



 **BINA EPC Contractor Co.**
(Executor of Oil, Gas, Petrochemical & Power Industries)

Toase-ehe Park Sanati Gohar Ofogh Petrochemical Co.

**CONCEPTUAL, BASIC and DETAIL DESIGN
ENGINEERING OF STYRENE PARK OFFSITE**

ENBR
TEKNOLOJI



Document Title: Equipment Data Sheet-Cartridge Filter

Document No. : EI0127-HRC-VD-ME-DSH-002-R0

Rev.: R0

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STYRENE PARK OFFSITE

Document Title:

Equipment Data Sheet-Cartridge Filter

Rev.	Issued Date	DESCRIPTION	PREPARED	CHECKED	APPROVED
R0	19/02/2024	Issued for Comment	M.Tavakoli	E.Malek	H.Keshmiri



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	R0	R1	R2	R3	R4	R5	R6
1	X						
2	X						
3	X						
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General

1	Items	QTY	Cartridge Filters	2
2	Tags		PK0001-F2 , PK0002-F2	
3	Service		VOC abatement from styrene storage tank effluent	

Process Data

Item	Description	Unit	Value	Rev.
4	Max. Ambient Design Temperature.	°C	85	
5	Expected Extreme Temperature	°C	52	
6	Min. Ambient Temperature	°C	5	
7	Max. Relative Humidity	%	80	
8	Min. Relative Humidity	%	65	

Process Data

Item	Description	Unit	Value	Rev.
9	Type of Fluid		Air	
10	Flow Rate (Nor/Max)	Nm3/hr	1080 / 1188 (Note1)	
11	Working Temperature (Min/Max)	°C	5 / 52	
12	Working Pressure	barg	max 0.04	
13	Design Temperature	°C	85	
14	Design Pressure	barg	-0.1 ~ 0.2	
15	Viscosity (Min./Max)	cP	0.018 / 0.020	
16	Density (Min./Max)	Kg/m3	1.107 / 1.295	
17	Particle Size	Micron	5μ and more	
18	Efficiency	%	95.0	
19	Dirty / Clean pressure drop	bar	0.04 / 0.02	
19	Insulation		No	

Mechanical Data

Item	Description	Unit	Value	Rev.
20	Shell Inside diameter	mm	444.5	
21	Shell Length (T.L. / W.L.)	mm	1500	
22	Thickness (SHELL / HEAD)	mm	6.35 / 6.35	
23	Corrosion allowance	mm	3.0	
24	Radiography (SHELL / HEAD)	%	85 / 85	
25	MDMT (Required)	°C	-5	
26	Hydrostatic Test Pressure	barg	Hold	
27	PWHT	-	No	
28	Impact test	-	No	
31	Number of filtering cartridge	No.	Hold	
32	Type of filtering cartridge	Inch	Hold	
33	Painting		Acco. To Painting Spec.	
34	Empty Weight	Kg	~ 470	
35	Operating Weight	Kg	~ 470	



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Material

Item	Description	Value	Rev.
1	Shell	SA 106 Gr.B	
2	Cap / Fittings	SA 234 GR.WPB	
3	Reinforcing Pad	SA 516 Gr.70	
4	Leg	SA 36	
5	Nozzle Neck	SA 106 Gr. B	
6	Forgings (including Flanges, etc)	SA 105	
7	Gasket	Spiral Wound (S.S.304 / Graphite)	
8	Cartridge	Polyester / Equ.	
9	Stud Bolt & Nut (External)	SA 193 Gr.B7 & SA 194 Gr.2H	
10	Stud Bolt & Nut (Internal)	SA 193 Gr.B8 & SA 194 Gr.8	

Nozzels

Item	Description	QTY	Size	Type	Rating	Face	SCH	Rev.
11	Vent	1	1"	S.O.	150	R.F.	Hold	
12	Drain	1	2"	S.O.	150	R.F.	Hold	
13	Gas inlet	1	6"	S.O.	150	R.F.	Hold	
14	Gas outlet	1	6"	S.O.	150	R.F.	Hold	
15	Opening for cartridge removing	1	18"	S.O.	150	R.F.	Hold	

Accessories

Item	Description	Rev.
16	<input checked="" type="checkbox"/> Nameplate	
17	<input checked="" type="checkbox"/> Lifting Lug	
18	<input checked="" type="checkbox"/> Earth Lug	
19	<input type="checkbox"/> Ladder and Platform	
20	<input checked="" type="checkbox"/> Internals (Cartridges and Supports)	
21	<input checked="" type="checkbox"/> Davite	

Notes

1- Feed stream is intermittent at loading time of upstream styrene storage tank.