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October 11, 2022

CHART INC.
5615 S 129TH E AVE
TULSA OK 74134

Workorder Type: Registration - Fitting(Conventional)
Workorder No: 8176772
Your Reference No.: R-1743
Registered to: CHART INC.

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 : 0H24221.5
Main Design No.: Scope of CRN Registration
Expiry Date: Oct 11, 2032

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 (There will be no hard copies for electronic submissions). 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,

Mehdi Talebi
Engineer, BPV
Tel. : +1 416-734-3413
Email : mtalebi@tssa.org



Technical Standards and Safety Authority
Carlingview Drive
Toronto, Ontario M9W 6N9
www.tssa.org

Show facsimile of manufacturer's logo or trademark, as it will appear on the fitting, in the space below



Earthly
Labs



STATUTORY DECLARATION Registration of Fittings

I, Ron Street, Plant Manager
(Name and Position, e.g. President, Plant Manager, Chief Engineer)

of Chart Inc.
(Name of Manufacturer)

Located at See Attached Worldwide Locations Appendix
(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 ISO 9001:2015 which has been verified by the following authority, Bureau Veritas

The items covered by this declaration, for which I seek registration, are category H - Carbon Capture System type fittings. In support of this application, the following information and/or test data are attached as follows:

SCOPE OF CRN REGISTRATION, REPORTS, DRAWINGS, CALCULATIONS

(drawings, calculations, test reports, etc.)

Declared before me at Chart Inc. in the city of Tulsa, OK
the 1st day of July AD 2022

Commissioner for Oaths:

Donald E. Buehrig, Jr.

(Printed name)

[Signature]
(Signature)

DONALD EDWARD BUEHRIG JR
Notary Public, State of Oklahoma
Commission # 22008675
My Commission Expires 06-24-2026

[Signature]
(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: 0H24221.5

Registered by: _____

Dated: _____

NOTE: This registration expires on: OCT 11.2032

Technical
Standards
and Safety
Authority

Boilers and
Pressure Vessels
Safety Program

REGISTERED

C.R.N.: 0H24221.5

Signed: MT

Date: October 11, 2022.

*Information provided in this application is releasable under the Freedom of Information and Privacy Protection Act and may be disclosed upon request.

PV 09553 (04/17)

See attached "Part of CRN" For the scope

CHART INC.

5615 S. 129TH E. AVE.

TULSA, OK

74134



29-Jun-22

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SCOPE OF CRN REGISTRATION

Product Description	Drawing Numbers	Design Code	Size Range	Connections	Material Specification	MAWP at MAWT (psig)	MDMT (F)	CA (in.)	Report Number
Carbon Capture System	Earthly Labs CRN C-1000, CRN Line 1010 Rev. 1, CRN H-1010 Rev. 1, CRN Line 1011 Rev. 1, CRN Line 1012, CRN Line 1014, CRN Line 1013, CRN Line 1020 Rev. 1, CRN Line 1021 Rev. 1, CRN Line 1022, V-1020 & V-1021 Dryer Beds CRN Line 1023, CRN Line 1024, CRN Line 1030, CRN V-1030, CRN Line 1031, CRN H-1040 Rev. 1, CRN Line 1040 Rev. 1, CarboMax 1000 CO2 Dewar, CRN Line 1041	ASME B31.3, 2020	1/4" OD x 0.035", 3/8" OD x 0.035", 2" Sch. 40S, 1/2" Class 3000, 2" Class 3000	Tube End, NPT, ASME B16.5 Flanged	ASTM A213 TP316, ASTM A269 TP316, ASTM A270 TP316, ASTM A312 TP304, ASTM A182 F316, ASTM A182 F304	<u>CO2</u> : 175 psig at 150°F	30°F and -40°F (Note 2)	Nil	R-1743 Rev. 0

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

Note 2: All CSA B51 regulated lines in the Carbon Capture System have a MDMT equal to 30°F except for line 1040 between the Chiller and Dewar which has a MDMT equal to -40°F.

Note 3: Per CSA Table 1 Note (2)(B) the total volume of any configured assembly shall not exceed 1.5 cubic feet in volume.

Note 4: Flanges to comply with ASME B16.5 and ASME B16.11 fittings shall be Class 3000.

Note 5: See Attached List of Chart Inc. Manufacturing locations applicable to this CRN.

THIS IS PART OF CRN
0H24221.5

Technical Standards and Safety Authority
Boilers and Pressure Vessels Safety Program