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Data Sheet for Slurry Horizontal Pumps - Dewatering Area

02	2026-06-10	Issued For Approval				
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	00	01	02	03	04	05			00	01	02	03	04	05	
1	X	X	X					31							
2	X	X	X					32							
3	X	X						33							
4	X	X						34							
5	X	X	X					35							
6	X	X	X					36							
7	X	X	X					37							
8	X	X						38							
9	X	X	X					39							
10	X	X						40							
11	X	X						41							
12	X							42							
13	X							43							
14	X							44							
15	X							45							
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1. FILTER PRESS FILTRATE PUMP DEWATERING AREA

No.	Description	Units	Value
General data			
1	Quantity	#	2 Operational & 2 Standby
2	Tag No. / Location (indoors/ outdoors)	-	3-34-1501-01/02 indoor 3-34-1501-03/04 indoor
3	Application Description	-	Filter press Filtrate Pump
Process / Operating Conditions			
Material Processed			
4	Ore Type	-	Copper ore
5	Fluid Type	-	Slurry water
6	Ore Specific gravity	t/m ³	4
7	Feed top size (F100)	μ	90
8	Feed F80	μ	38
9	Feed temperature	°C	+5 ~ 50
Operating conditions			
10	Service Type	-	Continues
11	Configuration	-	Horizontal slurry pump
12	Duty (from – to)	-	From PB 3-34-3210-01&02 to RT 3-34-3231-01
13	solids feed rate per pump (design)	dmt/h	0. 04537 (WFL)
14	solid feed rate per pump (nominal)	dmt/h	0. 03937 (WFL)
15	Solids content	%(m/m)	0.1 %
16	Slurry density	t/m ³	1.01
17	Slurry viscosity	C.P	0.801 (WFL)
18	Slurry flowrate (design/nominal)	m ³ /h	45.37 / 39.37 (WFL)
19	Slurry PH range	-	11-13
20	Gland seal water (Capacity / Pressure)	Lit/s @ bar	VTs
21	Discharge pressure	barg	12 (WFL)

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No.	Description	Units	Value	
22	Total Dynamic Head (TDH)	m-H2O	120 (WFL)	02
23	Vapor Pressure	m-H2O	0.4323	
24	Min Discharge Pressure (Empty Press)	Bar	VTs	
25	NPSH required (Maximum) (Note 7)	m	VTs	
26	NPSH Available	m	9.30 (WFL)	
27	Hydraulic power(mechanical)	kW	30.17 (WFL)	02
28	absorbed Power	kW	54.85 (VTC)	02
29	Installed power	kW	70 (VTC)	02
30	Efficiency at the design point	%	55 (VTC)	02
Mechanical Information				
Technical specs				
31	Manufacturer	-	ACC. TO AVL	
32	Model	-	VTs	
33	Type	-	Slurry Horizontal Centrifugal Pump	
34	Design pump operating speed	rpm	(VTs)	
35	Max pump operating speed	rpm	2900 (VTs)	
36	Suction nozzle size	mm	DN 80 (VTs)	
37	Discharge nozzle size	mm	DN 50 (VTs)	
38	Flange specification	-	ASME B16.5	
39	Impeller diameter	mm	(VTs)	
40	Number of impeller vanes	#	1 (VTC)	02
41	Sealing arrangement	-	(VTs)	
Materials of construction/wear protection				
42	Casing	-	Cast iron + EPDM Rubber lining (VTC)	
43	Impeller	-	Cast iron + EPDM Rubber lining (VTC)	
44	Liner	-	Polyurethane or similar (VTC)	
45	Shaft	-	AISI 431 (VTC)	

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No.	Description	Units	Value	
46	Shaft sleeve		AISI 431 (VTC)	
47	Wear ring	-	AISI 431 (VTC)	
48	Motor enclosure/frame material	-	CAST IRON	
ELECTRICAL DATA				
49	Drive Type	-	Direct Drive	
50	Manufacturer	-	As per Approved Vendor List	
51	Starting method	-	DOL	
52	Insulation Class	-	F	
53	Temp. Rise	-	B	
54	Power Supply	-	400V ±10%, 3ph ,50±5% Hz	
55	Motor Enclosure IP	-	IP 55 or better	
56	Ambient Temperature (Max/Min)	° C	Outdoor	+40/-25 (NOTE 6)
			Indoor	+40/+5 (NOTE 6)
57	Altitude above sea level	m	2500 (NOTE 6)	
POWER TRANSMISSION				
58	Transmission system	-	Pully and belt	
59	Transmitted power	kw	VTS	
60	Maximum driver Pully Diameter	mm	VTS	
61	Drive Ratio	-	VTS	
62	Driver speed	rpm	VTS	
Bearing details				
63	Motor end bearing type	-	Anti-Friction type (VTC)	
64	Pump end bearing type	-	VTS	
65	Lubrication type	-	VTS	
Piping Details				
66	Pipe line size (Suction /Discharge)	mm	DN 100 / DN73 and DN 100	
67	Static head (Suction /Discharge)	m	3/23 (WFL)	
68	Total Pipe Length (Suction /Discharge)	m	3.7/80 (WFL)	



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No.	Description	Units	Value	02
69	90 deg bends (Suction /Discharge)	Qty	0/17 (WFL)	
70	45 deg bends (Suction /Discharge)	Qty	0/1 (WFL)	
71	T pieces (Suction /Discharge)	Qty	0/1 (WFL)	
DIMENSION & WEIGHT				
72	Total length (l)	m	VTs	
73	Total width (b)	m	VTs	
74	Total height (h)	m	VTs	
75	Total weight	kg	VTs	

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2. FILTER PRESS FEED PUMP DEWATERING AREA

No.	Description	Units	Value
General data			
1	Quantity	#	4 Operational & 2 Standby
2	Tag No. / Location (indoors/ outdoors)	-	3-34-1501-05 ~07 /indoor 3-34-1501-08 ~10 /indoor
3	Application Description	-	Filter press feed pump
Process / Operating Conditions			
Material Processed			
4	Ore Type	-	Copper ore
5	Fluid Type	-	Slurry water
6	Ore Specific gravity	t/m ³	4
7	Feed top size (F100)	μ	90
8	Feed F80	μ	38
9	Feed temperature	°C	5 ~ 50
Operating conditions			
10	Service Type	-	Continues
11	Configuration	-	Horizontal slurry pump
12	Duty (from – to)	-	From CT 3-34-3232-01&02 to FP-3-34-2220-01~06
13	solids feed rate per pump (design)	dmt/h	23.28 (WFL)
14	solid feed rate per pump (nominal)	dmt/h	20.18 (WFL)
15	Solids content	%(m/m)	65
16	Slurry density	t/m ³	Up to 1.95
17	Slurry viscosity	C.P	2.66 (WFL)
18	Slurry flowrate (maximum/minimum)	m ³ /h	191.49 / 40 (WFL)
19	Slurry PH range	-	11-13
20	Gland seal water (Capacity / Pressure)	Lit/s @ bar	VTs
21	Total Dynamic Head (TDH) (maximum/minimum)	m	90 /46.4 (WFL)
22	Vapor Pressure	m	0.4323

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No.	Description	Units	Value
23	Min Discharge Pressure (Empty Press)	Bar	VTs
24	NPSH required (Maximum) (Note 7)	m	< 8
25	NPSH Available	m	9.46 (WFL)
26	Absorbed power(mechanical)	kW	62.63 (WFL)
27	Hydraulic Power	kW	76.10 (VTC)
28	Installed power	kW	90 (VTC)
29	Efficiency at the design point	%	75 (VTC)
Mechanical Information			
Technical specs			
30	Manufacturer	-	ACC. TO AVL
31	Model	-	VTs
32	Type	-	Slurry horizontal Centrifugal pump
33	Design pump operating speed	rpm	(VTs)
34	Max pump operating speed	rpm	2900 (VTs)
35	Suction nozzle size	mm	DN 150 (VTs)
36	Discharge nozzle size	mm	DN 100 (VTs)
37	Flange specification	-	ASME B16.5
38	Impeller diameter	mm	(VTs)
39	Number of impeller vanes	#	1 (VTC)
40	Sealing arrangement	-	(VTs)
Materials of construction/wear protection			
41	Casing	-	Cast iron + Rubber lining (VTC)
42	Impeller	-	Cast iron + Rubber lining (VTC)
43	Liner	-	Polyurethane or similar (VTC)
44	Shaft	-	AISI 431 (VTC)
45	Shaft sleeve	-	AISI 431 (VTC)
46	Wear ring	-	AISI 431 (VTC)

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No.	Description	Units	Value	
47	Motor enclosure/frame material	-	CAST IRON	
ELECTRICAL DATA				
48	Drive Type	-	Direct Drive	
49	Manufacturer	-	As per Approved Vendor List	
50	Starting Method	-	VFD	
51	Insulation Class	-	F	
52	Temp. Rise	-	B	
53	Power Supply	-	400V ±10%, 3ph ,50±5% Hz	
54	Motor Enclosure IP	-	IP 55 or better	
55	Ambient Temperature (Max/Min)	° C	Indoor	+40/5
			outdoor	+40/-25 (NOTE 6)
56	Altitude above sea level	m	2500 (NOTE 6)	
POWER TRANSMISSION				
57	Transmission system	-	Pully and belt	
58	Transmitted power	kw	VTS	
59	Maximum driver Pully Diameter	mm	VTS	
60	Drive Ratio	-	VTS	
61	Driver speed	rpm	VTS	
Bearing details				
62	Motor end bearing type	-	Anti-Friction type (VTC)	
63	Pump end bearing type	-	VTS	
64	Lubrication type	-	VTS	
Piping Details				
65	Pipe line size (Suction / Discharge)	mm	DN 200 / DN 150	
66	Static head (Suction /Discharge)	m	3/17 (WFL)	
67	Total Pipe Length (Suction /Discharge)	m	5/60 (WFL)	
68	90 deg bends (Suction /Discharge)	Qty	0/8 (WFL)	
69	45 deg bends (Suction /Discharge)	Qty	0/0 (WFL)	

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No.	Description	Units	Value
70	T pieces (Suction /Discharge)	Qty	0/0 (WFL)
71	Minimum Required Pressure at Delivery Point	m	21
DIMENSION & WEIGHT			
72	Total length (l)	m	VTs
73	Total width (b)	m	VTs
74	Total height (h)	m	VTs
75	Total weight	kg	VTs

Notes:

1. VTS: Vendor to Specify
2. VTC: Vendor to Confirm
3. WFL: WIL BE FINALIZED LATER
4. DOL: Direct On-Line
5. VFD: Variable Frequency Drive
6. For site condition, please see the Client NO.: **28C3-D-4IN-DOC-090-0000-00-PR-0001**
7. $NPSH_A - NPSH_R \geq 1.5$
8. The elevation of pump and pump base frame will be finalized by vendor.
9. For the LV & MV motors data sheet please refer Client NO.: **28C3-D-4IN-DSH-090-0220-00-EL-0038**