



# IHC Tailings Slurrification Unit

## Transporting tailings up to 250 in situ m<sup>3</sup> ph

The IHC Tailings Slurrification Unit (TSU) is a semi-mobile unit responsible for tailings oversize removal, temporary storage, slurry generation (slurrification) and slurry discharge to the destination site. The TSU can be fed by a conventional excavator or front-end loader and transports tailings over large distances efficiently. The TSU is capable of transporting 125 - 250m<sup>3</sup>/h of in situ tailings by means of low OPEX slurry transport.

By using slurry pipeline transport instead of a large, diesel-powered truck fleet, this increases operational safety, reduces the costs per tonne and adds to the reduction of the carbon footprint tremendously. This can be enhanced even further when using a completely electrified slurrification unit.

The TSU is equipped with an IHC High Pressure High Efficiency (HRHD-series) pump, able to pump slurrified tailings over large distances and elevation differences. To increase the transport capabilities, the TSU can be combined with an in-line booster pump station to increase the overall pumping range.

The TSU is a modular unit, based on standard container sized dimensions. This makes it road transportable.

The TSU can operate as a complete stand-alone unit based on an integrated design, including relevant unit systems like pumps, slurrification bin and the electrical & control equipment. An external water supply pump with water piping is required to provide slurrification water to the system. The slurry has to be discharged via a slurry pipe system; power can be added by electric cabling coming from a nearby grid or generator.



## Advantages

- ✓ increased operational safety
- ✓ lower cost per tonne
- ✓ minimal downtime
- ✓ low carbon footprint
- ✓ modular and easy transportable design
- ✓ remote controlled operation possible.

*Dry mining combined with low OPEX slurry transport to enhance operational efficiency*



### Oversize removal and slurrification in one unit

The heart of the TSU consists of a slurrification bin and the centrifugal slurry pump for the transport of the tailings. The slurrification bin is covered by a tiltable grizzly screen (75mm aperture) to screen off oversize and protect the pump from blockage. The container-sized and modular design of the TSU makes it very suitable to customise to meet specific project needs and (environmental) conditions.

### Mobility in every terrain type

Undercarriage of the TSU can be customised to suit specific operational environments. Examples are:

- sliding skid with pull bar
- steel tracks
- amphibious tracks.

### Options tailored for every operation

The TSU is a versatile and flexible system that can be directly integrated in different types of operations.

The TSU can be used to:

- transport and directly discharge material into another storage pond or mined-out void
- transport and discharge material in to geotextile tubes for dewatering and final storage
- transport and feed a buffer of a processing plant to extract residual mineral content.

### Electrically powered

The TSU is fully electrically driven. As the electric infrastructure at each Tailings Storage Facility is different, the TSU is available in the following configurations:

- high voltage (direct connection to available grid)
- low voltage (powered by a mobile generator set or by grid using a transformer).

### Remote controlled or automated operation

The TSU can be fully remotely controlled, thereby improving operational excellence and lowering the costs, but also limiting the need for personnel on site, which adds to health and safety. Characteristics:

- PLC based automation and control system
- vibrations measurement and control
- monitoring slurrification process
- hydraulic transportation system control
- remote controlled operation possible.

#### Dimensions

Length	18.4m
Width (min)	3.5m (skid base)
Width (max)	4.8m (top feed hopper)
Loading height	5.0m

#### Mass

Empty	60t
Operational	86t

#### Oversize screen

Size opening	75mm
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#### Slurry installation

Slurry pump	IHC High Pressure, High Efficiency slurry pump (HRHD-300)
Power at shaft	Up to 750kW
Discharge pipeline	HDPE or Steel
Discharge pipe Ø	250/300mm

#### Power

Power type	Electric @ 440V (HV options available)
Installed power	Up to 850kW

Are you interested in what the TSU can achieve for your project or operation?  
Would you like more information?

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