP at 149°C(barg)	MAWP at 300°F(psig)	MAWP at 149°C(barg)		
1/2"	540.00	37.23	540.00	37.23		
3/4"	540.00	37.23	540.00	37.23		
1"	540.00	37.23	540.00	37.23		
1-1/4"	540.00	37.23	522.14	36.00		
1-1/2"	540.00	37.23	464.13	32.00		
2"	435.12	30.00	348.10	24.00		
2-1/2"	290.08	20.00	232.06	16.00		
3"	217.56	15.00	174.05	12.00		
Size	MAWP at 400°F(psig)	MAWP at 204°C(barg)	MAWP at 400°F(psig)	MAWP at 204°C(barg)		
1/2"	495.00	34.13	495.00	34.13		
3/4"	495.00	34.13	495.00	34.13		
1"	495.00	34.13	495.00	34.13		
1-1/4"	495.00	34.13	495.00	34.13		
1-1/2"	495.00	34.13	464.13	32.00		
2"	435.12	30.00	348.10	24.00		
2-1/2"	290.08	20.00	232.06	16.00		
3"	217.56	15.00	174.05	12.00		

SCOPE OF CRN REGISTRATION

PRESSURE - TEMPERATURE RATINGS						
Process Connections		CL300 ASME B16.5 Flanged Type 316SS				
Service Type	Group 1		Group 2		Group 3	
Size	MAWP at 100°F(psig)	MAWP at 38°C(barg)	MAWP at 100°F(psig)	MAWP at 38°C(barg)	MAWP at Steam Saturation Temperature (Note 2)	
1/2"	720.00	49.64	720.00	49.64	232 psig at 400°F	16 barg at 204°C
3/4"	720.00	49.64	696.19	48.00	232 psig at 400°F	16 barg at 204°C
1"	720.00	49.64	580.16	40.00	232 psig at 400°F	16 barg at 204°C
1-1/4"	652.68	45.00	522.14	36.00	232 psig at 400°F	16 barg at 204°C
1-1/2"	580.16	40.00	464.13	32.00	232 psig at 400°F	16 barg at 204°C
2"	435.12	30.00	348.10	24.00	174 psig at 377°F	12 barg at 192°C
2-1/2"	290.08	20.00	232.06	16.00	87 psig at 329°F	6 barg at 164°C
3"	217.56	15.00	174.05	12.00	87 psig at 329°F	6 barg at 164°C
Size	MAWP at 200°F(psig)	MAWP at 93°C(barg)	MAWP at 200°F(psig)	MAWP at 93°C(barg)	In all cases the Group 3 Pressure-Temperature Ratings are limited by ASME B16.5 Table II-2-2.2 Pressure-Temperature Ratings (Note 6)	
1/2"	620.00	42.75	620.00	42.75		
3/4"	620.00	42.75	620.00	42.75		
1"	620.00	42.75	580.16	40.00		
1-1/4"	620.00	42.75	522.14	36.00		
1-1/2"	580.16	40.00	464.13	32.00		
2"	435.12	30.00	348.10	24.00		
2-1/2"	290.08	20.00	232.06	16.00		
3"	217.56	15.00	174.05	12.00		
Size	MAWP at 300°F(psig)	MAWP at 149°C(barg)	MAWP at 300°F(psig)	MAWP at 149°C(barg)		
1/2"	560.00	38.61	560.00	38.61		
3/4"	560.00	38.61	560.00	38.61		
1"	560.00	38.61	560.00	38.61		
1-1/4"	560.00	38.61	522.14	36.00		
1-1/2"	560.00	38.61	464.13	32.00		
2"	435.12	30.00	348.10	24.00		
2-1/2"	290.08	20.00	232.06	16.00		
3"	217.56	15.00	174.05	12.00		
Size	MAWP at 400°F(psig)	MAWP at 204°C(barg)	MAWP at 400°F(psig)	MAWP at 204°C(barg)		
1/2"	515.00	35.51	515.00	35.51		
3/4"	515.00	35.51	515.00	35.51		
1"	515.00	35.51	515.00	35.51		
1-1/4"	515.00	35.51	515.00	35.51		
1-1/2"	515.00	35.51	464.13	32.00		
2"	435.12	30.00	348.10	24.00		
2-1/2"	290.08	20.00	232.06	16.00		
3"	217.56	15.00	174.05	12.00		

SCOPE OF CRN REGISTRATION

PRESSURE - TEMPERATURE RATINGS						
Process Connections		ASME BPE Ferrule, ASME BPE Ferrule 45°, ASME BPE Ferrule 90°				
Service Type	Group 1		Group 2		Group 3	
Size	MAWP at 100°F(psig)	MAWP at 38°C(barg)	MAWP at 100°F(psig)	MAWP at 38°C(barg)	MAWP at Steam Saturation Temperature (Note 2)	
1/4"	200.00	13.79	200.00	13.79	232 psig at 400°F	16 barg at 204°C
3/8"	200.00	13.79	200.00	13.79	232 psig at 400°F	16 barg at 204°C
1/2"	200.00	13.79	200.00	13.79	232 psig at 400°F	16 barg at 204°C
3/4"	200.00	13.79	200.00	13.79	232 psig at 400°F	16 barg at 204°C
1"	200.00	13.79	200.00	13.79	232 psig at 400°F	16 barg at 204°C
1-1/2"	200.00	13.79	200.00	13.79	232 psig at 400°F	16 barg at 204°C
2"	200.00	13.79	200.00	13.79	174 psig at 377°F	12 barg at 192°C
2-1/2"	200.00	13.79	200.00	13.79	87 psig at 329°F	6 barg at 164°C
3"	200.00	13.79	174.05	12.00	87 psig at 329°F	6 barg at 164°C
Size	MAWP at 400°F (psig)	MAWP at 204°C (barg)	MAWP at 400°F (psig)	MAWP at 204°C (barg)	In all cases the Group 3 Pressure-Temperature Ratings are limited by ASME BPE Table DT-2-1 Pressure-Temperature Ratings (Note 7)	
1/4"	170.00	11.73	170.00	11.73		
3/8"	170.00	11.73	170.00	11.73		
1/2"	170.00	11.73	170.00	11.73		
3/4"	170.00	11.73	170.00	11.73		
1"	170.00	11.73	170.00	11.73		
1-1/2"	170.00	11.73	170.00	11.73		
2"	170.00	11.73	170.00	11.73		
2-1/2"	170.00	11.73	170.00	11.73		
3"	170.00	11.73	170.00	11.73		

Note 1: MAWP = Maximum Allowable Working Pressure, MAWT = Maximum Allowable Working Temperature, MDMT = Minimum Design Metal Temperature.

Note 2: Higher temperatures are possible under super-heated steam conditions. In all cases the Maximum Allowable Working Temperature (MAWT) is limited to 400°F / 204°C.

Note 3: The Maximum Allowable Working Pressure (MAWP) is the maximum allowed under this CRN. Aflex may limit certain hose applications to lower pressures than specified above. Please consult Aflex literature.

Note 4: For low temperature operation the products shall conform to the rules of the applicable codes under which they are used.

SCOPE OF CRN REGISTRATION

Note 5: The ASME BPE Ferrule connection shall be used with a clamp, however the assembly clamp is not part of this CRN. Pressure-Temperature ratings may be limited by the clamp type used in the joint assembly. The clamp used to complete the joint shall have its own CRN and shall have pressure-temperature ratings the same or higher than the product ratings.

Note 6: Part of ASME B16.5 Table II-2-2.1 and II-2-2.2 shown below:

Table II-2-2.1 Pressure-Temperature Ratings for Group 2.1 Materials

Nominal Designation		Forgings		Castings		Plates	
18Cr-8Ni		A182 Gr. F304 (1)		A351 Gr. CF3 (2)		A240 Gr. 304 (1)	
18Cr-8Ni		A182 Gr. F304H		A351 Gr. CF8 (1)		A240 Gr. 304H	
Working Pressures by Classes, psig							
		Class					
Temp., °F	150	300	400	600	900	1500	2500
-20 to 100	275	720	960	1,440	2,160	3,600	6,000
200	230	600	800	1,200	1,800	3,000	5,000
300	205	540	715	1,075	1,615	2,690	4,480
400	190	495	660	995	1,490	2,485	4,140

Table II-2-2.2 Pressure-Temperature Ratings for Group 2.2 Materials

Nominal Designation		Forgings		Castings		Plates	
16Cr-12Ni-2Mo		A182 Gr. F316 (1)		A351 Gr. CF3M (2)		A240 Gr. 316 (1)	
16Cr-12Ni-2Mo		A182 Gr. F316H		A351 Gr. CF8M (1)		A240 Gr. 316H	
18Cr-13Ni-3Mo		A182 Gr. F317 (1)		...		A240 Gr. 317 (1)	
19Cr-10Ni-3Mo		...		A351 Gr. CG8M (3)		...	
Working Pressures by Classes, psig							
Class							
Temp., °F	150	300	400	600	900	1500	2500
-20 to 100	275	720	960	1,440	2,160	3,600	6,000
200	235	620	825	1,240	1,860	3,095	5,160
300	215	560	745	1,120	1,680	2,795	4,660
400	195	515	685	1,025	1,540	2,570	4,280

Note 7: ASME BPE Table DT-2-1 shown below:

Table DT-2-1
Metallic Fittings: Rated Internal Working Pressure

Temperature		<3 in.		3 in.		4 in.		6 in.	
°F	°C	psig	kPa	psig	kPa	psig	kPa	psig	kPa
100	38	200	1379	200	1379	200	1379	150	1034
200	93	200	1379	200	1379	200	1379	150	1034
300	149	188	1293	188	1293	188	1293	141	970
400	204	170	1173	170	1173	170	1173	128	880

GENERAL NOTES:

- (a) These pressure ratings apply to metallic fittings, including butt welded or hygienic clamped connections.
- (b) For installation practices of hygienic clamp connections, refer to [Figure DT-9.4-1](#).
- (c) Manufacturers may publish higher pressure ratings; see [DT-2](#).

Note 8: See attached Worldwide Locations Appendix for the manufacturing locations applicable to this CRN.



WORLDWIDE LOCATIONS APPENDIX

AFLEX HOSE MANUFACTURING LOCATIONS & CERTIFYING AUTHORITIES

THIS IS PART OF CRN
0D24488.5
Technical Standards and Safety Authority
Boilers and Pressure Vessels Safety
Program

(rev. November 30, 2022)

Aflex Hose Ltd

Bradley Business Park
Dyson Wood Way
Bradley
Huddersfield
HD2 1GZ
United Kingdom

ISO 9001 Certified by bsi

In addition, in accordance with CSA B51 paragraph 4.2.5 Aflex Hose is taking responsibility for the product covered under this CRN that is manufactured at:

Watson-Marlow, Inc.

37 Upton Technology Park
Wilmington, MA, 01887
USA

ISO 9001 Certified by TUV

Watson-Marlow, Inc.

20472 Crescent Bay
Suite #104
Lake Forest, CA, 92630
USA

ISO 9001 Certified by TUV

Watson-Marlow, Inc.

32 Appletree Lane
Pipersville, PA, 18947
USA

ISO 9001 Certified by TUV