STYRENE PARK OFFSITE

General Comments:
All process data shall be in accordance with **PFD** and **P&ID** with the below numbers:

- PFD For STYREN (EI027-000-ED-PR-PFD-501,Rev.03)
- P&ID For STYREN (EI027-000-ED-PR-PID-522,Rev.04)

For further data, the **Process Data Sheet For Filter Package** (EI027-000-ED-PR-DSH-503 , Rev.02) shall be used.

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**

REVISION RECORD SHEET

Page	Revisions								Page	Revisions						
	R0	R1	R2	R3	R4	R5	R6			R0	R1	R2	R3	R4	R5	R6
1	×								41							
2	×								42							
3	×								43							
4									44							
5									45							
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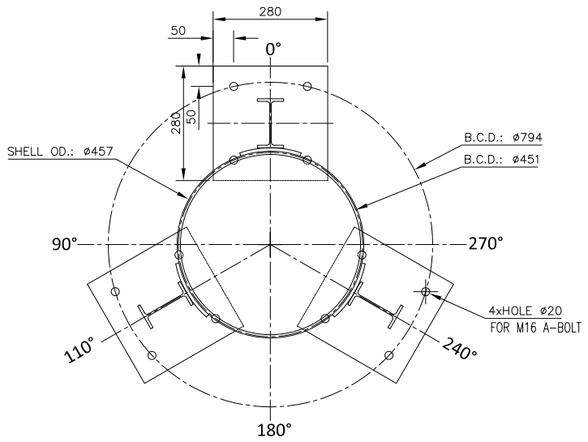
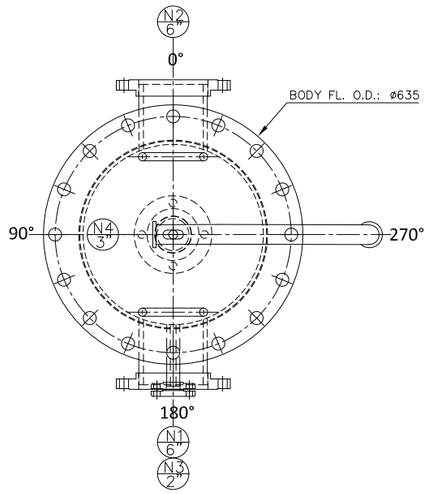
39									79							
40									80							

DESIGN DATA

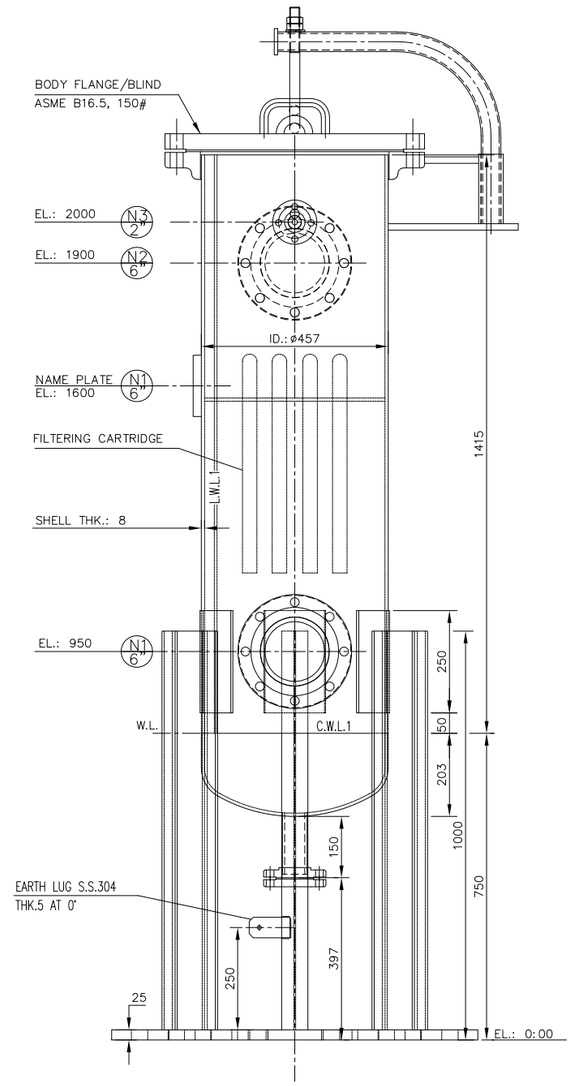
APPLICABLE CODE	ASME, Sec.VIII, Div1 ,Ver.2017	DESIGN PRESSURE	−0.1~0.2	Bar(g)
WIND CODE	UBC	OPERATING PRESSURE	Max.0.04	Bar(g)
WIND DESIGN DATA	SPEED:125 Km/hr EXPOSURE: C IMP. FACTOR: 1.15	VOLUME (Uncor./cor.)	0.240/0.247	m3
		HYDROSTATIC TYPE	UG−99(b)	Bar(g)
SEISMIC CODE	ASCE/SEI 7−16	HYDRO. TEST 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



GENERAL TOP VIEW
SCALE 1:15



GENERAL FRONT VIEW
SCALE 1:15

MATERIAL LIST

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 RATING	FLANGE TYP.	FLANGE FACE	SCH/THK −/mm	REINFORCING PAD (OD/THK.)	PROJ./EL.	ORIENTATION
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)

ALLOWABLE NOZZLE LOADS

NAME	SIZE	(Kgf) Fx	Fy	Fz	(Kg−m) 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	SIESMIC SHEAR LOAD (Kgf)	7867.0
WIND MOMENT LOAD (Kg−m)	4627.0	SIESMIC MOMENT LOAD (Kg−m)	26065.0

REFERENCE DRAWING	DWG NO.	REV.
P&ID for Cartridge Filter	EI0127-ENR-VD-PR-PID-003	R0
Equipment Data Sheet-Cartridge Filter	EI0127-ENR-VD-ME-DSH-002	R0
Strength Calculation-Cartridge Filter	EI0127-ENR-VD-ME-CAL-004	R0
GAD For Package	EI0127-ENR-VD-PI-DWG-001	R0

LEGENDS :

EL.:	ELEVATION	UNCRR.:	UN CORRODED
ID.:	INTERNAL DIAMETER	CRR.:	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 :

1− ALL DIMENSIONS ARE IN MILLIMETER UNLESS OTHERWISE SPECIFIED.
2− ALL THICKNESS SHOWN ON THIS DOCUMENT SHALL BE CONSIDERED AS A MINIMUM REQUIRED THICKNESS AFTER FORMING.
3− FLANGE BOLT HOLES SHALL BE STRADDLE TO EQUIPMENT MAIN AXIS.
4− FLANGE SURFACE FINISH ACCORDING TO ASME B16.5
5− HYDROSTATIC TEST PRESSURE SHALL BE ACCORDING TO UG−99(b)
6− ONE EARTH LUGS HAS BEEN CONSIDERED ON LEG.
7− BOTTOM OF BASERING PLATES HAS ELEVATION OF EL. 0.00 mm
8− ALL PROJECTIONS OF THE NOZZLES ON THE SHELL ARE MEASURED FROM THE FLANGE FACE TO THE VESSEL OD.
9− ALL PROJECTIONS OF THE NOZZLES ON THE HEAD ARE MEASURED FROM THE FLANGE FACE TO THE LOWER HEAD T.L. (i.e. B.L.).
10− THE BODY FLANG INCLUDES BLIND FLANGE WITH DAVIT, GASKET, STUD BOLTS, AND NUTS.
11− ALL REMOVABLE INTERNALS (IF ANY) WILL BE DESIGNED TO PASS THROUGH THE MANHOLE.
12− SPIRAL WOUND GASKETS ARE MADE FROM S.S. 316 FOR INNER RING, GRAPHITE FIBER FOR WINDING, AND C.S. FOR OUTER RING.
11− ANY MATERIAL DIRECTLY WELDED TO THE BODY SHALL BE THE SAME AS THE BODY MATERIAL.
12− THE REPORTED M.A.W.P. BELONGS TO THE VESSEL'S BODY.
13− 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
R0	06−Mar−24	Issued for Approval	M.T.	E.M.	H.K.	HRCO

CLIENT: پتروشیمی توسعه پارک صنعتی گوهر افق

CONSULTING ENGINEER: HAMCON RAH

PROJECT: *STYRENE PARK OFFSITE*

DRAWING TITLE: *General Arrangement Drawing-Cartridge Filter*

DRAWING NO.	REV.	SIZE	SCALE	SHEET
EI0127−ENR−VD−ME−DWG−006	R0	A3	AS DWG	3 of 3