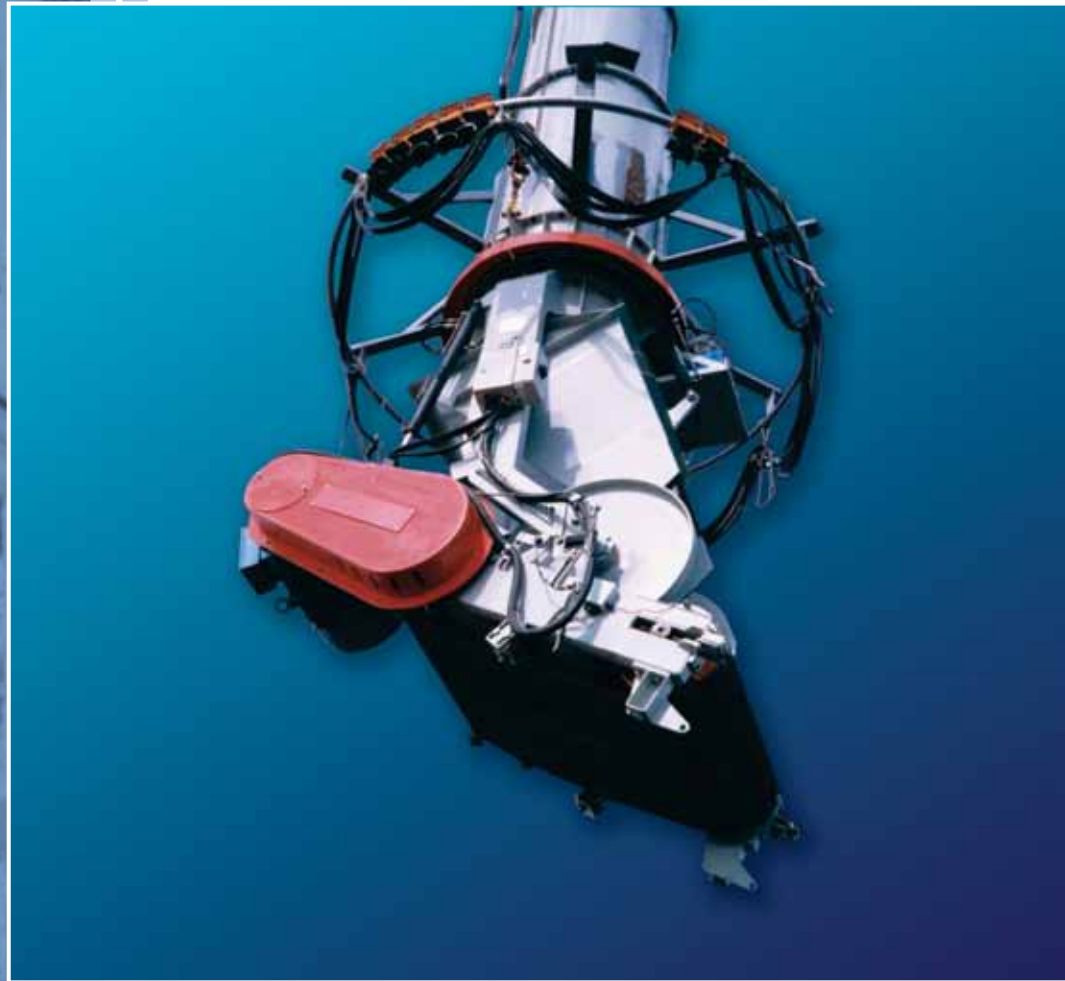


HMA

TP TECHNIPLAN



Mechanical & Structural Engineers

Committed People  Innovative Solutions

www.hmagroup.com.au



INTRODUCTION

Techniplan is a company specialising in Mechanical and Structural Engineering solutions and has been operating since 1984. Joining the HMA Group in 2008, it has continued to grow and can now offer expertise in the areas of electrical instrumentation and process engineering.

In the last twenty five years the business has carried out numerous mechanical and structural engineering, procurement and construction management projects for the mining, minerals processing, railway and port sectors.

Techniplan employs a number of highly qualified engineers, draftsmen, CAD operators and project managers. The company is able to stay at the forefront of best practice by means of the latest industry standard design and modelling software coupled with an ongoing program of skills upgrading and training.

Techniplan has built a solid reputation for quality, based on its operating philosophy of 'Get it Right'. Techniplan's initial focus was on the design of large materials handling systems such as conveyors, ship loaders, stackers and reclaimers and processing plants for the mining industry and as a result, the Techniplan team of qualified engineers have had extensive experience in this industry; from consulting, contracting and manufacturing viewpoints.



TECHNIPLAN PTY LTD

Techniplan has custom developed hundreds of turnkey design contracts and has been involved in everything from materials handling solutions to large scale plant upgrades through to green field multi-disciplinary projects.

Techniplan is still heavily involved in the mining industry but has become increasingly more involved in the design and construction of specialised machinery such as jet slingers, railway maintenance equipment, cranes, manipulators, and prototypes to customer specifications.

Typical railway maintenance machines which Techniplan has designed and built over recent years include: ballast under cutters, sleeper renewers, spot tampers, clip inserters, sleeper unloaders, sleeper handling cranes, special purpose scissor lifts and even truck mounted boom lifts for railway maintenance.

A significant strength is designing and building bulk material handling systems for all types of material including coal, woodchips, grain, ores and rock. Over many years, Techniplan has designed and supplied stackers, trippers, shuttles, feeders and belt conveyors. As well as piece handling equipment for mail, parcels and board handling.

Techniplan is regularly called upon to provide its expertise in areas of design review, certification and accident analysis.

WHY DO BUSINESS WITH TECHNIPLAN?

The Techniplan ethos "Get it right" applies to every project and every client. Techniplan staff excel at solving technical and engineering problems in an innovative way which provide results that work.

As a client or a supplier you are always in a close working relationship with senior Techniplan engineers who use a unique 'hands on' approach to all work entrusted in them.

- > Techniplan offers a multi-discipline engineering design practice.
- > Long-term experience in materials handling systems and machine design
- > Long-term and close relationships with machine manufacturers and fabricators.
- > High commendation in the 2001 Engineering Excellence Awards for the Design and supply of Four Rail Maintenance Machines.





"We have three Techniplan jetslingers at our plant. Two of them are on our stockpile on a reversible conveyor and they distribute woodchips from our chipping plant on to the stockpile. The third jetslinger is fitted to our ship loading plant and also includes a telescopic chute. We consider the Techniplan jetslingers to be the best we have seen and have found them to be most reliable and simple in design and operation. They are very reliable and extremely maintenance friendly."

*Tony Vaibar – Maintenance Superintendent
South East Fibre Exports Pty Ltd*

JET SLINGERS

Techniplan slingers are a tried and proven solution for stockpiling and ship loading applications. Techniplan slingers have been used successfully on the following bulk material:

- > **COAL - washed and raw**
(Capacity up to 2500 tph)
- > **WOODCHIPS – hardwood and soft wood**
(Capacity up to 1500 tph)
- > **GRAINS – Wheat, Barley, Maize**
(Capacity up to 1000 tph)
- > **SUGAR**
(Capacity up to 3000 tph)
- > **MINERAL SANDS – ilmenite etc**
(Capacity up to 1000 tph)

FEATURES

Techniplan has developed a number of innovative concepts which set its slingers apart from others

QUICK BELT CHANGE FACILITY

The quick belt change facility does away with the need to dismantle the slinger in order to change a conveyor belt. It also does away with the need for cranes and heavy lifting equipment. More importantly, the change can be effected in under an hour by an experienced crew. This means that an unscheduled belt change does not necessarily mean long interruptions and delays to ship loading or stockpiling operations.

INTEGRAL BYPASS CHUTE

The integral bypass chute allows material to be directed to the belt or past the belt. The chute is not an obstructive flap valve. It is an open free flowing tilting chute without ledges or impediments to the passage of material.

CORRECT GEOMETRY

Techniplan slingers load tangentially onto the belt, maintaining correct loading geometry under a wide range of trajectory luff angles. This is achieved without changes in the relationships between pulleys and consequently without changes of belt tension.



Slingers are supplied with, or without, bypass chute with either hydraulically operated cylinders or mechanical screw jacks. They can be supplied with a trolley and a winch for hauling slinger back to a maintenance platform for changing belts.

Alternatively they can be supplied with integral platform which rotates with the slinger.

Jet slingers have been supplied to all states of Australia as well as export destinations including Fiji, New Zealand, Indonesia and South Africa. Techniplan will custom design to your requirements, and supply all of the auxiliary equipment such as telescopic chutes, winches, trolleys.

TELESCOPIC CHUTES

Techniplan builds a range of telescopic chutes that enable the Jet Slinger to be manoeuvred over the side of larger ships than would otherwise be possible.

Techniplan telescopic chute winches are a tried and proven design incorporating planetary gears and are equipped with back up safety brakes capable of holding a blocked chute. They are available with the complete range of ship loading head accessories including telescopic chute gimbal joints, jet slinger electrical power feeding devices based on cable reelers, slip rings and C-track.



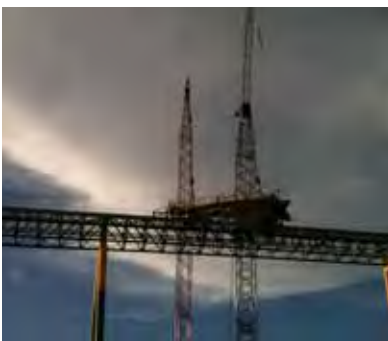
MINING & QUARRY INDUSTRIES

Techniplan can design, supply and erect turn-key bulk conveying solutions for all sectors of the mining industry including coal, woodchips, grain, ore, rocks or other materials.

These solutions include:

- reject gates
- belt feeders,
- radial stackers,
- train load out conveyors,
- shuttle conveyors,
- trippers,
- bin gates,
- jet slingers,
- telescopic chutes,
- belt feeders,
- plant and chain conveyors,
- elevated coal bins,
- storage silos,
- processing plants,
- coal wash plants.
- Train loaders

We have experience in conducting into new operations and we can take these through to design and execution.





Techniplan specialises in the design of custom built mechanical handling equipment suitable for arduous conditions and demanding climates. They can design and supply just about every solution possible for the Railway industry and more specifically equipment needed to help rail maintenance crews.

Railway solutions include:

ROAD – RAIL CONVERSIONS

hi-rail conversions for complete range of trucks & equipment.

SLEEPER RENEWERS

used by flying rail maintenance gangs in remote areas.

SLEEPER UNLOADERS

automatically unloads sleepers from custom built sleeper wagons.

TECHNIPLAN VIBROPAK

a rapidly deployable spot tamping machine designed to consolidate either new, worn or loose ballast under concrete, steel or timber sleepers.



BOOM LIFTS

attachments mounted on a road rail truck;
used for repair and maintenance of
overhead conductors.

SCISSOR LIFTS

to service overhead conductors on
electrified railways. The scissor lifts are self
propelled by an air cooled diesel and can be
operated at speeds up to 25 Kph.

GANTRY CRANES

special purpose high performance gantry
cranes to transport sleepers as part of a
track strengthening project.

CLIP INSERTERS

designed to apply and extract rail clips from
both sides of the rail simultaneously with
one operator.

SWITCH BALLAST UNDERCUTTER

capable of removing fouled ballast from
underneath the railway track.

RAIL HEATERS

self-contained units or consists.



SPECIALISED DESIGN & PROTOTYPES

Techniplan is extremely proud of its ability to design, build and supply custom engineering solutions.

Some of the more specialised projects that Techniplan has designed, have been in the materials handling and transportation areas; in industries where the solutions have needed to be innovative and unique.

Techniplan also manufactures a range of overhead cranes and lifting equipment, spreaders and forklift attachments, and other container handling machinery.

Simply ask us if it can be done...



MobyDick Wheel Washing Systems

We solve the problem of dirty roads & highways

HMA Techniplan are the exclusive agents in Australia / New Zealand / New Guinea / New Caledonia and Fiji for MobyDick Wheel Washing Systems.

MobyDick Wheel Washing System is a division of FRUTIGER. FRUTIGER AG is based in Winterthur Switzerland and have over 3000 units installed world wide, and with over 25 years of experience are able to provide you with a perfect solution to your problem of dirty and contaminated roads no matter what the site conditions. MobyDick have eight base models with an extensive range of design variations to meet individual customer needs.

Understanding the particular problem is the starting point in putting together the suitable MobyDick System.



performance, the water treatment plays a decisive part in the success of a Wheel Washing System. The wash water in all MobyDick Systems is re-circulated for further use. The water treatment is achieved either through the addition of a flocculent and automatic sludge-removal with a scraper conveyor or with large settlement tanks which may be used without flocculent addition.

...We provide you with a perfect solution to your problem of dirty and contaminated roads no matter what the site conditions.

MobyDick Wheel Washing Systems are used in many various applications:-

- Waste Management
- Landfill
- Coal and hard rock mining
- Aggregates
- Livestock and botanical disease isolation
- Reclamation of fertilisers
- Construction including road and building

Next to the highly effective cleaning



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