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www.tssa.org

April 29, 2020

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

Service Request Type: BPV-Fitting Registration
Service Request No.: 2817448
Your Reference No.: R-1196
Registered to: CIRCOR AEROSPACE 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: **0C12966.5R1**

Main Design No.: CHECK VALVES - SERIES: 200-*PP, 200-*BB, 200-*MM, 200-*RR,
H200-*PP - SEE SCOPE OF REGISTRATION

Expiry Date: 29-Apr-2030

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

Notes: This registration includes Series 200-*PP/*BB/*MM/*RR/*PP. See 'Scope of CRN Registration' documents for material and pressure ratings. Sizes range from 1/8" to 2"

A stamped copy of the approved registration and invoice for engineering services will be mailed to you shortly. Should you have any questions or require further assistance, however, 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.

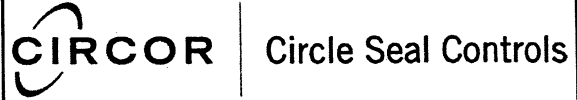
Yours truly,

Alan Wu P. Eng.
Mechanical Engineer, BPV
Tel. : 416-734-3443
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Email : awu@tssa.org



Technical Standards and Safety Authority
 345 Carlingview Drive
 Toronto, Ontario M9W 6N9
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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, RANDALL RALEY, PRODUCT MANAGER
(Name and Position, e.g. President, Plant Manager, Chief Engineer)

of CIRCOR AEROSPACE, INC.
(Name of Manufacturer)

Located at 2301 Wardlow Circle, Corona, California, 92880, USA 951-270-6462
(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 B31.1, 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 which has been verified by the following authority, SAI GLOBAL.

The items covered by this declaration, for which I seek registration, are category C - Check Valves 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 _____ in the _____ of _____
 the _____ day of _____ AD 20_____.

Commissioner for Oaths:

(Printed name)
See attached (B), 3/9/2020
(Signature)

Randall Raley
(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 C.

CRN: 0C12966.5R1
 Registered by: A Wu
 Dated: Apr 29, 2020



This document has been digitally signed and approved.

Technical Standards and Safety Authority
 Boilers and Pressure Vessels Safety Program

REGISTERED

C.R.N.: 0C12966.5R1

Signed: Au

Date: April 29, 2020.

NOTE: This registration expires on: Apr 29, 2030

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

CALIFORNIA JURAT WITH AFFIANT STATEMENT

GOVERNMENT CODE § 8202

- See Attached Document (Notary to cross out lines 1-6 below)
- See Statement Below (Lines 1-6 to be completed only by document signer[s], not Notary)

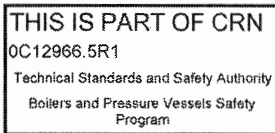
1 _____
 2 _____
 3 _____
 4 _____
 5 _____
 6 _____

Signature of Document Signer No. 1 *Signature of Document Signer No. 2 (if any)*

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
 County of Riverside

Subscribed and sworn to (or affirmed) before me
 on this 9th day of March, 2020
 by Date Month Year



(1) Randall Raley
 (and (2) _____),
 Name(s) of Signer(s)



proved to me on the basis of satisfactory evidence to be the person(s) who appeared before me.

Signature Brooke Milligan
 Signature of Notary Public

Seal
 Place Notary Seal Above

OPTIONAL

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: STATUTORY DECLARATION Document Date: NO DATE
 Number of Pages: 1 Signer(s) Other Than Named Above: NO OTHER SIGNERS



SCOPE OF CRN REGISTRATION

Product Description	Model	Design Code	End Connection	Size Range	Material Specifications (Note 2)	MAWP at MAWT (Note 1)	Report Number
Check Valves	Series 200-*PP	ASME B31.1, ASME B31.3	FNPT	1/8", 1/4", 3/8", 1/2", 1", 1-1/4", 1-1/2"	Type 316 SS	2200 psig at 400°F	R-1196A
					Type 303 SS	1600 psig at 400°F	
					Brass	1000 psig at 250°F	
					Aluminum T4	800 psig at 250°F	
					Aluminum T6	1200 psig at 250°F	
				2", 2-1/2"	Type 316 SS	1800 psig at 400°F	
					Type 303 SS	1300 psig at 400°F	
					Brass	800 psig at 250°F	
					Aluminum T4	700 psig at 250°F	
					Aluminum T6	1000 psig at 250°F	
Check Valves	Series 200-*BB	ASME B31.1, ASME B31.3	Tube End	1/4"	Type 316 SS	3000 psig at 400°F	R-1196B
					Type 303 SS	2500 psig at 400°F	
					Brass	1500 psig at 250°F	
					Aluminum T4	1300 psig at 250°F	
					Aluminum T6	1900 psig at 250°F	
				3/8", 5/8", 3/4", 1", 1-1/4", 1-1/2"	Type 316 SS	2200 psig at 400°F	
					Type 303 SS	1600 psig at 400°F	
					Brass	1000 psig at 250°F	
					Aluminum T4	800 psig at 250°F	
					Aluminum T6	1200 psig at 250°F	
Check Valves	Series 200-*MM	ASME B31.1, ASME B31.3	MNPT	1/4"	Type 316 SS	2200 psig at 400°F	R-1196C
					Type 303 SS	1600 psig at 400°F	
					Brass	1000 psig at 250°F	
					Aluminum T4	800 psig at 250°F	
					Aluminum T6	1200 psig at 250°F	
Check Valves	Series 200-*RR	ASME B31.1, ASME B31.3	Tube End	1/2"	Type 316 SS	2200 psig at 400°F	R-1196D
					Type 303 SS	1600 psig at 400°F	
					Brass	1000 psig at 250°F	
					Aluminum T4	800 psig at 250°F	
					Aluminum T6	1200 psig at 250°F	

THIS IS PART OF CRN
 0CH2966.5R1
 Technical Standards and Safety Authority
 Boilers and Pressure Vessels Safety
 Program



SCOPE OF CRN REGISTRATION CONTINUED

Product Description	Model	Design Code	End Connection	Size Range	Material Specifications (Note 2)	MAWP at MAWT (Note 1)	Report Number
Check Valves	Series H200-*PP	ASME B31.1, ASME B31.3	FNPT	1-1/4"	Type 316 SS	5800 psig at 400°F	R-1196E
					Type 303 SS	4200 psig at 400°F	
					Brass	2600 psig at 250°F	
					Aluminum T4	2200 psig at 250°F	
					Aluminum T6	3200 psig at 250°F	
				1-1/2"	Type 316 SS	3500 psig at 400°F	
					Type 303 SS	2500 psig at 400°F	
					Brass	1600 psig at 250°F	
					Aluminum T4	1300 psig at 250°F	
					Aluminum T6	1900 psig at 250°F	
				2"	Type 316 SS	5200 psig at 400°F	
					Type 303 SS	3700 psig at 400°F	
					Brass	2300 psig at 250°F	
					Aluminum T4	2000 psig at 250°F	
					Aluminum T6	2800 psig at 250°F	

Note 1: MAWP = Maximum Allowable Working Pressure, MAWT = Maximum Allowable Working Temperature.

Note 2:
 Type 316 SS = Stainless Steel ASTM A479-316
 Type 303 SS = Stainless Steel A582-303 with a minimum yield strength of 30,000 psi and a minimum tensile strength of 75,000 psi.
 Brass = Brass ASTM B16 UNS C36000. In accordance with ASME B31.1 Table A-6 Note (8) Materials shall be tested to determine the presence of residual stresses that might result in failure of individual parts due to stress corrosion cracking. Tests shall be conducted in accordance with ASTM B154 or ASTM B858. The test frequency shall be as specified in ASTM B249.
 Aluminum T4 = ASTM B221 UNS A96061 T4
 Aluminum T6 = ASTM B221 UNS A96061 T6

Note 3: The pressure-temperature ratings shown are the maximum CRN pressure-temperature ratings. In all cases the pressure-temperature ratings may be limited by the seat and seal materials. Please consult Circle Aerospace, Inc.

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

Note 5: In accordance with ASME B31.1 para. 123.1.2(D) when this product is manufactured from a ASME B31.1 unlisted material and used under the ASME B31.1 code the facility owner must accept the use of the following non listed materials.

- Stainless Steel ASTM A582-303 meeting the requirements specified in ASTM A473.

<p>THIS IS PART OF CRN 0C12966.5R1 Technical Standards and Safety Authority Boilers and Pressure Vessels Safety Program</p>
