Metso

Inclined Plate Settlers (IPS)

Maximum process recovery, minimum plant footprint

Planet Positive

Sustainability is one of Metso's key strategic priorities, we are committed to limiting global warming to 1.5 °C. The Metso Inclined Plate Settlers are a part of the Planet Positive offering because they minimize the environmental impact on site, while maximizing profitability.

- 50% smaller plant footprint
- Maximized recovery rate
- Robust design
- Increased uptime
- Maximized throughput
- Lower installation costs
- Lower environmental impact
- 20% lower OPEX cost

Saves up to 50% space compared to conventional technology

Inclined plate settlers (IPS)

Compact solutions for improved thickening performance

Metso's inclined plate settler (IPS) is a proven and a compact sedimentation and dewatering solution offering good clarity of the overflow liquid and maximum density of the underflow solids discharge with minimum space requirements. Easy to install, relocate and adapt to process changes, IPS offers maximum return on investment to customers.

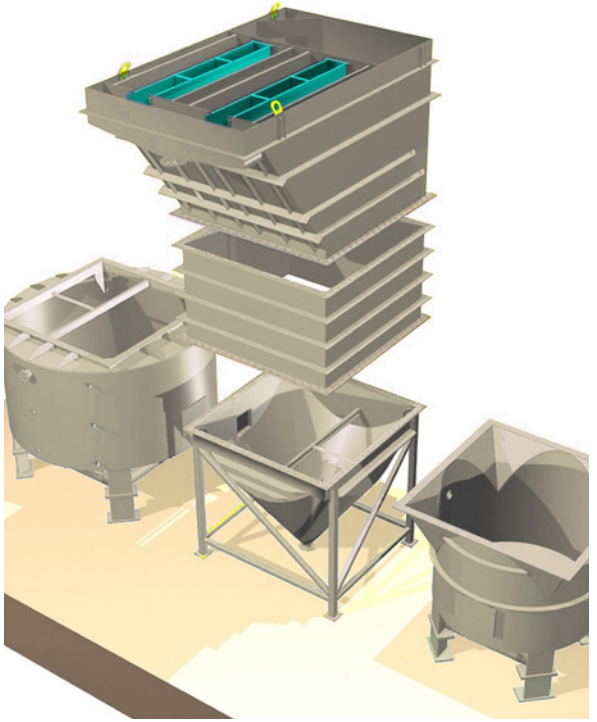
Unique IPS Principle to optimize process efficiency

Metso's inclined plate principle uses parallel inclined plates to minimize floor area occupation. The size and cost of the gravity settler can be reduced by matching the thickening & clarifying requirements more closely.

Two basic criteria for gravity settling equipment are good clarity of the overflow liquid and maximum density of the underflow solids discharge. The area needed to clarify a suspension is often greater than that needed for thickening. This means that in a cylindrical thickening tank, the lower section with rakes and drive mechanism can be oversized.

Wide product range for diverse demands

IPS product ranges from LTO, LTE, LTC and LTE/C models



Major applications:

- Metallurgical industries
- Metallic minerals
- Chemical industry
- Coal slurry
- Power plants
- Contaminated soils
- Potash
- Mine water treatment

Thickeners and clarifiers

Inclined Plate Settlers

Metso's IPS offers good clarity of the overflow liquid and maximum density of the underflow solids discharge with minimum space requirements. Easy to install, relocate and adapt to process changes with a wide product offering for a range of applications, the Metso IPS offers maximum return on investment to customers.

Uses flocculation chemistry to dramatically increase settling rates

Decreased CAPEX and up to 20% lower OPEX cost

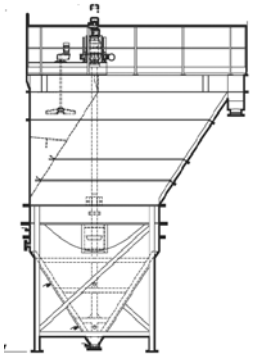
Compact and efficient design reduces plant footprint by ~50%

Increased uptime from robust design, maximized throughput and ease of maintenance

Inclined Plate Settlers

Product Portfolio

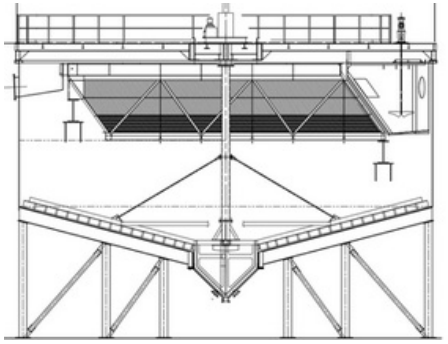
The IPS equipment has proven to provide maximum recovery rates and a decreased plant footprint for a wide range of applications.



LTO
15 – 500m²

Key features

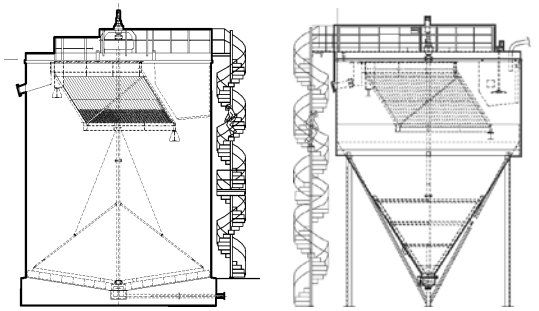
- Small to medium flow range
- Suits slurries containing coarse particles, can be fitted with rake mechanism and rake lift
- Standardized design with modular options for extra sludge retention



LTC
440 – 5400m²

Key features

- Multiple inclined plate packs in a conventional thickener tank with standard center drive rake mechanism
- Substantial reduction in TIC due to large settling area to floor area ratio



LTE & LTE/C
220 – 1140m²

Key features

- Cylindrical or Conical tank with inclined plate packs, for high thickening performance and/or extended sludge buffering
- Gives maximum clarification area from minimum floor space
- Minimize/eliminate flocculants

Treatment of mine water underground at a large iron-ore mine

Challenge

Pumping solid free processed water from underground mine with clean overflow and space issue

Solution

Installing three units of IPS LTO 500-F8 thickeners at the basement of the mine

Results

Achieved production of a clean overflow with particles below 20 ppm against the set limit of 100 ppm with Metso's IPS units.

Clean overflow with particles below

20 ppm

IPS LTO models easy to relocate and adapt to process changes, Metso Inclined Plate Settler offers flexibility to customer's operations.

Metso is a frontrunner in providing sustainable technologies, end-to-end solutions and services for the aggregates, minerals processing and metals refining industries globally. By helping our customers increase their productivity, improve their energy and water efficiency and environmental performance with our process and product expertise, we are the **partner for positive change.**

Metso

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