8	PT (pumping temp)	Min / Nor / Max °C	0 / 55	Casing support	☐ Centerline	☐ Foot	☐ Braket		
9	Sp Gr at PT		0.986 - 1.200	Impeller mount	☑ Overhung	☐ Between Brgs			
10	Vap. press. at PT	bara	0.16	Case split	☑ Radial	☐ Axial			
11	Viscosity at PT	cp	0.5	No. of stages	☑ Single	☐ Two	☑ Multi		
12	Corr. / eros caused by	CHLORIDE ppm	(5)	Impeller type	☐ Closed	☐ Single	☐ Double Suction	☑ Open	
13	Capacity : normal	m^3/hr	14.5	Volute type	☑ Single	☐ Double	☐ Diffuser		
14	rated	m^3/hr	18	Nozzles :	Size	Rating	Facing	Location	
15	Differential head	m	79.1	Suction	-	-	-	Bottom	
16	Discharge press. at Nozzle	barG	7.8	Discharge	-	ANSI 150 LB	RF	Side	
17	Suction press	barG	0	Misc. Conn :	Size	Rating	Facing	Remarks	
18	Diff. press	bar	7.8	Vent				na	
19	Hydraulic HP	kW	3.9	Drain				na	
20	Max. Suction press.	barG	0.3						
21	NPSH avail,	m	Submerged	C.W. In & Out	na				
22	PERFORMANCE								
23	NPSH req'd (water)	m	By Vendor	Flushing	na				
24	Efficiency	%	By Vendor	Quenching	na				
25	BHP at rated cap.	kW	By Vendor						
26	Min. Cont. flow : Thermal / Stable	m^3/hr	Vendor / Vendor	Imp. dia. Min. / Rated / Max. mm			By Vendor		
27	Max. Head rated imp.	m	By Vendor	Bearing No. / Type radial			By Vendor		
28	Max. BHP rated imp.	kW	By Vendor	thrust			By Vendor		
29	Max. Allow. work press.	barG	By Vendor	Lubrication type			By Vendor		
30	Hydrotest press.	barG	By Vendor	Coupling : Mfr. / type			By Vendor		
31	Design press. / temp.	barG / °C	12 / 55	Packing : Mfr. / No. size			NA		
32	Rotation viewed from coupling end		By Vendor	Mechanical seal : API code			Manufactuer Standard		
33	Rotating speed	rpm	By Vendor	Mfr. / size, model No.			Manufactuer Standard		
34	S.S.S. at BEP	m^3/hr-m-rpm	By Vendor	API plan : flush / aux seal			Manufactuer Standard		
35	Max. Allow Sound Level / Expected	dB(A)	85 /	Baseplate					
36	Vertical Pumps :			MATERIALS API Mat'l. class :	Supplier to recommend				
37	Pit depth / Base to pump bottom	m	(3)	Pressure casing	By Vendor	Throat bush	By Vendor		
38	Min. Submergence req'd	m	By Vendor	Inner case parts	By Vendor	Shaft	By Vendor		
39	Pump length (Imp. to disch. nozzle)	m	By Vendor	Impeller	By Vendor	Case gasket	By Vendor		
40	SHOP TESTS	Required	Witnessed	Shaft sleeve	By Vendor	Wet bolt / nut	By Vendor		
41	Performance			Case wear. ring	By Vendor				
42	NPSH			Imp. wear. ring	By Vendor				
43	Hydrotest			Cooling water : API c.w. pipe plan :	NA				
44	Motor :	Supplied by		In :	barG / °C	/			
45	Mfr.	HP: kW	rpm	Out :	barG / °C	/			
46	Area class :	Phase: 3 Volts: 400 V Cycles: 50	Hz	Design :	barG / °C	/			
47	Cl. Div. Gr.	Type: Zone 2, Gr. IIA, Div.T3		Consumption	Pump / Flushing cooler / Lube oil cooler / Total				
48	Turbine :	Supplied by		m^3 / hr	/	/	/		
49	Mfr.:	HP: kW	rpm	External flush / Quench		Flushing	Quenching		
50		Steam consump.	ton/hr	Fluid name :					
51	Speed Changer :	Supplied by		In :	barG / °C	/	/		
52	Mfr.:	Type Gear loss	KW	Consumption	m^3/hr				
53		AGMA SF Efficiency	%	Lubricant	Bearing : Grade	/ Qty	ℓ,		
54		Speed (Input / Output) : /	rpm		Tandem / Double seal : Grade	/ Qty	ℓ,		

55 REMARKS :

56 1. Manufacturer standard vertical full submerged pump to be provided.

57 2. Fluid contains 5 vol% of sludge, open impeller with cutting system.

58 3. Pump will be started at HLL and Stopped at LLL. (See Sketch)

59 4. Foot with discharge elbow and piping, rail etc. to be provided by supplier

60 5. Uric Acid (pH 6)

61 6. Manufacturer to select pump type