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June 18, 2018

SCOTT ISLIP
ROUND ENGINEERING INC
10 SEGWUN RD
WATERDOWN ON L8B 0K6
CA

Service Request Type: BPV-Fitting Registration
Service Request No.: 2306738
Your Reference No.: R-0885
Registered to: CRYOVATION LLC

Dear SCOTT ISLIP,

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

CRN No.: 0H20461.5
Main Design No.: MANIFOLD ASSEMBLIES - SEE SCOPE OF CRN REGISTRATION
Expiry Date: 18-Jun-2028

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

The stamped copy of the approved registration and the invoice are mailed separately. Should you have any questions or require further assistance, 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,

Wendy Du, P.Eng.
Technical Standards & Safety Authority
Boilers & Pressure Vessels Safety Program
Tel.: 416-734-3566
Fax: 416-231-6183
Email: wdu@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



STATUTORY DECLARATION Registration of Fittings

I, ROBERT L. LEONARD, DIRECTOR OF QUALITY CONTROL
(Name and Position, e.g. President, Plant Manager, Chief Engineer)

of CRYOVATION, LLC
(Name of Manufacturer)

Located at 9B MARY WAY, HAINESPORT, NJ 08036 609-619-5734
(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

(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 CSA B51 ANNEX F which has been verified by the following authority, TUV RHEINLAND

The items covered by this declaration, for which I seek registration, are category H - MANIFOLDS type fittings. In support of this application, the following information and/or test data are attached as follows:
SCOPE OF CRN, DRAWINGS, CALCULATIONS

(drawings, calculations, test reports, etc.)

Declared before me at Hainesport in the Burlington County of New Jersey
 the 9th day of MAY AD 2018

JOEL IRIZARRY
 NOTARY PUBLIC OF NEW JERSEY
 My Commission Expires June 9, 2020
 (ROBERT L. LEONARD)

Commissioner for Oaths:
Joel Irizarry
(Printed name)
[Signature]
(Signature)

Robert Leonard
(Signature of Declarer)

FOR OFFICE USE ONLY

To the best of my knowledge and belief, the application meets the requirements of the **Technical Standards and Safety Act**, Boilers and Pressure Vessels Regulation, and CSA Standard B51 and is accepted for registration in Category H

CRN: 0H20461.5

Registered by: Wendy Au

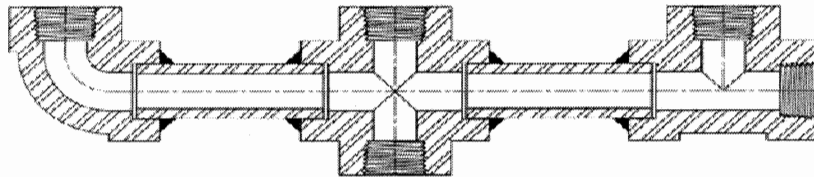
Dated: Jun. 18, 2018

NOTE: This registration expires on Jun. 18, 2028

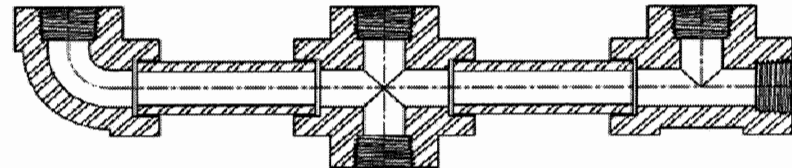
Technical Standards and Safety Authority	Boilers and Pressure Vessels Safety Program
REGISTERED	
C.R.N.: <u>0H20461.5</u>	
Signed: <u>[Signature]</u>	
Date: <u>Jun. 18, 2018</u>	

SCOPE OF CRN REGISTRATION

Product Description	Dwg. No.	Design Code	Size NPS x Thickness	Material	MAWP at MAWT	MDMT (F)	Report
Manifold Assembly	014-SPEC-SS	ASME B31.3, 2016	1/2" Sch. 40	ASTM A312-304/304L, ASTM A182-304/304L (Note 2)	3000 psig at 120F	20F	R-0885A
Manifold Assembly	014-SPEC-SS	ASME B31.3, 2016	1/2" Sch. 80	ASTM A312-304/304L, ASTM A182-304/304L (Note 2)	6000 psig at 120F	20F	R-0885A
Manifold Assembly	014-SPEC-BRASS	ASME B31.3, 2016	0.840" OD x 0.20" Wall	ASTM B927 UNS C26000 Brass (Note 3)	3000 psig at 120F	20F	R-0885B
Manifold Assembly	014-SPEC-BRASS	ASME B31.3, 2016	1.05" OD x 0.23" Wall	ASTM B927 UNS C26000 Brass (Note 3)	3000 psig at 120F	20F	R-0885B



STAINLESS STEEL



BRASS

Note 1: Per CSA Table 1 Note (2)(B) the total volume of any configured manifold assembly shall not exceed 1.5 cubic feet in volume.

Note 2: Type 316 SS may substitute for Type 304 SS.

Note 3: Other Brass, Copper and Copper Alloy grades may be used as long as they have a ASME B31.3 Table A-1 allowable stress value equal to or larger than 8000 psi at 120F.

