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www.tssa.org

March 1, 2022

BADGER METER INC 4545 W BROWN DEER RD MILWAUKEE WI 53223

**Workorder Type:** Registration - Fitting(Conventional)

Workorder No: 8064464

Your Reference No.: RENEWAL OF CRN#0F14981.5 (ONT), 0F12298.2 (ABSA)

Registered to: BADGER METER INC

Dear TODD PAUL,

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

CRN: 0F14981.5R1

Main Design No.: Hedland Flow Meters per Scope of Registration attached to the Statutory Declaration

Expiry Date: Mar 01, 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,

Zivko Gacevic , P. Eng. Engineer, BPV

Tel.: +1 416-734-3429 Email: zgacevic@tssa.org



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

\*\*Comparison of the fitting of the space below to the fitting of the space below to the space be

STATUTORY DECLAR								
Registration of Fittings	<b>i</b>							
I, Michael Wusterbarth, Director - Engineering Flow Instrumentation								
(Name and Position, e.g. President, Plant Manager, Chief t	Engineer)							
of Badger Meter, Inc.								
(Name of Manufacturer)								
Located at 8635 Washington Ave., Racine, WI 53406-1580	262-639-6770	n/a						
(Plant Address)	(Telephone No.)	(Fax No.)						
do solemnly declare that the fittings listed hereunder, which are subject to the <i>Technical Standards and Safety Act</i> , Boilers and Pressure Vessels Regulation, comply with all of the requirements of								
(Title of recognized North American Standard) which specifies the dimensions, materials of construction, pressure/temperature rating	s, identification marking th	ne fittings and service;						
or are not covered by the provisions of a recognized North American standard a ASME B31.3 &NFPA T2.6.R1 as supported by the attached data which is pressure/temperature ratings and the basis for such ratings, the marking of the fit	lentifies the dimensions,	material of construction,						
I further declare that the manufacture of these fittings is controlled by a quality system meeting the requirements of								
The items covered by this declaration, for which I seek registration, are category F	ty	pe fittings. In support of						
this application, the following information and/or test data are attached as follows:  Calculations BP628/8H; Hedland Canadian Registration Flow Meter Catalog, Mode	l assembly and detail r	narte drawinge						
(drawings, calculations, test reports, etc.)	t dosernory and detail p	oarts drawings						
Declared before me at IZACINE in the in the	OVR STAN OF	VSA						
the 13 day of DECEMBER AD 20 21.  Commissioner for Oaths:	ARL							
TOOD A PAUL								
(Printed name)								
(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'F'	Technical Standards and Safety Authority	Boilers and Pressure Vessels Safety Program						
CRN:	REGISTERED							
Registered by:	C.R.N.: 0F14981.5							
Dated:		Signed: Jacus Zol						
NOTE: This registration expires on: Mar. 1, 2032	Date: March 1,	<b>ZUZZ.</b>						

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

# **RACINE FEDERATED INC. - HEDLAND DIVISION**

# HEDLAND VARIABLE AREA FLOW METER HOUSINGS, SUMMARY OF ADDITIONAL PRESSURE TESTING

### TESTED HOUSINGS WITH THIRD PARTY VERIFICATION

	HOUSING	HOUSING	BURST	BURST	PORT	FAILURE	BURST
	BODY	CAP	WALL O.D.	WALL I.D.	TYPE	MODE	PRESSURE
H2-1-4HSG-NPT	HN100009	HN101314	0.808*	0.534*	1/4 NPTF	O-RING SEAL	39,308 PSI
H6-1-2HSG-NPT	HN100021	HN101300	1.305	1.001	½ NPTF	LONG WALL BURST	22,503 PSI
H7-3-4HSG-NPT	HN100033	HN101296	1.688	1.378	¾ NPTF	LONG WALL BURST	17,224 PSI
H8-1-2HSG-NPT	HN100069	HN100355	2.871	2.378	1½ NPTF	LONG WALL BURST	14.665 PSI

<sup>\*</sup>BASED UPON THE OTHER SAMPLES THIS IS THE ASSUMED BURST WALL IF THE O-RING HAD SURVIVED

### SIMILAR HOUSINGS BURST RATED BY ANALOGY

	HOUSING	HOUSING	BURST	BURST	PORT	ANALOGIZED	BURST
	BODY	CAP	WALL O.D.	WALL I.D.	TYPE	FAILURE MODE	RATING
H2-1-4HSG-SAE	HN100013	HN101317	0.808	0.534	#6 SAE	LONG WALL BURST	>39,308 PSI
H6-1-2HSG-SAE	HN100025	HN101303	1.305	1.001	#10 SAE	LONG WALL BURST	22,503 PSI
H6-1-4HSG-NPT	HN100272	HN101284	1.305	1.001	1/4 NPTF	LONG WALL BURST	22,503 PSI
H6-1-4HSG-SAE	HN100276	HN101288	1.305	1.001	#6 SAE	LONG WALL BURST	22,503 PSI
H7-3-4HSG-SAE	HN100037	HN101297	1.688	1.378	#12 SAE	LONG WALL BURST	17,224 PSI
H7-1-0HSG-NPT	HN100045	HN101323	1.688	1.378	1 NPTF	LONG WALL BURST	17,224 PSI
H7-1-0HSG-SAE	HN100049	HN100080	1.688	1.378	#16 SAE	LONG WALL BURST	17,224 PSI
H8-1-4HSG-NPT	HN100057	HN100352	2.871	2.378	11/4 NPTF	LONG WALL BURST	14,665 PSI
H8-1-4HSG-SAE	HN100061	HN100353	2.871	2.378	#20 SAE	LONG WALL BURST	14,665 PSI
H8-1-2HSG-SAE	HN100073	HN100356	2.871	2.378	#24 SAE	LONG WALL BURST	14,665 PSI

#### **CONCLUSION:**

THE ANALOGIZED HOUSINGS ARE IDENTICAL TO THE TESTED HOUSINGS IN THE AREA OF THE FAIURE; THE DIFFERENCES ARE IN THE PORT TYPES.

THIS IS PART OF CRN

0F14981.5R1

echnical Standards and Safety Authority
Boilers and Pressure Vessels Safety
Program