

# ABOUT IHC ROBBINS

IHC Robbins is a multi-discipline technology business operating from Brisbane and Perth. It specialises in providing integrated services to the mineral sands and alluvial mining industry in the key areas of:

- geology resource evaluation,
- metallurgical testwork,
- practical mining engineering/concept engineering,
- specialised equipment, and
- project delivery.

Through our integrated service capability, IHC Robbins is uniquely positioned to support clients through the entire lifecycle of their mining project: from discovery to construction, operation, production, tailings development, management and rehabilitation.



## IHC ROBBINS AND ROYAL IHC

IHC Robbins is a fully owned subsidiary of Royal IHC.

With a history steeped in Dutch shipbuilding since the mid-17th Century, Royal IHC has in-depth knowledge and expertise in engineering and manufacturing high-performance integrated vessels and equipment, and providing sustainable services.

The international strength of the Netherlands-based Royal IHC underpins IHC Robbins' focus on supplying world-class engineering services to the resources industry, specialising in the delivery of heavy mineral and alluvial processing plants.



## MISSION

Our mission is to design innovative solutions and provide reliable geological, metallurgical, engineering and project services that add value to our clients' activities in the mining and minerals industry by optimising operational performance.

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## A VARIETY OF ACCESSORIES ARE AVAILABLE FOR THE BASIC PLATFORM. THESE INCLUDE THE FOLLOWING:

For mineral sands application:

- Static grizzly fitted to the slat feeder.
- Product screen mounted on the slurrification bin structure.
- Oversize chute for the product screen.
- Oversize chute and reject conveyor for the product screen.

For tailings reclamation applications:

- Disintegrator mounted on the slurrification bin structure, for the mechanical disintegration of the product prior to slurrification

## GENERAL ACCESSORIES

- Dozer trap feed option.
- Dilution water pump on a skid unit.
- Booster pump set for the slurry product, on a skid.
- Combination MCC and Transformer skid to power the installation, on a skid.
- Control system with telemetry interface.
- Flow and density control instruments.
- Inter skid piping and hoses.
- Inter skid power and instrument cables.
- Operational flood lights.

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www.royalihc.com



# IHC ROBBINS DMSU DRY MINING SLURRIFICATION UNIT UP TO 1800TPH



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# IHC ROBBINS DMSU

IHC Robbins has developed a skid mounted Dry Mining Slurrification Unit (DMSU) to serve as an uplift and slurrification tool for a range of mineral deposits.

The DMSU has a production range of up to 1400 tph. Offering a high volume, superior reliability, all terrain, slurrification solution, the DMSU can be readily customized to suit a client's mineral body and throughput expectations.

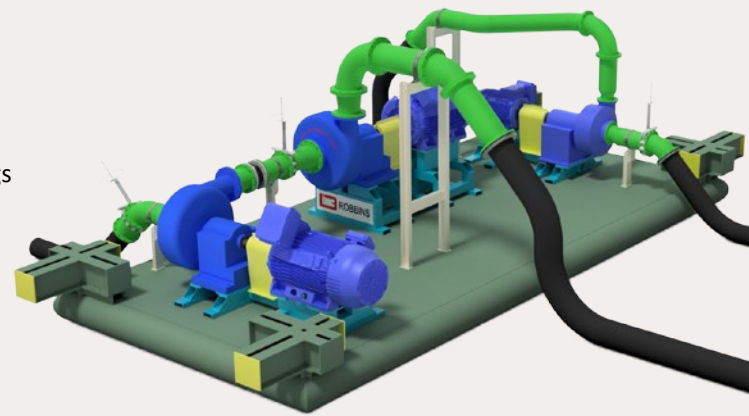
The plant is intended for use to uplift, screen and slurry mineral sands or alluvial sands deposits. Alternatively the unit can be used to uplift, disintegrate and slurry dry tailings materials, in the reclamation of tailings deposits.

## SKID CONCEPT

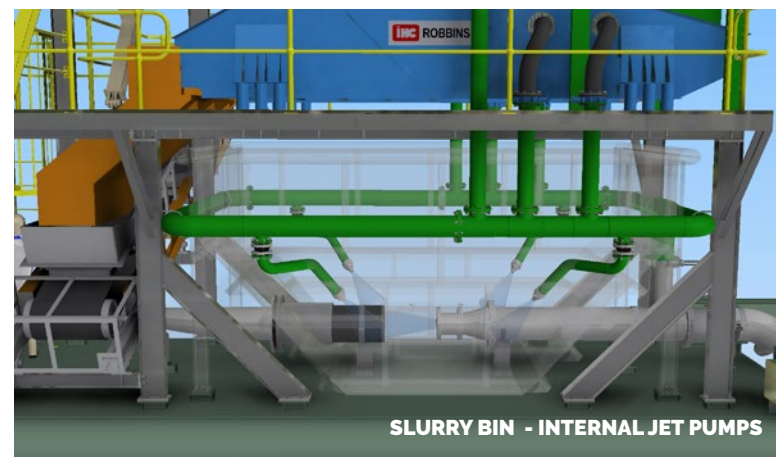
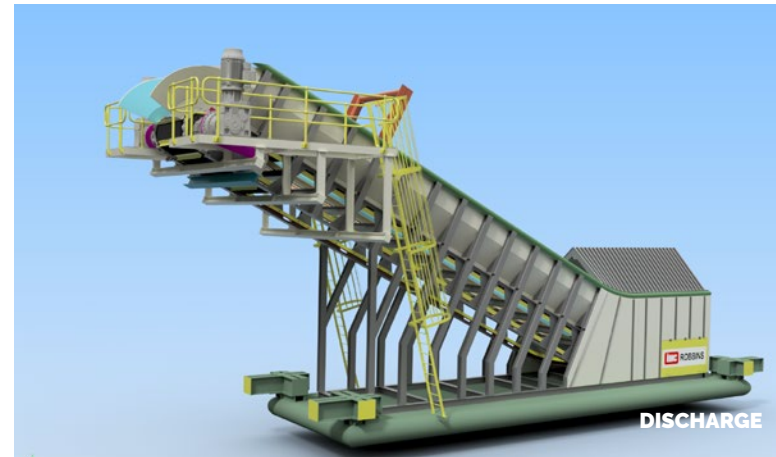
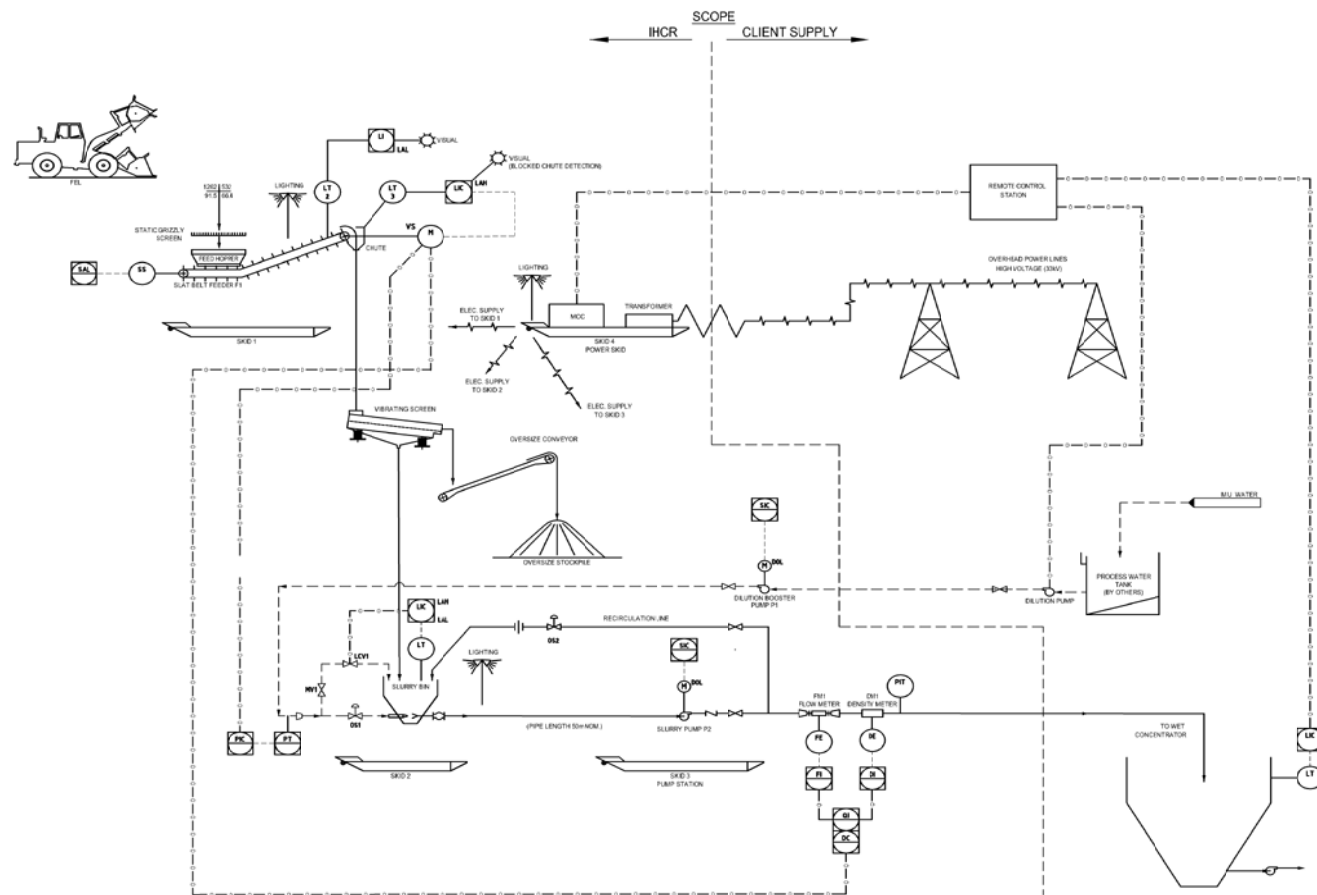
The skid concept provides a low ground pressure footing (less than 20 kPa) for use on unstable pavements. The modules are relocatable as needed via dozer or equivalent, with replaceable buffer blocks used to shunt the skids into position.

## PUMP SKIDS

The pump skid is offered with client specification pump sets, selected to suit the capacity and density as required.



## PIPING AND INSTRUMENTATION DIAGRAM



## ADVANCED EQUIPMENT

### SLAT FEEDER

The slat feeder can be fed from both sides, making the unit suitable for high throughput applications. Achieving both buffer volume and conveyor reach in one single module, the DMSU's slat feeder reduces the number and mass of conveyor modules ordinarily required to feed such a slurrification module.

With an incline angle of 26 degrees and the option of rib type feeder belt slats, the feeder can feed most materials.

The slat feeder has a solids holding volume of over 20 m<sup>3</sup>. The bulk of the holding volume is accommodated in the inclined section of the feeder reaching up to the slurrification bin module. For this reason, the feeder achieves both the buffer capacity (hopper volume) and the attractive working feed height of 3.2 m.

### RAMP FREE DESIGN FOR EASE OF USE

In reducing the feed height, the DMSU does not incur the operating expense of a feed ramp. Even with the grizzly option, the feed height remains unchanged at 3.2 m. Without the need for ramps:

- The relocation of the plant becomes significantly less complicated.
- Incidents of driver safety and machine damage are minimised.
- The product feed rate via front end loader is optimised.
- Dozer push application can also be easily adopted.

### SLURRY BIN

The slurrification bin has a capacity of 25 m<sup>3</sup>. Utilising an internal jet pump nozzle, in combination with motive water (dilution), the module slurries the solids feed to the desired density and direct this stream into a booster pump assembly. The booster pump receives the slurry and transfers the product overland to the clients process plant.

This internal jet pump allows for a squat slurrification bin that will achieve consistent product density, will not hang up with solids internally, and does not represent an NPSH issue for the booster pump. The bin height is kept to a minimum, to reduce the height required by the feed conveyor, to feed the system.

Are you interested in what the IHC Robbins DMSU can achieve for your project or operation?

Please contact IHC Robbins  
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# WHY CHOOSE IHC ROBBINS?

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- Integrated engineering service capability,
  - Uniquely positioned to support clients for the entire lifecycle of their mining project
- IHC Robbins is a fully owned subsidiary of Royal IHC.
  - Royal IHC has in-depth knowledge and expertise of engineering and manufacturing high-performance integrated vessels and equipment, and providing sustainable services.



## SAFETY, HEALTH, ENVIRONMENT AND QUALITY (SHEQ)

- Delivery of successful projects through strong personal leadership and taking responsibility within every level of our organisation
- Continuous improvement to our operations in order to meet and exceed the quality requirements of our customers
- Dedication to minimising the impact of our operations on the environment
- Commitment to identification, management and mitigation of risks
- Use of an Integrated Management Systems for Safety, Quality and Environment



## MANAGEMENT SYSTEMS

- The IHC Robbins Management System has been developed over a number of years to facilitate successful project delivery
- Emphasis on producing accurate and timely deliverables, project reporting, forecasting, and administration.
  - These are deployed across all facets of IHC Robbins' business – process and engineering design, project management, project controls, costing, scheduling, procurement and expediting through to commercial and financial administration