Zishan Engineers (Pvt.) Ltd.
An ISO 9001-2015 certified company,
47/F, Block 6, PECHS, Karachi-Pakistan
Tel: (92-21) 34393045-48 & 34310151-54
Fax: (92-21) 34533430 & 34310156
E-mail : contact@zishanengineers.com,
Web : www.zishanengineers.com

Document No.	165-8-DSM-001
Revision	A
Date	12-01-2018
Total Pages (inc front cover)	2

OIL & GAS DEVELOPMENT COMPANY LTD.

MATERIAL SELECTION OF REGEN GAS SCRUBBER AND IN / OUT LINES FOR QADIRPUR GAS FIELD, GHOTKI, SINDH, PAKISTAN

DATASHEET FOR MIST ELIMINATOR (DEMISTER)

ISSUED FOR REVIEW

Rev.	Date	Description	Prepared By	Checked By	Approved By
A	12-01-2018	Issued for Review	MA/ RA	RA	MM

Consultant	Data Sheet			
ZISHAN ENGINEERS (PVT.) LTD.	Mist Eliminator (Demister)			
	Document No.		Revision	DATE
Client	165-8-DSM-001		A	12-01-2018
OIL & GAS DEVELOPMENT COMPANY LTD.	Prepared By	Checked By	Approved By	SHEET
	MA/ RA	RA	MM	2 OF 2

1	**Existing Details**	
2	Size / Dia (mm) :	694 mm (Cladded Shell ID of the Vessel)
3	Thk (mm) :	150 mm (Mist Pad)
4	Segments (nos) :	VTS
5	Equivalent Style (if any) :	VTS
6	Bulk Density (kg/m3) :	VTS
7	Wire Dia. (mm) :	VTS
8	Grids (top & bottom) Type :	VTS (See note-1)
9	Type of Bolting arrangement (if any) :	VTS (See note-1)
10	**Process Description**	
11	Process Details :	HC Gas comes in the regeneration gas scrubber and then routed toward Compressor, this gas contains 300 ppm H2S and approx 6 to 7 Mol% CO2. The required demister is to be installed in the scrubber.
12	Type of application :	Regeneration gas scrubber/ Compressor Suction KOD
14	Operating pressure (Psig.) :	400- 750
15	Operating temperature (deg.F) :	136
16	Max Gas / Vapor flow rate (MMSCFD/ kg/hr) :	15.5/ 15,320
17	Min Gas / Vapor flow rate (MMSCFD/ kg/hr) :	4.65/ 4,596
18	Molecular weight of Gas / Vapor :	19.85
19	Gas density (kg/m3) :	41.89
20	Gas viscosity (C.P.) :	0.014
21	Droplet size (microns) at outlet of :	less than 10 microns
22	Liquid density (kg/m^3) :	632
23	Liquid viscosity (C.P.) :	0.18
24	Dissolved solid contents :	
25	Suspended solid contents :	Nil
26	**Desired Performance**	
27	Allowable Pressure Drop across Demister Pad (mmWC) :	200
28	Desired Separation Efficiency :	99.99 % droplet removal efficiency for droplets sizes of 10 microns and larger
29	**Vessel Details**	
30	Vessel or Duct containing Demister existing / to be planned, horizontal / vertical, please state: Diameter / Size of Demister location - height available below & above the Demister	Please see attached DWGs.
31	Installation : Through full Demister open end / through the manhole, please state: the location & size of manhole	Mist Pad will be installed by removing vessel top flange, also see attached DWGs.
32	**Material Details**	
33	Material of construction for mesh pad :	Mesh Wire material should be SS 316
34	Material of construction for grids/bolts :	SS 316

Notes:

1 Please see attached Vessel GA drawings (165-8-MPV-001, Rev.0, 165-8-MPV-002, Rev.0, 165-8-MPV-003, Rev.0 & 165-8-MPV-004, Rev.0).

2 The knitted mistmat shall have a free volume of at least 97 % (e = 0.97), a wire thickness, dw, between 0.23 mm and 0.28mm.

3 The specific surface wire area = 4(1 - e)/dw and should be greater than 428 m2/m3

4 The mistmat shall have a turndown ratio upto 30% of total inlet capacity.

5 VTS- Vendor to Specify

6 Gas composition for inlet of demister is given below

Composition	Mole fraction		
Methane	0.8003		
Ethane	0.0105		
Propane	0.0024		
i-Butane	0.0006		
n-Butane	0.0006		
i-Pentane	0.0002		
n-Pentane	0.0002		
n-Hexane	0.0074		
n-Heptane	0.0000		
CO2	0.0575	to	0.07
H2S	0.0003		
Nitrogen	0.1147		
H2O	0.0053		