

CASE STUDY

Product: Scalper Screen Media
Commodity: Iron Ore
Country: Australia
Technology Groups: Screening Media
Companies: Multotec Australia & Multotec South Africa



MULTOTEC

Replacement of competitor scalping screens 3.1 m x 6.0 m (3 screen machines)

Massive screen media 995 mm x 608 mm x 70 mm weighing over 58 kg per panel with 6 weeks wear life

Background:

Prior to the introduction of the **Multotec HD rubber panels** at this site, the client was struggling with extended delays during shutdowns as the screen media was too large to remove manually.

They required the overhead crane to assist the removal of the 58+ kg screen media. At the same time the crusher re-liners need the overhead crane to remove their crusher parts. This would cause a bottleneck between the 2 work groups and delay the production by 2-3 days every 6 weeks.

Multotec's solution:

Phase 1: Achieve 6-week screen media life

Multotec optimised the plant by introducing modular panels for quick change outs and eliminated the need for cranes and eliminated the downtime. The screen media can now be changed in 12 hours. This gave the client increased uptime and in 12 months added another 1.5 Mtpa to their operation.

By understanding the requirements of the client and the targets for long-term planning, Multotec designed panels, taking the shut-down changeout interval to achieve the 12 weeks.

- Changeouts are predictable
- Modular light weight parts
- Multotec removed the hazard of overhead crane
- Standardisation of hold down system
- Achieved double the wear life of the previous supplier

Key Project Outcomes

- Increased production
- Increase MTBF
- Less maintenance-related downtime
- Increased plant availability
- Less \$\$\$ on consumables spending



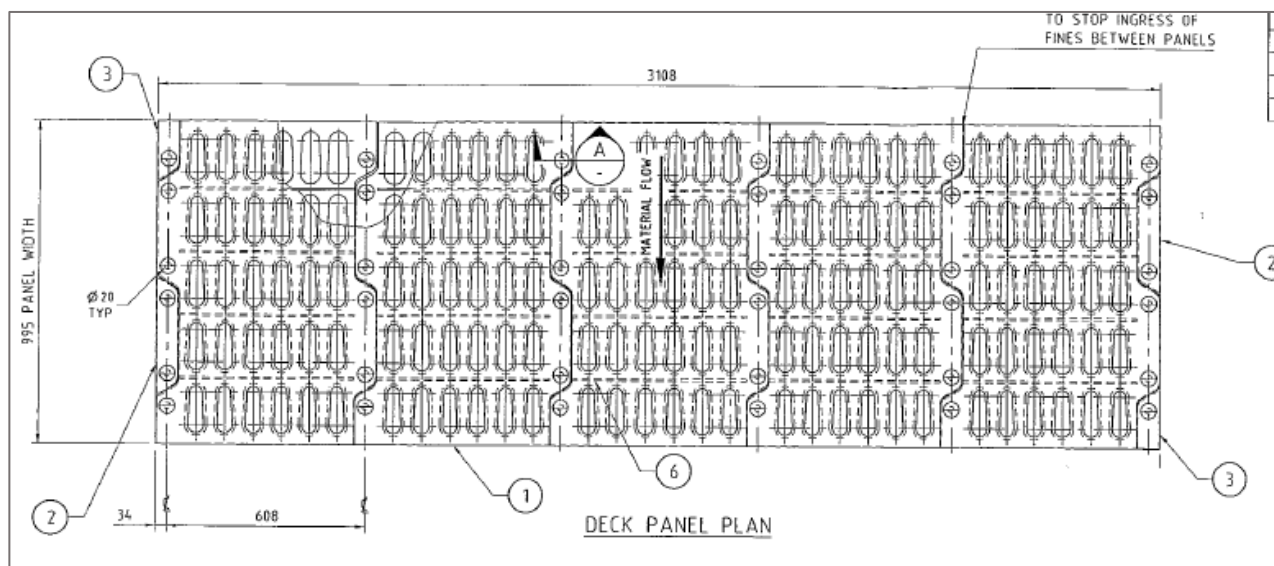
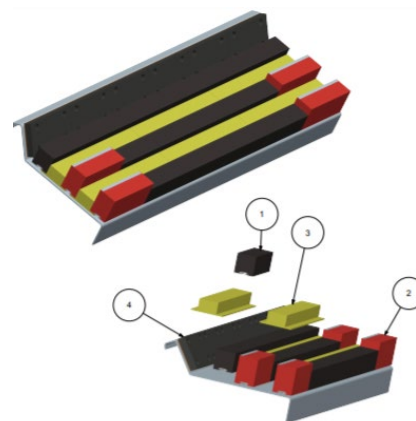
Cost evaluation:

Scalper / Product Screen	Cost per screen	Change out per year approx.	Number of screens	Total yearly
Previous Supplier	Aus\$ 47 000	8.5	3	Aus\$ 1 198 500
Multotec	Aus\$ 47 000	4	3	Aus\$ 564 000
SCREEN MEDIA SAVINGS	Total Savings			Aus\$ 634 000
Iron Ore	1.5 Mtpa	@ Aus\$75 per tonne		Aus\$ 112 mil
ESTIMATE gain from production	Earnings			1.5 Mtpa

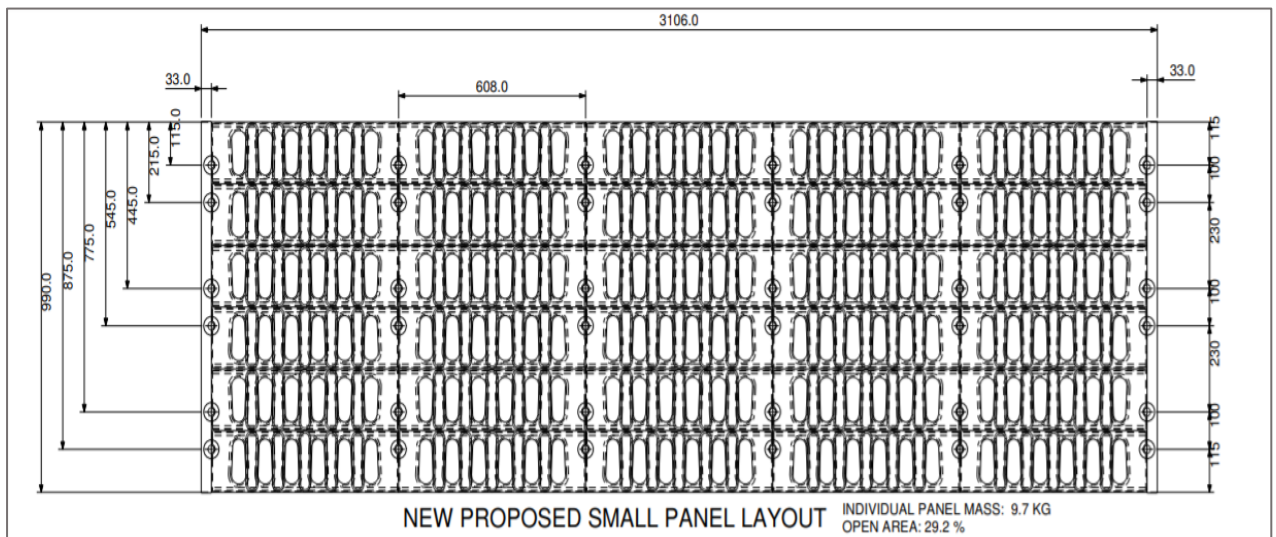
Phase 2: Optimise impact area wear life

The feed end impact area was only lasting 6-8 weeks wear life. Multotec designed an impact box with modular lifter bars to extend the wear life to 12 weeks to align with new shutdown intervals.

- Interchangeable parts
- Modular
- Easy to install and remove
- Extend the wear life in the impact zone



Previous supplier's screen configuration



Multotec modular screen media solution