ALLOWABLE NOZZLE LOADS ⚠5						
NOZZLE	F_x	F_y	F_z	M_x	M_y	M_z
N1	5.62 kN [1263.43 LBf]			2.59 kNm [1910.29 LBf-ft]		
N2	5.62 kN [1263.43 LBf]			2.59 kNm [1910.29 LBf-ft]		
⚠1 N3	28.08 kN [6312.63 LBf]			51.84 kNm [38235.22 LBf-ft]		
N6	2.81 kN [631.71 LBf]			0.65 kNm [479.42 LBf-ft]		

NOZZLE DATA:

MARK.	SIZE	SCH	RATING	TYPE	FLG. MAT'L	⚠2 ELEVATION	⚠3 PROJECTION	NBR.	SERVICE	REMARKS
N1	6"	40S	ASME B16.5 CL.150	SORF	SA182 F304	3350mm 131.89in	950 mm 37.4 in	1	INLET	–
N2	6"	40S	ASME B16.5 CL.150	SORF	SA182 F304	2300mm 90.55 In	1150 mm 45.28 In	1	OUTLET	–
N3	30"	10S	ASME B16.47 CL.150	WNRF	SA182 F304	3700mm 145.67in	0 mm 0 In	1	CAKE OUTLET	SERIES A
N4A/N4B	2½"	80S	SPECIAL	–	SA240 304	366 mm 14.41 In	1080 mm 42.52 In	2	VIBRATOR	CONNECTION
N5	2"	40S	ASME B16.5 CL.150	SORF	SA182 F304	415 mm 16.34 In	600 mm 23.62 In	1	PRESSURE GAUGE	–
N6	3"	40S	ASME B16.5 CL.150	SORF	SA182 F304	2000mm 78.74 In	1125 mm 44.29 In	1	AIR / VENT	–
N7A/N7B	1/2"	7.5t	NPT-3000# ⚠4	–	–	–	–	2	AIR VIBRATOR	–
N8	1/2"	4.9t	NPT-3000#	–	SA182 F304	380 mm 14.96 In	400 mm 15.75 In	1	PRESSURE TRANSMITTER	⚠6 PLUG OFF
N9	1"	7.5t	NPT-3000#	–	SA182 F304	275 mm 10.83 In	1050 mm 41.35 In	1	H.L. SWITCH	PLUG OFF
N10	1"	7.5t	NPT-3000#	–	SA182 F304	3350mm 131.89in	134 mm 5.28 In	1	L.L. SWITCH	⚠6 PLUG OFF

GENERAL DATA:

DESIGN ACC.	: ASME CODE SECTION VIII DIV.1 2019 EDITION (U-STAMP)		
INSPECTION BY	: ABSG		
DESIGN PRESSURE	: −1.03/6.0 Bar(G)	[−14.5/87.02 Psi(G)]	⚠6
DESIGN TEMPERATURE	: 0/150 ℃	[32/302 ℉]	
TEST PRESSURE	: 8.3 ⚠5 Bar(G)	[120.4 ⚠5 Psi(G) Hydr]	⚠6
M.A.W.P.	: 6.0 Bar(G) at 150 ℃	[87.02 ⚠5 Psi(G) at 302 ℉]	
M.A.E.W.P.	: 1.0 Bar(G) at 302 ℃	[14.5 ⚠5 Psi(G) at 302 ℉]	
M.D.M.T.	: 0 ℃ at −1.0/6.0 Bar(G)	[32 ℉ at −14.5/87.02 Psi(G)]	
FILTER VOLUME	: 10100 Ltr	[2668.14 Gal]	
CORR. ALLOW.	: 0 mm	[0 In]	
INSULATION SURFACE	: – m^2	[– ft^2]	
WEIGHT FULL (WATER)	: 15000 Kg	[33069.34 lb]	
EMPTY	: 2740 Kg (VESSEL)	[6040.66 lb]	
	: 600 Kg (COVER)	[1322.77 lb]	
	: 1560 Kg (FILTERLEAVE)	[3439.21 lb]	
MATERIAL SHELL	: SA240 304	ACC. : ASME	
RADIOGRAPHY	: SPOT	WELD EFF. : 0.85	
MEDIUM	: TALLOW, BLEACHED EDIBLE/VEGETABLE OIL		
HEAT TREATMENT	: NONE		
MISALIGNMENTS	: AS PER UW 33		
OUT OF ROUNDNESS	: MAX. AS PER UG 80		
PWHT	: N/A		
LETHAL SERVICE	: NO		

⚠1 WIND
BASIC WIND SPEED
SOURCE : ASCE7-16, LATEST EDITION (WIND HAZARD MAPS)
BASIC WIND SPEED : 162.5 kph [101 mph]
EXPOSURE FACTOR : C
IMPORTANCE FACTOR : 1

⚠1 SEICMIC CONDITIONS
SEISMEC ZONE FACTOR
SOURCE : ASCE 7-16
SEISMIC DESIGN CATEGORY : D
SEISMIC SITE CLASS : D
IMPORTANCE FACTOR : 1.25
SPECTRAL RESPONSE ACCELERATION AT SHORT PERIOD, Sds : 1.077 g
SPECTRAL RESPONSE ACCELERATION ONE SECOND PERIOD, Sd1 : 0.664 g

SOIL PROFILE
SEISMIC DESIGN CATEGORY : D
SEISMIC SITE CLASS : D

SEISMIC IMPORTANCE FACTOR I : 1.25
SEISMIC IMPORTANCE FACTOR Ip : 1.25

SURFACE TREATMENT :
S.S. PARTS TO BE PICKLED & PASSIVATED

FILTER LEAF DATA:

FILTER AREA	: 125 m^2 [1345.49 ft^2]	CAKE VOLUME	: 3.125 m^3 [110.358 ft^3]		
NBR. FILTER LEAVES	: 24	LEAF PITCH	: 75 mm [2.95 In]		
FILTER SCREEN	: 24 x 110 / 1.4539	WEIGHT FILTER ELEM.	: 1560 Kg [3439.21 lb]		

LEAF NO.	NBR.	TYPE	A
125-1	10	2	1800 [70.87 In]
125-2	2	2	1740 [68.5 In]
125-3	2	2	1660 [65.35 In]
125-4	2	2	1560 [61.41 In]
125-5	2	2	1440 [56.69 In]
125-6	2	2	1290 [50.79 In]
125-7	2	2	1100 [43.31 In]
125-8	2	2	840 [33.07 In]

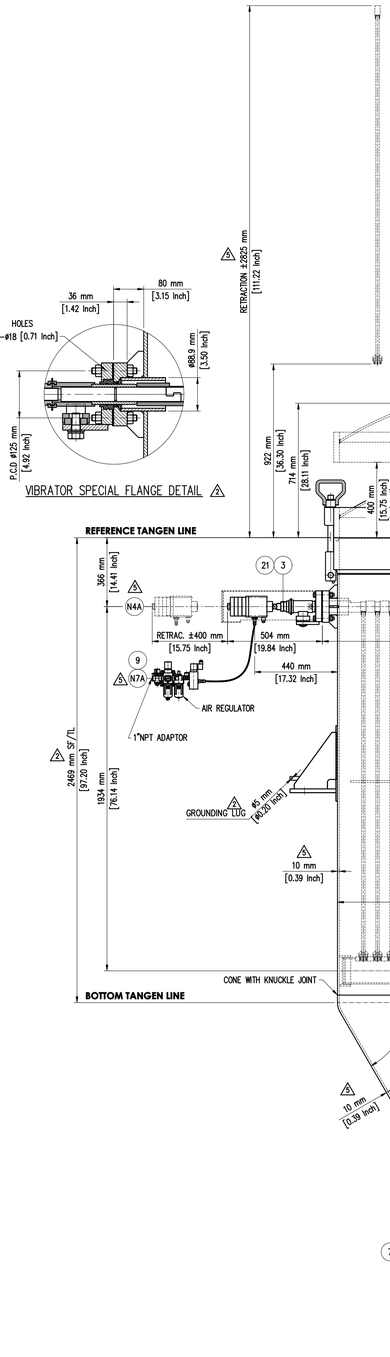
⚠5 NAME PLATE TAGS.	
19-FD-751	19-FD-750
19-FD-851	19-FD-850
19-FD-753	19-FD-752
19-FD-853	19-FD-852
19-FD-755	19-FD-754
19-FD-855	19-FD-854
19-FD-757	19-FD-756
19-FD-857	19-FD-856
19-FD-759	19-FD-758

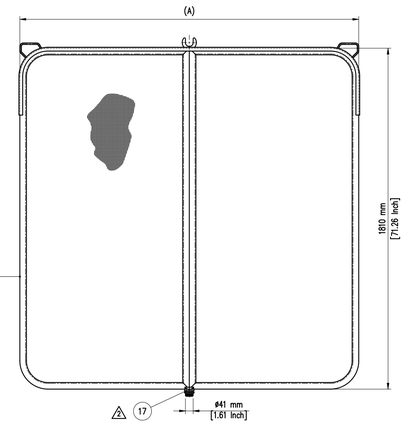
LIST OF MATERIAL (LOM) ⚠7	
PLATE	SA240 304
PIPE	SA312 TP304
NOZZLE FLANGE	SA182 F304

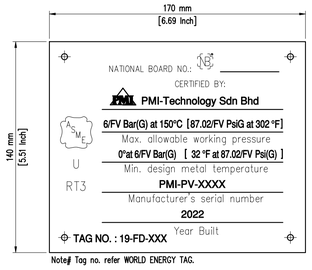
@ SUPPLY BY OTHERS
✳ STANDARD STARTUP AND COMMISSIONING SPARE PARTS

	21	4	STUD BOLT, c/w 2x HEAVY NUTS	SA193 B8	5/8"−11 UNC x 90L	–
	20	8	STUD BOLT, c/w 2x HEAVY NUTS − GALV	SA193 B7	5/8"−11 UNC x 120L	
✳	19	2	EMERGENCY SPACER 60x39x28	1.4404	VC00110	–
✳	18	2	EMERGENCY PLUG ⌀41.0mm	1.4404	VC00802	–
✳	17	50	O-RING 70°Sh ⌀34.52x3.53	VITON	–	–
✳	16	2	SPARE PARTS VIBRATOR	VITON	VC00303	–
✳	15	2	GASKET 6" 222x168x2t (MANIFOLD)	VITON	ASME B16.21−150#	–
✳	14	1	DOOR GASKET 2000 I.G.=6250	SILICONE	VC00533	–
✳	13	1	GASKET 2" 105x60x2t (P.GAUGE)	VITON	ASME B16.21−150#	–
	12	1	MEMBR. MANOMETER ASME 2"	S.S.	−14.5 ~ 145 Psi	–
	11	1	MANIFOLD 2000-NW150/24	S.S.	14240-PLVD-M	–
	10	1	COUNTER FLANGE NW750 WN/RF	S.S.	14240-PLVD-B	–
	9	2	AIR SUPPLY UNIT 3/8" − 24V/DC	–	VC00624	–
	8	1	SOLENOID VALVE 24VDC + LIMITSW.	–	–	–
@	7	1	30" BUTTERFLY VALVE	S.S.	–	–
	5	1	PREFAB. COVER 2000 ⚠7	Ref. LOM	14240-PLVD-C	–
@	4	28	STUD BOLT, c/w 2x HEAVY NUTS − GALV	SA193 B7	1 1/4"−7UNC x 420Lg.	
	3	2	VIBRATOR T.1−4 HF−N LP.75 − 2000	S.S./VITON	14240-PLVD-V	–
	2	1	LEAVES PLVD 2000/125	S.S.	14240-PLVD-X	–
	1	1	TANK PLVD 2000/1800 ⚠7	Ref. LOM	14240-PLVD-B	–
	PART NO.	QTY.	DESCRIPTION	MATERIAL	REMARKS	WEIGHT(KG)

APPROVAL STAMP:

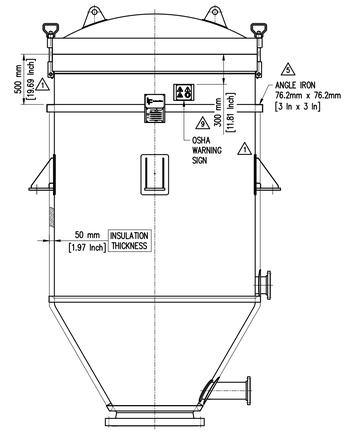






Note# Tag no. refer WORLD ENERGY TAG.

NAME PLATE DETAIL ⚠5



INSULATION RINGS

PROJECT - WORPAR
ITEM NBR - 616A1.1 to 616A8.2
TYPE - ASSY
eB NBR - 100171013.011
DATE - 17.05.2022

⚠11	11	11/05/22	ADD PLUG FOR NOZZLE N8	ADY	JASON−11/05/22	JASON−11/05/22
⚠10	10	28/03/22	ADD PLUG FOR NOZZLE N10	ADY	JASON−28/03/22	JASON−28/03/22
⚠9	9	17/01/22	REVISE TEST PRESSURE	ADY	JASON−17/01/22	JASON−17/01/22
⚠8	8	07/12/21	REVISE AS SHOWN	ADY	JASON−07/12/21	JASON−07/12/21
⚠7	7	03/11/21	REVISE AS SHOWN	ADY	JASON−03/11/21	JASON−03/11/21
⚠6	6	18/10/21	REVISE AS SHOWN	ADY	JASON−18/10/21	JASON−18/10/21
⚠5	5	25/08/21	REVISE AS SHOWN	ADY	JASON−25/08/21	JASON−25/08/21
⚠4	4	03/08/21	REVISE AS SHOWN	ADY	JASON−03/08/21	JASON−03/08/21
⚠3	3	23/07/21	REVISE AS SHOWN	ADY	JASON−23/07/21	JASON−23/07/21
⚠2	2	01/07/21	REVISE AS SHOWN	ADY	JASON−01/07/21	JASON−01/07/21
⚠1	1	31/05/21	REVISE AS SHOWN	ADY	JASON−01/06/21	JASON−01/06/21
	REV.	DATE	DESCRIPTION	DRAWN BY	CHECKED BY	APPROVED BY

PROJECT NAME: WORPAR

WORLD ENERGY TAGS.
19-FD-751 / 19-FD-851 / 19-FD-753 / 19-FD-853 / 19-FD-755 / 19-FD-855 / 19-FD-757 / 19-FD-857 / 19-FD-759
19-FD-750 / 19-FD-850 / 19-FD-752 / 19-FD-852 / 19-FD-754 / 19-FD-854 / 19-FD-756 / 19-FD-856 / 19-FD-758

Approved - No comments
Approved with comments (Proceed with Manufacturing and Issue Final Drawing)
Approved - With Comments (Revise and Resubmit)
Not Approved. Correct and resubmit

CGuevara 05/13/2022
BY DATE

desmet ballestra

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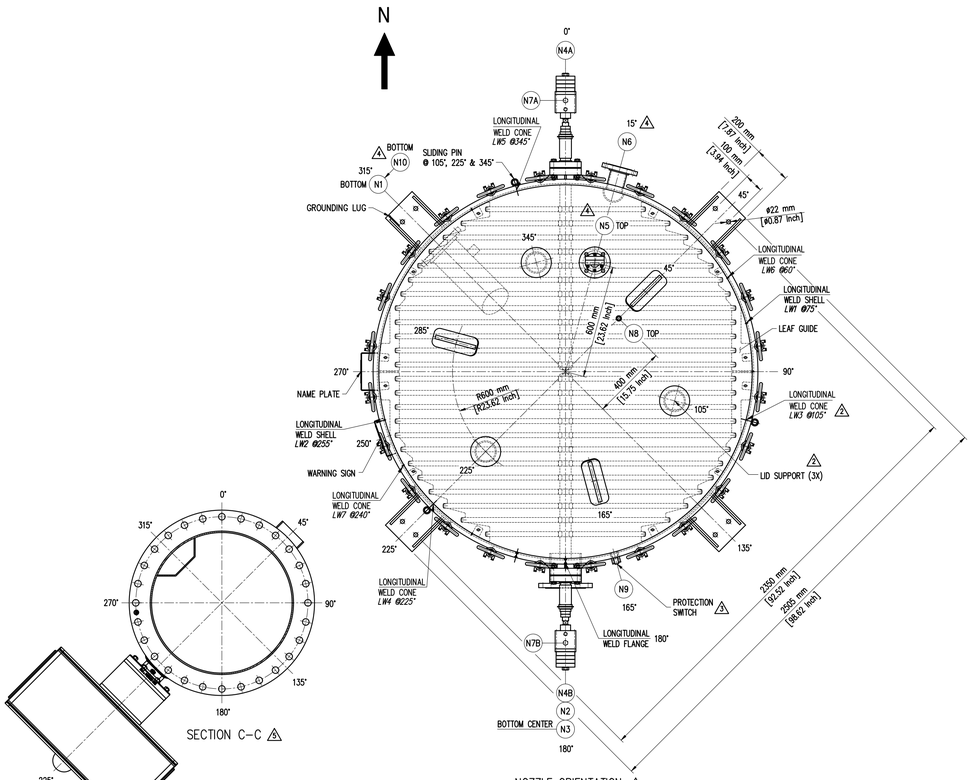
	DRAWN BY	CHECKED BY	APPROVED BY
NAME	ADY	JASON	JASON
DATE	05/05/2021	05/05/2021	05/05/2021

SIZE A1 SCALE: 1:16

TITLE/DESCRIPTION: BLEACHING FILTER ⚠7
SUBJECT: PRESSURE LEAF VERTICAL TYPE PLV(D) FILTER 2000/125 (PAGE 1 OF 2)

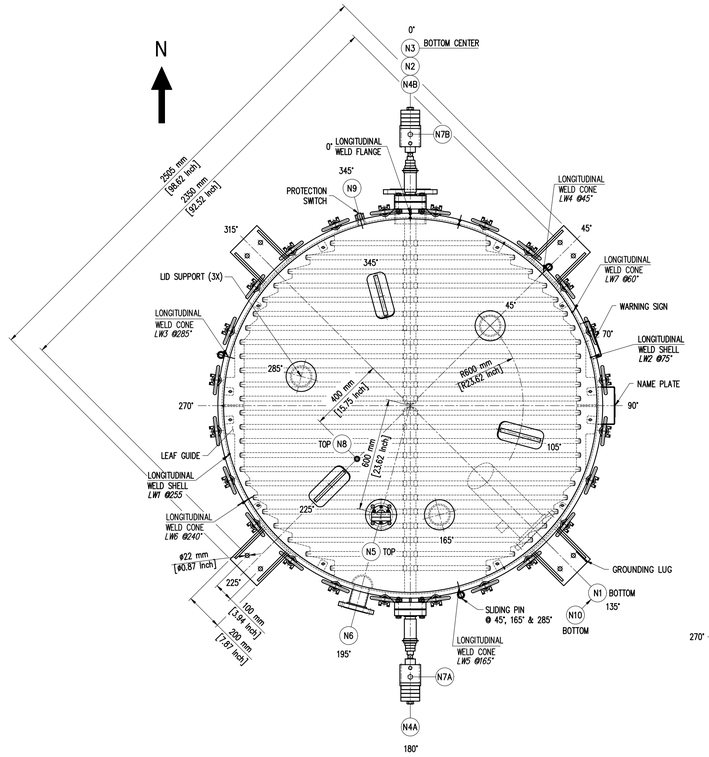
W/O NO.: 14240
O/C NO.: 2021/123
PROJECT NAME: DESMET (WORPAR)
DRAWING NO.: 14240-PLVD-A REV. 11

PMI-TECHNOLOGY SDN. BHD. (568082-K)



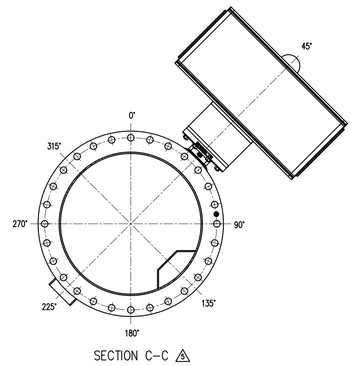
NOZZLE ORIENTATION

DESMET TAG.	WORLD ENERGY TAG.
616A1.1	19-FD-750
616A1.2	19-FD-850
616A3.1	19-FD-752
616A3.2	19-FD-852
616A5.1	19-FD-754
616A5.2	19-FD-854
616A7.1	19-FD-756
616A7.2	19-FD-856
616A9.1	19-FD-758



NOZZLE ORIENTATION

DESMET TAG.	WORLD ENERGY TAG.
616A2.1	19-FD-751
616A2.2	19-FD-851
616A4.1	19-FD-753
616A4.2	19-FD-853
616A6.1	19-FD-755
616A6.2	19-FD-855
616A8.1	19-FD-757
616A8.2	19-FD-857
616A10.1	19-FD-759



SECTION C-C

REV.	DATE	DESCRIPTION	DRAWN BY	CHECKED BY	APPROVED BY
11	11/05/22	ADD PLUG FOR NOZZLE N8	ADY	JASON-11/05/22	JASON-11/05/22
10	28/03/22	ADD PLUG FOR NOZZLE N10	ADY	JASON-28/03/22	JASON-28/03/22
9	17/01/22	REVISE TEST PRESSURE	ADY	JASON-17/01/22	JASON-17/01/22
8	07/12/21	REVISE AS SHOWN	ADY	JASON-07/12/21	JASON-07/12/21
7	03/11/21	REVISE AS SHOWN	ADY	JASON-03/11/21	JASON-03/11/21
6	18/10/21	REVISE AS SHOWN	ADY	JASON-18/10/21	JASON-18/10/21
5	25/08/21	ADD NOZZLE LOAD TABLE	ADY	JASON-25/08/21	JASON-25/08/21
4	03/08/21	REVISE AS SHOWN	ADY	JASON-03/08/21	JASON-03/08/21
3	23/07/21	REVISE AS SHOWN	ADY	JASON-23/07/21	JASON-23/07/21
2	01/07/21	REVISE AS SHOWN	ADY	JASON-01/07/21	JASON-01/07/21
1	31/05/21	REVISE AS SHOWN	ADY	JASON-01/06/21	JASON-01/06/21

PROJECT NAME: WORPAR

WORLD ENERGY TAGS.
19-FD-751 / 19-FD-851 / 19-FD-753 / 19-FD-853 / 19-FD-755 / 19-FD-855 / 19-FD-757 / 19-FD-857 / 19-FD-759
19-FD-750 / 19-FD-850 / 19-FD-752 / 19-FD-852 / 19-FD-754 / 19-FD-854 / 19-FD-756 / 19-FD-856 / 19-FD-758

PART NO.	QTY.	DESCRIPTION	MATERIAL	REMARKS	WEIGHT(KG)

APPROVAL STAMP:

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	DRAWN BY	CHECKED BY	APPROVED BY
NAME	ADY	JASON	JASON
DATE	05/05/2021	05/05/2021	05/05/2021

SIZE: A1
SCALE: 1:16

TITLE/DESCRIPTION: BLEACHING FILTER
W/O NO.: 14240
SUBJECT: PRESSURE LEAF VERTICAL TYPE PLV(D) FILTER 2000/125 (PAGE 2 OF 2)
O/C NO.: 2021/123

PMI-TECHNOLOGY SDN. BHD. (568082-K)
PROJECT NAME: DESMET (WORPAR)
DRAWING NO.: 14240-PLVD-A
REV. 11