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Data Sheet for Bredell Pumps
(PU) 3-34-1505-01~02

01	08/27/2024	Issue For Approval				
00	05/19/2024	Issue For Review				
Rev.	Date	Description	Prepared By	Checked By	Approved By	Authorized By

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1. CU THICKENER UNDERFLOW BREDEL PUMP

No.	Description	Units	Value
General data			
1	Quantity	#	1 Operational & 1 Standby
2	Tag No. / Location (indoors/ outdoors)	-	PU 3/4-34-1505-1,2/outdoor 01
3	Application Description	-	Underflow Cu thickener discharge pump
4	Site condition		Refer to Doc No.: 12002-D-PR-DOC-303-GNL-001 01
Process / Operating Conditions			
Material Processed			
5	Ore Type	-	Copper ore 01
6	Fluid Type	-	Abrasive Slurry
7	PH. Range	-	10.5 ~ 12 01
8	Ore specific gravity	t/m ³	4.0
9	Feed top size (F100)	micron	150
10	Feed F80	micron	90
11	Feed slurry temp	°C	5-60
Operating conditions			
12	Service Type	-	Continuous
13	Configuration	-	Horizontal
14	Duty (from– to)	-	Under flow Thickener discharge to feed box
15	solids feed rate per pump (design)	dmt/h	93.12
16	solid feed rate per pump (nominal)	dmt/h	80.70
17	Solids content	%(m/m)	65
18	slurry density	t/m ³	1.95
19	Solid density	t/m ³	4

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No.	Description	Units	Value
20	Slurry flowrate (design)	m ³ /h	73.42
21	Slurry flowrate per cluster (nominal)	m ³ /h	63.64
22	Discharge pressure	Barg	2 (VTC)
23	Power absorbed (mechanical)	KW	30 (VTC)
24	Efficiency at the design point	%	80 (VTC)

Mechanical Information

Technical specs

25	Manufacturer/Model	-	VTS 
26	Type	-	Bredell hose pump
27	Maximum pump operating working pressure		VTS 
28	Design pump operating speed	rpm	VTS
29	Max pump operating speed	rpm	VTS
30	Inlet diameter	mm	Piping inlet 4" (VTC)
31	Discharge diameter	mm	Outlet out let 4 "(VTC)
32	Flange specification	-	ASME B16.5
33	Number of shoes	-	VTS
34	Sealing arrangement	-	VTS

Materials of construction/wear protection

35	Pump housing	-	Cast iron (VTC)
36	Hose	-	EPDM (VTC)
37	Liner	-	NA
38	Rotor	-	Cast iron(VTC)
39	Shaft	-	VTS
40	Wear Ring	-	VTS

Drive specifications

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No.	Description	Units	Value
41	Drive gearbox		Yes (VTC)
42	Cooling		VTs
Bearing details			
43	Motor end bearing type		VTs
44	Pump end bearing type		VTs
45	Lubrication type		VTs
Piping details			
46	Static head	m	10 (WFL)
47	Total pipe length	m	160 (WFL)
48	90 deg bends	Qty	6 (WFL)
49	45 deg bends	Qty	0 (WFL)
50	T pieces	Qty	1 (WFL)
Electrical Data			
51	DRIVE TYPE		Electromotor
52	TYPE OF MOTOR		electric motor with external ventilation (TEFC)
53	POWER CONSUMPTION (voltage, phase , frequency)	(V, Ø, Hz)	400±10, 3 , 50±5
54	SOUND PRESSURE LEVEL	Db	<85 @ 1 m distance from pump
55	INSULATION CLASS		F
56	TEMPERATURE RAISE CLASS		B
57	Safety Class		IP 55
58	Installation Power	KW	VTs
Masses & Dimensions			
59	Dimension (L x W x H)	mm	VTs
60	Empty mass (complete HC manifold)	kg	VTs

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No.	Description	Units	Value
61	Operating mass (complete HC manifold)	kg	VTS
I&C information			
instruments			
62	Temperature sensor & transmitter	#	VTS
63	Vibration sensor & Transmitter	#	VTS

- Notes:**
- 1. VTS: Vendor to Specify
 - 2. VTC: Vendor to Confirm
 - 3. WFL: WILL BE FINALIZED LATER
 - 4. For LV & MV motor data sheet please refer to: 12002-D-EL-DSH-303-GNL-038