

Screen Application Specification Datasheet

Client: iPUT Pty Ltd GK Ref #: _____
 Project: New Coal Preparation Plant Date: November 14th 2017
 Application: ROM Desliming Screen

PRELIMINARY RELEASE, NOT YET APPROVED

Line	Item Description	Units	Details
1	Site Equipment Number	-	tba
2	Material to be processed – description	-	-50mm sized ROM coal, evenly fed
3	Material to be processed – dry bulk density	t/m ³	1.5 to 1.9
4	Environmental ambient temperature range	°C	-5 to +45
5	GK Screen Model	-	STM-H4873
6	Qty decks	ea	1 + top cascader
7	Screen deck inclination to horizontal	deg	-15
8	Maximum Performance Guaranteed throughput at max solids loading and minimum dry bulk density	t/hr	1,700
9	Maximum Performance Guaranteed throughput at max solids loading and maximum dry bulk density	t/hr	2,000
10	Performance Guarantee -2mm in screen oversize	%	<8% (by weight)
11	Performance Guarantee +2mm in screen undersize	%	<4% (by weight)
12	Performance Guarantee screen oversize free moisture	%	<12%
13	Performance Guaranteed Availability	%	>95% of scheduled operational time
14	Performance Guaranteed “feed off” water flow rate	m ³ /hr	2,740 / 4,600 + rinse water
15	Length of drain section from back corner of feed zone	m	Full deck length
16	Required rinse section spray water available /m width	m ³ /hr	100 evenly distributed
17	Design duty cycle	-	Continuous 24hr/day operation
18	Screening area (width x length)	m	Top cascader 4.8 x 2.4 Main deck 4.8 x 7.3
19	Length of infeed load zone tiled section	mm	700
20	Screen deck type (material)	-	BZ 304 stainless steel wedgewire
21	Side poly liner height above deck	mm	tba
22	Screen deck aperture	mm	1.4
23	Screen open area	%	~38
24	Screen deck panel size (width x length)	mm	305 x 609

Line	Item Description	Units	Details
25	Total screen area	m ²	46
26	Amplitude of vibration stroke	mm	~10-11
27	Exciter drive motor running speed	RPM	750
28	Critical speed \tilde{n} (expected)	RPM	~830
29	Guaranteed max sound level @ 1m	dB(A)	< 85 (unloaded)
30	Exciter drive AC induction motor details	-	2@ tba kW
31	Exciter drive motor thermal overload protection and VVVF inverter fine tune speed controller	-	Included
32	Qty of motor terminal boxes to be connected	-	2
33	Vert accel'n component perpendicular to final stage	g	~2.5 – 3.0
34	Product discharge velocity	m/s	~0.2 – 0.25
35	Resulting bed depth at discharge for this solids rate	mm	~200 – 230
36	Screen fully assembled mass, empty (approx)	kg	tba
37	Trough assembly mass, no deck panels (approx)	kg	tba
38	Exciter assembly mass (approx)	kg	tba
39	Springs, deck panels & misc items mass (approx)	kg	tba
40	Isolation balancer (if applicable) mass (approx)	kg	Not applicable (?)
41	Feed end max static load / corner (approx)	kN	tba
42	Discharge end max static load / corner (approx)	kN	tba
43	Feed end max dynamic load / corner (approx)	kN	tba vert / tba horiz (no safety factor)
44	Discharge end max dynamic load / corner (approx)	kN	tba vert / tba horiz (no safety factor)
45	Included features with every GK screen	-	<ul style="list-style-type: none"> • 8 x accelerometer feed to plc for spring condition monitoring • 20 hrs continuous run shop test • lifting lugs for full / separate assy • auto lubrication system • Easy replacement of snap-on decks and side panels
46	Exciter drive spring configuration	-	tba
47	Minimum required clearances – exciter	mm	75 all round
48	Minimum required clearances – trough	mm	75 feed direction; 25 lateral
49	Screen support system	-	tba (above / below)

Line	Item Description	Units	Details
50	Protective coating system – all areas	-	customer spec
51	Additional protection – feed zone	-	25 mm thick ceramic button tiles
52	Additional protection – structure in underflow	-	10mm thick rubber lining fully sealed
53	Additional protection – any exposed wear area	-	polyurethane spray min 3mm thick
54	Maintenance – minor service operational intervals	hrs	1,400
55	Maintenance – major service operational intervals	hrs	8,500
56	Manufacturer’s warranty from earliest of commissioning or 6 months after delivery, not including consumable items (eg deck panels) or regular maintenance / service items	-	5 years – total machine

Note: Conditions apply to guarantee / warranty including stable operation to spec, fair use and maintenance

The above screen application data is based on typical feed material as follows:

Design loading case feed data – nominal feed rate:

Solids (t/h, ad): **1,750** Water (t/h)*: **2,400** Solids (% , ad): **41.5-43.0** Mags (t/h): **0.2** Pulp (m3/h): **3,570**

*feed water; ie excluding spray water

Size Fraction (mm)		Size Range	Mass % (max oversize) RD 1.52; Pulp RD 1.17; Ash 28.2%, ad		Mass % (max undersize) RD 1.87; Pulp RD 1.25; Ash 48.6%, ad	
Upper	Lower	mm	Fractional	Passing	Fractional	Passing
150.0	125.0	-150 +125	0.0	100.0	0.0	100.0
125.0	63.0	-125 +63	0.0	100.0	0.0	100.0
63.0	50.0	-63 +50	0.0	100.0	0.0	100.0
50.0	31.5	-50 +31.5	26.2	100.0	7.3	100.0
31.5	16.0	-31.5 +16	26.5	73.8	9.6	92.7
16.0	8.0	-16 +8	16.0	47.3	10.1	83.1
8.0	4.0	-8 +4	9.3	31.3	16.4	73.1
4.0	2.8	-4 +2.8	2.8	22.0	5.4	56.7
2.8	2.0	-2.8 +2	2.4	19.2	5.2	51.2
2.0	1.4	-2 +1.4	2.4	16.8	4.7	46.0
1.4	1.0	-1.4 +1	2.0	14.4	4.5	41.4
1.0	0.71	-1 +0.71	1.5	12.4	3.5	36.9
0.71	0.50	-0.71 +0.5	1.6	10.9	3.2	33.4
0.50	0.35	-0.5 +0.35	1.3	9.3	2.8	30.2
0.35	0.25	-0.35 +0.25	1.1	8.0	2.4	27.4
0.25	0.125	-0.25 +0.125	1.8	6.9	5.2	25.0
0.125	0.063	-0.125 +0.063	1.4	5.1	4.5	19.8
0.063	0.045	-0.063 +0.045	0.5	3.7	1.7	15.3
0.045	0.038	-0.045 +0.038	0.2	3.2	0.8	13.5
0.038	0	-0.038 +0	2.9	2.9	12.8	12.8

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For Approval

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