

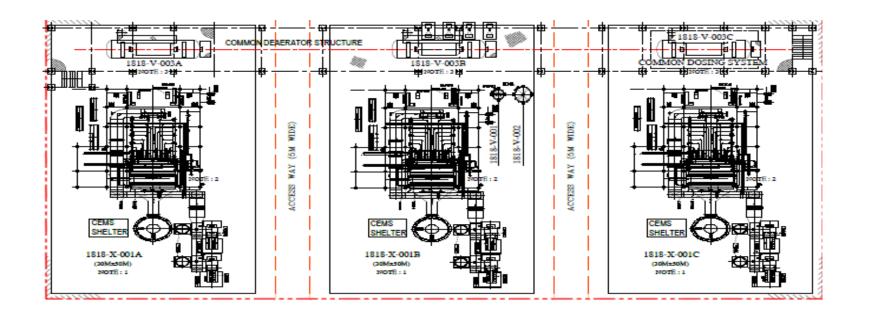
PROCESS ENGINEERING SERVICES

Validation of Petcoke Drum Discharge Chute Sizing Calculation

Client: Fulcrum Engineering Consultancy, Trichy

Project: IOCL, Barauni, Bihar

Scope Of Work: Validation of the discharge chute sizing with back up calculations to get approval from Engineers India Limited (EIL)





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Validation of Petcoke Drum Discharge Chute Sizing Calculation

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-	DS	DS Row I	Description	Unit		-	OEM BOILER						OEM BOILER						OEM BOILER					
+1	2	1	PURCHASER / OWNER	-					IOC1	1. Gegerat			IOCL Genral						IOCL Gaprot					
2	2	2	MANUFACTURER - REFERENCE															1						
3	2	3	LOCATION Site & Elevation ASL		oceas Desig	on Basis	Vado	dara, Gajara	t ledis	Richart P	уюська Дарі с	m Backs	Vado	durk, Gaisn	A ledin	Roder Pr	necess Desi	on Basis	Vado	dana, Guiara	t India	Rofur Pr	rocess Desi	on Basis
4	2	4	UNIT					18		46		-10			518			18			518			
- 5	2	5	ITEM N						1616-X-4	001 A/E/IC	OT A/B/C			1918-X-001 A/B/C					1816-X-001 A/B/C					
63	2	- 6	TYPE		relation)			Water to	abe boilers	(Noteral cir	culytion		Water table beliefs (Natural circulation)					Water tube boilers (Natural circulation)						
71	2	7	NUMBER REQUIRED				5 Working / 0 stundby						3 Vorking / 0 stundby						3 Working / 0 stundby					
a	- 2	8	DESIGN CODE				ASMETA IDE						ASME I & IBR						ASMETAIDE					
- 31	2	9	STEAM PRODUCTION	1/6			MO (MCR) Note 1						50 (MCR) Note 1						150 (MCR) Note 1					
10	2		STEAM TEMPERATURE AT B.L. (min/scen/mox/do				450 / 455 / 460 / 465					450 / 455 / 460 / 455					450 / 455 / 460 / 485							
- 11	2		STEAM PRESSURE AT B.L. (min/sorm/max/design)				36/31/38/48afV						36/31/38/486FV					36/31/38/488FV						
12	2	12	HEAT ABSORBED AT MCR:	MMkcalibr							Later													
12		142	MEAT ADSUMBLE AT MICH:	PYNYMESSES	Feel Oil		Feel Gas Feel Oil						Feel Gas Feel Oil					Feel Gas Feel Oil						
	2		OPERATING CONDITIONS	-	MCR Pesk		Turndown MCR Peak		The state of the s		Peak						Pesk	Turndown MCR		6			-	
	2	96	STEAMFLOV	1/0	150	165		150	DOE			165		150	Pesh 165		150	165	30	150	165	30	150	Pes 165
13	2						30			30	150		20			30	10.0		- 30	150	165	30	75/0	160
14	- 2	57	STEAM OUTLET TEMPERATURE (w. BL)	· c	455	455	455	455	455	ODE	455	455	455	455	455	455	455	455	-			_		-
15	2	15	FEED WATER TEMPERATURE	C	-		190	110	110	110	110	110	110	210	110	190	110	190	_			_		_
16	2	19	STEAM OUTLET PRESSURE (st BL)	kg/cm2(g)				37			37			37			25					_		_
13	2	20	STEAM PRESSURE AT DRUM	kg/cm2(g)			DDE	435	DOC	300	43.5	DDE	38.6	4.6	47.5	38.6	46	42.5				_		_
18	2	21.	FEED WATER PRESSURE AT B.L.	kg/cm2(g)			DDE	56	DDE	ODE	36	DDE	71.27	68.9	65.70	71.27	68.3	65.76						_
13	2	22	FEED WATER FLOW (including decoperheater flow)	kg/kr			DDE	197500	DDE	DDE	197500	DOE	ading to 30 TPH Not	Correspo ading to ISO TPH Net	eding to 965 TPH Net Street	Correspo ading to DO TPH Net	eding to 150 TPH Not Street	ading to 365 TPH Net Steam						
20	2	23	DESUPERHEATER WATER FLOW	kg/kr		- 1	DDE	0090	DOE	006	0050	DDE	Later	Later	Later	Sater	Later	Later	10 10					
		100000				n 11			1.5		-		0.3 % of	0.0 5 of	0.3 % of	0.3 % of	0.34 of	0.3 % of						
-21	2	24	CONTINUOUS BLOW DOWN				DDE	5700	DOE	DOE	5700	DOE	physics.	phoses	oteom	ctesm	phone	phowes						4
	100	1111-25	,						The state of		1-10-100-1		flow	flow	flow	flow	Here	floor		100				
22	2	25	TYPE OF FUEL		Feel Oil			RING / RF	G		Feel Oil		R	LNG / RI	G		Feel Oil		F	LNG / RF	G		Feel Oil	
23	2	26	FUEL FLOW (BASED ON AVERAGE LHV)	kg/h			DOE	REFER PO	300	DOE	REFERIPO	DOE	Bufur Uniting Sun	Bufut EP+0	Latter	Florer United for	12555	Enter						
24	2	27	FUEL TEMPERATURE	· · · · ·			ODE	40	DOE	DDE	60	DDE		40			80							
25	2	26	FUEL AVERAGE LHV	healtha			ODE	90/311	DOE	DDE	3800	DDE		0911 - FILN	G .		3800							
26	2	29	EXCESS AIR		15	- 35	-	50	-		15		- 85	3	50	30	53	- 15						
-		-	30000000000000000000000000000000000000										Consuppo	Correspo	Correspo	Contage.	Correspon	Corrusto						
21	2	30	COMBUSTION AIR FLOWRATE	kg/h			DDE	103262	DOE	DDE	197060	DOE	oding to 00 TPH Not Stoom	nding to 150 TPH Not Deam	ading to 365 TPH Nut Otean	nding to 30 TPH Not Steam	eding to 150 TPH Not Shown	nding to 165 T#H Not Stoom						
28	2	31	COMBUSTION AIR TEMPERATURE (1)	C		7	DDE	80 - 30	200€	DOE	80 - 90	DDE				10								
					Ĭ.	J. j.	alpesado.						Comuspo ading to			Consupo edieg to		Correspo ading to						