
	CONCEPTUAL, BASIC and DETAIL DESIGN ENGINEERING OF STYRENE PARK OFFSITE	
	Document Title: General Arrangement Drawing-Cartridge Filter for Filter Package	Document No.: EI0127-ENR-VD-ME-DWG-006

STYRENE PARK OFFSITE

Commented:

Please , to be implemented and followed technical recommendations As below Engineering Documents :

- PFD For STYREN (EI027-000-ED-PR-PFD-501-R3)
- P&ID For STYREN (EI027-000-ED-PR-PID-522-R4)
- Process Data Sheet For Filter Package (EI027-000-ED-PR-DSH-503 , Rev.02)

Document Title

General Arrangement Drawing-Cartridge Filter

FOR

Filter Package

R0	2024/05/03	Issued For Approval	M.Teymouri	E.Malek	H.Keshmiri
Rev.	Issued Date	DESCRIPTION	PREPARED	CHECKED	APPROVED



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ENGINEERING OF STYRENE PARK OFFSITE

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Filter for Filter Package

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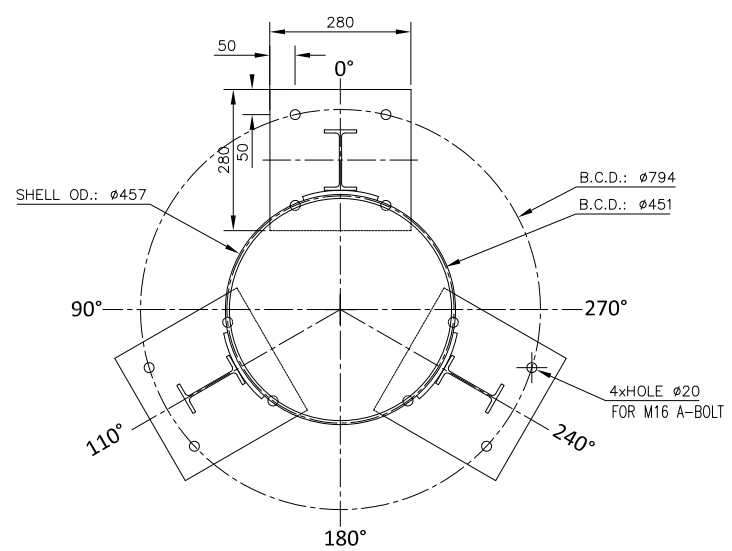
Rev. R0

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REVISION RECORD SHEET

Page	Revisions							Page	Revisions						
	R0	R1	R2	R3	R4	R5	R6		R0	R1	R2	R3	R4	R5	R6
1	x							41							
2	x							42							
3	x							43							
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DESIGN DATA			
APPLICABLE CODE	ASME, Sec.VIII, Div1 ,Ver.2017	DESIGN PRESSURE	-0.1~0.2 Bar(g)
WIND CODE	UBC	OPERATING PRESSURE	Max.0.04 Bar(g)
WIND DESIGN DATA	SPEED:125 Km/hr EXPOSURE: C IMP. FACTOR: 1.15	VOLUME (Uncor./cor.)	0.240/0.247 m3
		HYDROSTATIC TYPE	UG-99(b) Bar(g)
SEISMIC CODE	ASCE/SEI 7-16	HYDRO. TEST PRESSURE/POSITION	12.8/VERTICAL Bar(g)
SEISMIC DESIGN DATA	SITE CLASS: C SEISMIC ZONE=1 I=1.25,R:2.0 Fa:1.05/Fv:1.1 Ss:1.31/S1:0.46 z/h:0.0/ap:0.0	M.A.W.P	9.1 Bar(g)
		J.E (Shell/Head)	1.0/0.85
		R.T (Shell/Head)	FULL/SPOT
		CORROSION ALLOWANCE	3.0 mm
SERVICE	VOC ABATEMENT FROM STYRENE STORAGE TANK EFFLUENT	P.W.H.T	NO
LOCATION	OUTDOOR	INSULATION/FIRE PROOF	NO / NO
FLUID	Air	IMPACT TEST	NO
DENSITY (Min./Max.)	1.107/1.295	PAINTING	Acco. To Painting Spec.
DESIGN TEMP.	85 °C	M.D.M.T(REQU./ Cal)	-5/-46 °C
OPERATING TEMP.(Min./Max)	5/52 °C		



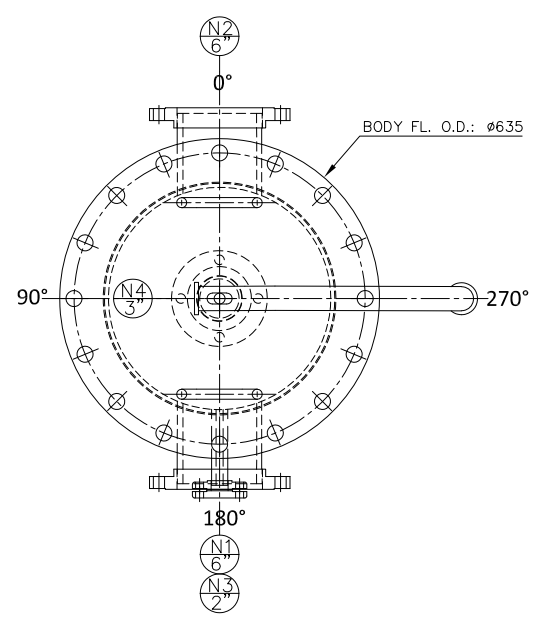
ANCHORAGE ARRANGMENT
SCALE 1:15

MATERIAL LIST

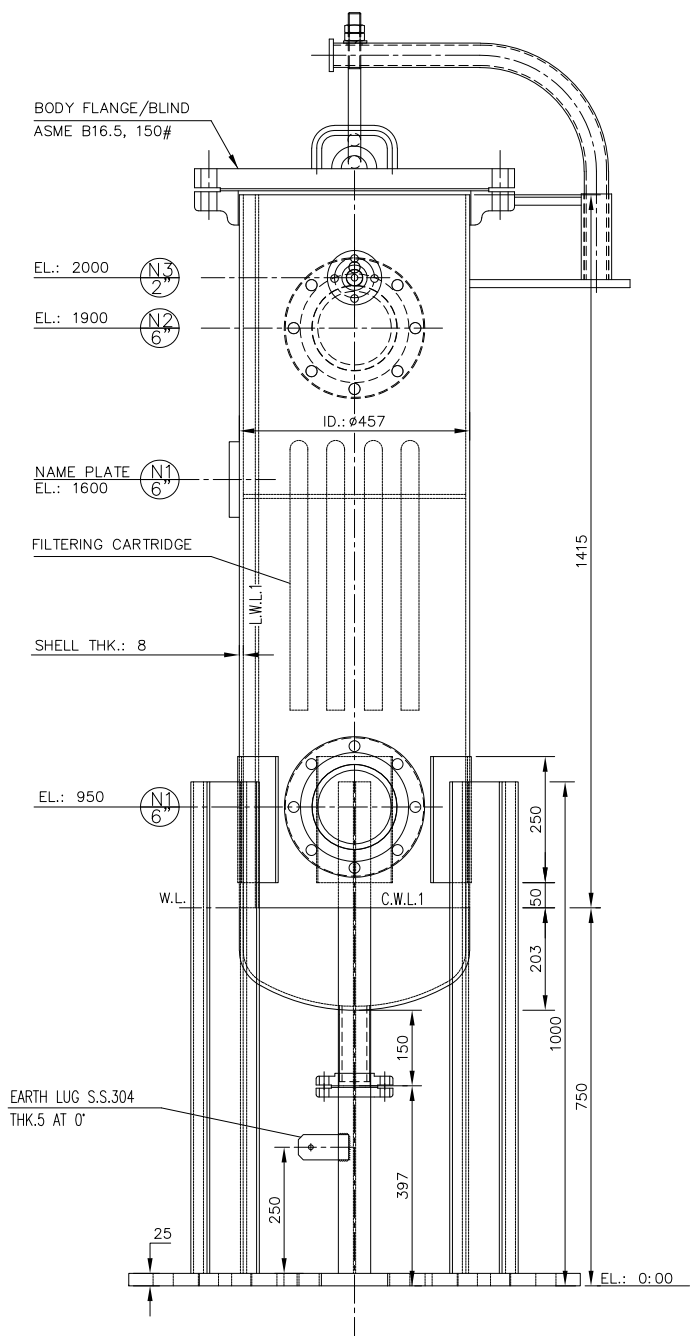
ITEM	DESCRIPTION	MATERIAL	QUANTITY
SHELL/HEAD	SA-516 70/A234 WPB	ANCHOR BOLT	SA-36
FORGED FLANGE	SA-105	LIFTING LUG/EARTH LUG	-/S.S
PIPE	SA-106 B	NAME PLATE	SS 304
FITTING	A234 WPB	INTERNAL WELDED ATTACHMENT	C.S.
		CORROSION ALLOWANCE	3.0
GASKET	S.W. Type, Graphite filled with inner/outer S.S. rings.	P.W.H.T	NO
REINFORCING PAD	SA-516 70	INSULATION/FIRE PROOF	NO/NO
BODY FLANGE	SA-105	IMPACT TEST	NO
STUD BOLT/NUT	SA-193 B7/SA-194 2H	PAINTING	Acco. To Painting Spec.

NOZZLES DATA TABLE

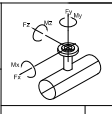
ITEM	QTY.	TITLE	SIZE	FLANGE			SCH/THK	REINFORCING PAD	PROJ./EL.	ORIENTATION
				RATING	TYP.	FACE				
N1	1	Gas Inlet	6"	#150	S.O.	R.F	STD/-	-/-	150/950	180° (SHL)
N2	1	Gas Outlet	6"	#150	S.O.	R.F	STD/-	-/-	150/1900	0° (SHL)
N3	1	Vent	1"	#150	S.O.	R.F	160/-	-/-	150/6250	180° (SHL)
N4	1	Drain	2"	#150	S.O.	R.F	80/-	-/-	150/AS DWG	0° (BHD)



GENERAL TOP VIEW
SCALE 1:15



GENERAL FRONT VIEW
SCALE 1:15



ALLOWABLE NOZZLE LOADS

NAME	SIZE	(Kgf)			(Kg-m)		
		Fx	Fy	Fz	Mx	My	Mz
N4	2"	64.8	-51.8	64.8	11.0	17.5	13.9
N1/N2	6"	180.7	-144.4	180.7	84.4	136.2	106.9

WEIGHTS (Kgf)

FABRICATED	4900.8
EMPTY	13122.0
OPERATING	14392.2
FIELD TEST	26170.9
UN-FACTORED FOUNDATION LOADS ON TOP OF ALL LEGS	
WIND SHEAR LOAD (Kgf)	1847.0
SEISMIC SHEAR LOAD (Kgf)	7867.0
WIND MOMENT LOAD (Kg-m)	4627.0
SEISMIC MOMENT LOAD (Kg-m)	26065.0

REFERENCE DRAWING	DWG NO.	REV.
P&ID for Cartridge Filter	EI0127-ENR-VD-PR-PID-003	RO
Equipment Data Sheet-Cartridge Filter	EI0127-ENR-VD-ME-DSH-002	RO
Strength Calculation-Cartridge Filter	EI0127-ENR-VD-ME-CAL-004	RO
GAD For Package	EI0127-ENR-VD-PI-DWG-001	RO

LEGENDS :

EL.:	ELEVATION	UNCR.:	UN CORRODED
ID.:	INTERNAL DIAMETER	CR.:	CORRODED
OD.:	OUTSIDE DIAMETER	M.A.W.P.:	MAX. ALLOWABLE WORKING PRES.
FL.:	FLANGE	J.E.:	JOINT EFFICIENCY
W.L.:	WELD LINE	R.T.:	RADIOGRAPHY TEST
C.W.L.:	CIRCUMFERENTIAL WELD LINE	P.W.H.T.:	POST WELD HEAT TREATMENT
L.W.L.:	LONGITUDINAL WELD LINE	M.D.M.T.:	MIN. DESIGN METAL TEMP.
B.C.D.:	BOLT CENTER DIAMETER	A-BOLT	ANCHOR BOLT

NOTES :

- ALL DIMENSIONS ARE IN MILLIMETER UNLESS OTHERWISE SPECIFIED.
- ALL THICKNESS SHOWN ON THIS DOCUMENT SHALL BE CONSIDERED AS A MINIMUM REQUIRED THICKNESS AFTER FORMING.
- FLANGE BOLT HOLES SHALL BE STRADDLE TO EQUIPMENT MAIN AXIS.
- FLANGE SURFACE FINISH ACCORDING TO ASME B16.5
- HYDROSTATIC TEST PRESSURE SHALL BE ACCORDING TO UG-99(b)
- ONE EARTH LUGS HAS BEEN CONSIDERED ON LEG.
- BOTTOM OF BASING PLATES HAS ELEVATION OF EL. 0.00 mm
- ALL PROJECTIONS OF THE NOZZLES ON THE SHELL ARE MEASURED FROM THE FLANGE FACE TO THE VESSEL OD.
- ALL PROJECTIONS OF THE NOZZLES ON THE HEAD ARE MEASURED FROM THE FLANGE FACE TO THE LOWER HEAD T.L. (i.e. B.L.).
- THE BODY FLANG INCLUDES BLIND FLANGE WITH DAWT, GASKET, STUD BOLTS, AND NUTS.
- ALL REMOVABLE INTERNALS (IF ANY) WILL BE DESIGNED TO PASS THROUGH THE MANHOLE.
- SPIRAL WOUND GASKETS ARE MADE FROM S.S. 316 FOR INNER RING, GRAPHITE FIBER FOR WINDING, AND C.S. FOR OUTER RING.
- ANY MATERIAL DIRECTLY WELDED TO THE BODY SHALL BE THE SAME AS THE BODY MATERIAL.
- THE REPORTED M.A.W.P. BELONGS TO THE VESSEL'S BODY.
- ALLOWABLE NOZZLE LOADS ARE APPLIED TO THE JUNCTION OF THE NOZZLE NECK WITH THE VESSEL.

KEY PLAN :

REV.	ISSUE DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED	COMPANY
RO	06-Mar-24	Issued for Approval	M.T.	E.M.	H.K.	HRCO

CLIENT: 

CONSULTING ENGINEER: 

PROJECT: STYRENE PARK OFFSITE			
DRAWING TITLE: General Arrangement Drawing-Cartridge Filter			
DRAWING NO.	REV.	SCALE	SHEET
EI0127-ENR-VD-ME-DWG-006	RO	A3	3 of 3