FORM U-1 MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS
As Required by the Provisions of the ASME Boiler and Pressure Vessel Code Rules, Section VIII, Division 1

1. Manufactured and certified by: **PMI-Technology Sdn Bhd Lot 11004, 4 3/4 Miles, Jalan Lahat, 31500 Lahat, Perak Malaysia**
(Name and address of Manufacturer)

2. Manufactured for: **Desmet Ballestra 450 Franklin Gateway SE, Suite 170 Marietta, GA 30067 USA**
(Name and address of Purchaser)

3. Location ofinstallation: **World Energy, Paramount, CA 14700, Downey Avenue, CA – 90723 Paramount, CA USA**
(Name and address)

4. Type: **Vertical** (Horizontal, vertical, or sphere) | **Pressure Filter Vessel** (Tank, separator, jkt vessel, heat exch., etc.) | **PMI-PV-8769** - (Manufacturer's serial number)

NONE (CRN) | **See Attached Form U-4 (Remark 1)** (Drawing Number) | **143** - (National Board number) | **2022** (Year built)

5. ASME Code, Section VIII, Div. 1: **2019** [Edition and Addenda, if applicable (date)] | **NO** (Code Case number) | **NO** [Special service per UG-120(d)]

Items 6-11 incl. to be completed for single wall vessels, jackets of jacketed vessels, shell of heat exchangers, or chamber of multichamber vessels.

6. Shell: (a) Number of course(s) **4** (b) Overall length **3368 MM**

Course(s)			Material	Thickness		Long. Joint (Cat. A)			Circum. Joint (Cat. A, B & C)			Heat Treatment	
No	Diameter	Length	Spec./Grade or Type	Nom.	Corr.	Type	Full, Spot, None	Eff.	Type	Full, Spot, None	Eff.	Temp	Time
1	2000 MM	1524 MM	SA240 304	10 mm	0 MM	1	SPOT	0.85	1	SPOT	0.85	-	-
1	2000 MM	710 MM	SA240 304	10 mm	0 MM	1	SPOT	0.85	1	SPOT	0.85	-	-
1	2000x1338 MM	634	SA240 304	10 mm	0 MM	1	SPOT	0.85	1	SPOT	0.85	-	-
1	1338x762 MM	500	SA240 304	10 mm	0 MM	1	SPOT	0.85	1	SPOT	0.85	-	-

Body Flanges on Shells												
									Bolting			
No	Type	ID	OD	Flange Thk	Min Hub Thk	Material	How Attached	Location	Num & Size	Bolting Material	Washer (OD, ID, thk)	Washer Material
1	Integral-Type Flanges	1980 MM	2040 MM	195 MM	10 MM	SA240 304	Fig.2-4(6)	Shell, CW1	24, M30	SA193 Gr.B7	M30	DIN 125A
-	-	-	-	-	-	-	-	-	-	-	-	-

7. Heads: (a) **SA240 304** (Material spec. number, grade or type) (H.T. - time and temp.) (b) - (Material spec. number, grade or type) (H.T. - time and temp.)

	Location (Top, Bottom, Ends)	Thickness		Radius		Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure		Category A		
		Min.	Corr.	Crown	Knuckle					Convex	Concave	Type	Full, Spot, None	Eff.
(a)	Top	9 MM	0 MM	1850 MM	NO	NO	NO	NO	NO	YES	YES	1	SPOT	0.85
(b)	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Body Flanges on Heads												
									Bolting			
	Location	Type	ID	OD	Flange Thk	Min Hub Thk	Material	How Attached	Num & Size	Bolting Material	Washer (OD, ID, thk)	Washer Material
(a)	Top	Integral-Type Flanges	1980 MM	2040 MM	160 MM	None	SA240 304	Fig.1-6 (d)	-	-	-	-
(b)	-	-	-	-	-	-	-	-	-	-	-	-

8. Type of jacket: - Jacket closure: - (Describe as ogee and weld, bar, etc.)
If bar, give dimensions; if bolted, describe or sketch: -

9. MAWP **6.0 Bar(G)** (Internal) **1.0 Bar(G)** (External) at max. temp. **150 °C** (Internal) **150 °C** (External) Min. design metal temp. **0 °C** at **-1.0/6.0 Bar(G)**

10. Impact test: NO [Indicate yes or no and the component(s) impact tested] at test temperature of: -

11. Hydro., pneu., or comb. test pressure: **Hydro 8.3 Bar(G)** Proof test: -

Items 12 and 13 to be completed for tube sections.

12. Tubesheet: - [Stationary (material spec. no)] | - [Diameter (subject to press.)] | - (Nominal thickness) | - (Corr. allow.) | - [Attachment (welded or bolted)]
- [Floating (material spec. no)] | - (Diameter) | - (Nominal thickness) | - (Corr. allow.) | - (Attachment)

13. Tubes: - (Material spec. no., grade or type) | - (O.D.) | - (Nominal thickness) | - (Number) | - [Type (straight or U)]

(07/17)

July 20, 2022

26/7/2022

Form U-1

Manufactured by PMI-Technology Sdn Bhd Lot 11004, 4 3/4 Miles, Jalan Lahat, 31500 Lahat, Perak Malaysia

Manufacturer's Serial No. PMI-PV-8769 CRN NONE National Board No. 143

Items 14-18 incl. to be completed for inner chambers of jacketed vessels or channels of heat exchangers.

14. Shell: (a) No of course(s) - (b) Overall length -

Course(s)			Material	Thickness		Long Joint (Cat. A)			Circum. Joint (Cat. A, B & C)			Heat Treatment	
No.	Diameter	Length	Spec./Grade or Type	Nom.	Corr.	Type	Full, Spot, None	Eff.	Type	Full, Spot, None	Eff.	Temp.	Time
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-

Body Flanges on Shells												
									Bolting			
No.	Type	ID	OD	Flange Thk	Min Hub Thk	Material	How Attached	Location	Num & Size	Bolting Material	Washer (OD, ID, thk)	Washer Material
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-

15. Heads: (a) - (b) -
(Material spec. number, grade or type) (H.T. - time and temp.) (Material spec. number, grade or type) (H.T. - time and temp.)

	Location (Top, Bottom, Ends)	Thickness		Radius		Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure		Category A		
		Min	Corr.	Crown	Knuckle					Convex	Concave	Type	Full, Spot, None	Eff
(a)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(b)	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Body Flanges on Heads												
									Bolting			
	Location	Type	ID	OD	Flange Thk	Min Hub Thk	Material	How Attached	Num & Size	Bolting Material	Washer (OD, ID, thk)	Washer Material
(a)	-	-	-	-	-	-	-	-	-	-	-	-
(b)	-	-	-	-	-	-	-	-	-	-	-	-

16. MAWP - (Internal) - (External) at max. temp. - (Internal) - (External) Min. design metal temp. - at -

17. Impact test - at test temperature of -
[Indicate *yes* or *no* and the component(s) impact tested]

18. Hydro., pneu., or comb. test pressure - Proof test -

19. Nozzles, inspection, and safety valve openings:

Purpose (Inlet, Outlet, Drain, etc.)	No	Diameter or Size	Type	Material		Nozzle Thickness		Reinforcement Material	Attachment Details		Location (Insp. Open)
				Nozzle	Flange	Nom.	Corr.		Nozzle	Flange	
		Refer Form U-4									

20. Support: Skirt NO (Yes or No) Lugs 4 (Number) Legs NO (Number) Others NO (Describe) Attached Shell & Welded (Where and how)

21. Manufacturer's Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report (list the name of part, item number, Manufacturer's name, and identifying number):
NO

22. Remarks Refer Form U-4
-
-

(07/17)

July 20, 2022

26/7/2022

Form U-1

Manufactured by **PMI-Technology Sdn Bhd Lot 11004, 4 ¾ Miles, Jalan Lahat, 31500 Lahat, Perak Malaysia**

Manufacturer's Serial No. **PMI-PV-8769** CRN **NONE** National Board No. **143**

CERTIFICATE OF SHOP COMPLIANCE

We certify that the statements in this report are correct and that all details of design, material, construction, and workmanship of this vessel conform to the ASME BOILER AND PRESSURE VESSEL CODE, Section VIII, Division 1.

U Certificate of Authorization Number **53,598** Expires **September 20, 2022**

Date July 20, 2022 Name **PMI-Technology Sdn Bhd** (Manufacturer) Signed _____ (Representative)

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors an employed by **ABSG Consulting Inc., An Affiliate of ABS Boiler and Marine Insurance Company** of **Texas, USA**

have inspected the pressure vessel described in this Manufacturer's Data Report on JULY 26, 2022, and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel in accordance with ASME BOILER AND PRESSURE VESSEL CODE, Section VIII, Division 1. By signing this certificate neither the Inspector nor his/her employer makes any warranty, expressed or implied, concerning the pressure vessel described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his/her employer shall be liable in any manner for any personal injury of property damage or a loss of any kind arising from or connected with this inspection.

Date 26-7-2022 Signed _____ (Authorized Inspector) Commissions 13439 AI [National Board Authorized Inspector Commission number]

CERTIFICATE OF FIELD ASSEMBLY COMPLIANCE

We certify that the statements in this report are correct and that the field assembly construction of all parts of this vessel conforms with the requirements of ASME BOILER AND PRESSURE VESSEL CODE, Section VIII, Division 1. U Certificate of Authorization Number _____ Expires _____.

Date _____ Name _____ (Assembler) Signed _____ (Representative)

CERTIFICATE OF FIELD ASSEMBLY INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and employed by

_____

of _____, have compared the statements in this Manufacturer's Data Report with the described pressure vessel and state that parts referred to as data items _____, not included in the certificate of shop inspection, have been Inspected by me and tot he best of my knowledge and belief, the Manufacturer has constructed and assembled this pressure vessel in accordance with the ASME BOILER AND PRESSURE VESSEL CODE, Section VIII, Division 1. The described vessel was inspected and subjected to a pressure test of _____. By signing this certificate neither the Inspector nor his/her employer makes any warranty, expressed or concerning the pressure vessel described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his/her employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date _____ Signed _____ (Authorized Inspector) Commissions _____ [National Board Authorized Inspector Commission number]

FORM U-4 MANUFACTURER'S DATA REPORT SUPPLEMENTARY SHEET
As Required by the Provisions of the ASME Boiler and Pressure Vessel Code Rules, Section VIII, Division 1

1. Manufactured and certified by: PMI-Technology Sdn Bhd Lot 11004, 4 3/4 Miles, Jalan Lahat, 31500 Lahat, Perak Malaysia (Name and address of Manufacturer)

2. Manufactured for: Desmet Ballestra 450 Franklin Gateway SE, Suite 170 Marietta, GA 30067 USA (Name and address of Purchaser)

3. Location of installation: World Energy, Paramount, CA 14700, Downey Avenue, CA – 90723 Paramount, CA USA (Name and address)

4. Type: Vertical (Horizontal, vertical, or sphere) | Pressure Filter Vessel (Tank, separator, heat exch., etc.) | PMI-PV-8769 (Manufacturer's serial number)

NO (CRN) | Remark No. 1 (Drawing number) | 143 (National Board number) | 2022 (Year built)

Data Report Item Number | Remarks

19. Nozzles, inspection and safety valve openings:

Purpose (Inlet, Outlet, Drain etc.)	No.	Diameter or Size	Type	Material		Nozzle Thickness		Reinforcement Material	Attachment Details		Location (Insp. Open.)
				Nozzle	Flange	Nom.	Corr.		Nozzle	Flange	
Inlet (N1)	1	DN150	SORF CL. 150	SA312 TP304	SA182 F304	7.11 MM	0	SA240 304	Fig.UW-16.1(c)	Fig.UW-21(1)	-
Outlet (N2)	1	DN150	SORF CL. 150	SA312 TP304	SA182 F304	7.11 MM	0	Inherent	Fig.UW-16.1(c)	Fig.UW-21(1)	-
Cake Outlet (N3)	1	DN750	WNRF CL. 150	-	SA182 F304	-	0	Inherent	-	See Remark 2	-
Vibrator (N4A/B)	2	DN65	See Remark 3	SA312 TP304	SA182 F304	7.6 MM	0	Inherent	Fig.UW-16.1(c)	See Remark 4	-
Pressure Gauge (N5)	1	DN50	SORF CL. 150	SA312 TP304	SA182 F304	3.9 MM	0	Inherent	Fig.UW-16.1(c)	Fig.UW-21(1)	-
Air / Vent (N6)	1	DN80	SORF CL. 150	SA312 TP304	SA182 F304	5.5 MM	0	Inherent	Fig.UW-16.1(c)	Fig.UW-21(1)	-
Pressure Transmitter (N8)	1	DN15	CL. 3000 NPT	SA182 F304	-	4.78 MM	0	Inherent	Fig.UW-16.1(c)	-	-
H.L. Switch (N9)	1	DN25	CL. 3000 NPT	SA182 F304	-	6.35 MM	0	Inherent	Fig.UW-16.1(c)	-	-
L.L. Switch (N10)	1	DN25	CL. 3000 NPT	SA182 F304	-	6.35 MM	0	Inherent	Fig.UW-16.1(c)	-	-

22. Remarks :-

1. Drawing Number – 14240-PLVD-A REV. 11 – General Arrangement Drawing
   14240-PLVD-B REV. 1 – Details Drawing
   14240-PLVD-C REV. 0 – Prefab Cover Drawing
   14240-PLVD-D REV. 1 – Name Plate Drawing
2. Type 1, Category D (Location : Welded to Bottom Cone)
3. Custom Flange, Size : OD 167mm x 36mm Thk.
4. Loose Slip On – Figure 2-4 (4a)
5. Nozzle N10 (L.L Switch) welded to pipe neck of Nozzle N1
6. Inspection opening – Top Cover
7. Non-Lethal Service
8. Hydrostatic Test in horizontal position
9. Impact Test : No, exempted as per para. UHA-51(d)(1)(a)
10. Cone : SA240 Gr. 304, Thk. 10mm, Size : OD-2000mm x OD-762mm x L-1134mm, Knuckle Radius R-120 at Top Cone, S.F 40

Certificate of Authorization: Type U No. 53,598 Expires September 20, 2022

Date July 20, 2022 Name PMI-Technology Sdn. Bhd. (Manufacturer) Signed (Representative)

Date JULY 26, 2022 Signed (Authorized Inspector) Commissions 13489 AI (National Board Authorized Inspector Commission Number)