

*Screen Application Specification Datasheet*

Client: IPUT Pty Ltd GK Ref #: \_\_\_\_\_  
 Project: New Coal Preparation Plant Date: November 14<sup>th</sup> 2017  
 Application: Product / Rejects Drain & Rinse Screen

**PRELIMINARY RELEASE, NOT YET APPROVED**

Line	Item Description	Units	Details
1	Site Equipment Number	-	tba
2	Material to be processed – description	-	-50mm washed coal / rejects, evenly fed
3	Material to be processed – dry bulk density	t/m <sup>3</sup>	1.3 to 1.6
4	Environmental ambient temperature range	°C	-5 to +45
5	GK Screen Model	-	STM-H4273
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	1,100
9	Maximum Performance Guaranteed throughput at max solids loading and maximum dry bulk density	t/hr	1,400
10	Performance Guarantee Maximum medium (magnetite + water) carryover to rinse section (by weight)	%	<5
11	Performance Guarantee Residual magnetite in overflow	kg/t	<0.5
12	Performance Guaranteed Availability	%	>95% of scheduled operational time
13	Performance Guaranteed Medium (magnetite + water) “feed off” flow rate reporting to drain section	m <sup>3</sup> /hr	4,600
14	Length of drain section from back corner of feed zone	m	3m
15	Required rinse section spray water available /m width	m <sup>3</sup> /hr	125 evenly distributed
16	Design duty cycle	-	Continuous 24hr/day operation
17	Screening area (width x length)	m	Top cascader 4.2 x 2.4 Main deck 4.2 x 7.3
18	Length of infeed load zone tiled section	mm	700
19	Screen deck type (material)	-	BZ 304 stainless steel wedgewire
20	Side poly liner height above deck	mm	tba
21	Screen deck aperture	mm	1.4
22	Screen open area	%	~38

Line	Item Description	Units	Details
23	Screen deck panel size (width x length)	mm	305 x 609
24	Total screen area	m <sup>2</sup>	40
25	Amplitude of vibration stroke	mm	~10-11
26	Exciter drive motor running speed	RPM	750
27	Critical speed ñ (expected)	RPM	~830
28	Guaranteed max sound level @ 1m	dB(A)	< 85 (unloaded)
29	Exciter drive AC induction motor details	-	2@ tba kW
30	Exciter drive motor thermal overload protection and VVVF inverter fine tune speed controller	-	Included
31	Qty of motor terminal boxes to be connected	-	2
32	Vert accel'n component perpendicular to final stage	g	~2.5 – 3.0
33	Product discharge velocity	m/s	~0.2 – 0.25
34	Resulting bed depth at discharge for this solids rate	mm	tba
35	Screen fully assembled mass, empty (approx)	kg	tba
36	Trough assembly mass, no deck panels (approx)	kg	tba
37	Exciter assembly mass (approx)	kg	tba
38	Springs, deck panels & misc items mass (approx)	kg	tba
39	Isolation balancer (if applicable) mass (approx)	kg	Not applicable (?)
40	Feed end max static load / corner (approx)	kN	tba
41	Discharge end max static load / corner (approx)	kN	tba
42	Feed end max dynamic load / corner (approx)	kN	tba vert / tba horiz (no safety factor)
43	Discharge end max dynamic load / corner (approx)	kN	tba vert / tba horiz (no safety factor)
44	Included features with every GK screen	-	<ul style="list-style-type: none"> <li>• 8 x accelerometer feed to plc for spring condition monitoring</li> <li>• 20 hrs continuous run shop test</li> <li>• lifting lugs for full / separate assy</li> <li>• auto lubrication system</li> <li>• Easy replacement of snap-on decks and side panels</li> </ul>
45	Exciter drive spring configuration	-	tba
46	Minimum required clearances – exciter	mm	75 all round
47	Minimum required clearances – trough	mm	75 feed direction; 25 lateral

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

**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 worst case feed rate (volumetric - product coal):**

Solids (t/h, ad): **1,100**    Water (t/h)\*: **3,010**    Solids (% , ad): 26.8    Ash (% , ad): **8.5**  
 Mags (t/h @RD=5.1): **1,050**    RD: **1.3**    Pulp (m3/h): **4,060**    Pulp RD: **1.27**  
 \*feed water; ie excluding spray water

Size Fraction (mm)		Size Range	Mass %	
Upper	Lower	mm	Fractional	Passing
150.0	125.0	-150 +125	0.0	100.0
125.0	63.0	-125 +63	0.0	100.0
63.0	50.0	-63 +50	0.0	100.0
50.0	31.5	-50 +31.5	18.0	100.0
31.5	16.0	-31.5 +16	32.3	82.0
16.0	8.0	-16 +8	20.4	49.7
8.0	4.0	-8 +4	13.8	29.3
4.0	2.8	-4 +2.8	4.6	15.5
2.8	2.0	-2.8 +2	4.1	10.9
2.0	1.4	-2 +1.4	4.0	6.7
1.4	1.0	-1.4 +1	1.8	2.8
1.0	0.71	-1 +0.71	0.6	0.9
0.71	0.50	-0.71 +0.5	0.2	0.3
0.50	0.35	-0.5 +0.35	0.1	0.1
0.35	0.25	-0.35 +0.25	0.0	0.0
0.25	0.125	-0.25 +0.125	0.0	0.0
0.125	0.063	-0.125 +0.063	0.0	0.0
0.063	0.045	-0.063 +0.045	0.0	0.0
0.045	0.038	-0.045 +0.038	0.0	0.0
0.038	0	-0.038 +0	0.0	0.0

**PRELIMINARY**  
*For Approval*

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