

FINANCIAL ANALYSIS FOR BATCH VACUUM PAN WITH SRI JIGGER TUBES

ASSUMPTIONS AND INFORMATION

US Dollars (AUS\$1.1 = US\$1)

1.1

Parameter	Value	Benefits	Value	Costs	Value
Pan size (m3)	50	Average pan steam consumption (t/h)	12	Jigger cost (\$/m)	\$1,800
Impact of pan cycle time on factory (%)	5.00%	Average steam reduction (%)	2.00%	Jigger tube required (m)	12
Factory operation (h/y)	3000	Steam savings (\$/y)	\$5,760	Jigger installation cost (\$)	\$54,000
Factory operation costs (\$/h)	2200	Average pan cycle (h)	3	Jigger maintenance (% p.a.)	1%
Electricity cost (\$/MWh)	\$60	Cycle time reduction (%)	7.60%	Jigger maintenance (\$/y)	\$540
Steam cost (\$/t)	\$8	Reduction in factory operation (\$/y)	\$25,080		
Discount Rate (%)	15%				
		Total Benefits (\$/y)	\$30,840	Total Operating Costs (\$/y)	\$540
Capital and installation costs	\$54,000	US	\$49,090.91		
Operating costs	\$540 per annum	US	\$490.91		
Benefits	\$30,840 per annum	US	\$28,036.36		
Ongoing benefit	\$30,300 per annum	US	\$27,545.45		

FINANCIAL ANALYSIS

Year ending 30 June	0	1	2	3	4	5	6	7	8	9	10
Base case											
Capital costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Ongoing benefit	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
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Capital costs	\$54,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Ongoing benefit	\$0	\$30,300	\$30,300	\$30,300	\$30,300	\$30,300	\$30,300	\$30,300	\$30,300	\$30,300	\$30,300
Capital cost	\$54,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
On-going benefit	\$0	\$30,300	\$30,300	\$30,300	\$30,300	\$30,300	\$30,300	\$30,300	\$30,300	\$30,300	\$30,300
Non-discounted cashflow	-\$54,000	\$30,300	\$30,300	\$30,300	\$30,300	\$30,300	\$30,300	\$30,300	\$30,300	\$30,300	\$30,300

DISCOUNTED CASH FLOW ANALYSIS

Analysis year	0	1	2	3	4	5	6	7	8	9	10
Discount factor	1.0000	0.8696	0.7561	0.6575	0.5718	0.4972	0.4323	0.3759	0.3269	0.2843	0.2472
Discounted capital costs	\$54,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Discounted net benefits	\$0	\$26,348	\$22,911	\$19,923	\$17,324	\$15,064	\$13,100	\$11,391	\$9,905	\$8,613	\$7,490
Discounted cashflow	-\$54,000	\$26,348	\$22,911	\$19,923	\$17,324	\$15,064	\$13,100	\$11,391	\$9,905	\$8,613	\$7,490
PV capital costs	\$54,000										
PV benefits	\$152,069		US	\$138,244.26							
NPV	\$98,069		US	\$89,153.35							
B/C Ratio	2.82	:1									
Ratio Benefits/Capital Costs after 4 years	1.68	Non discounted									
Ratio Benefits/Capital Costs after 4 years	1.28	Discounted									
IRR	55.4%										
IRR (discounted)	35.2%										
NPV/Capital	1.82										

Notes:
 50m3 pan requires 12m jigger tubes
 120m3 pan requires 18m jigger tubes
 Installation is 150% of jigger purchase cost