

Metso:Outotec

IPS

Inclined plate settlers

Maximum
process recovery,
minimum plant
footprint



Planet Positive

Sustainability is one of Metso Outotec's key strategic priorities, we are committed to limiting global warming to 1.5 °C. The Metso Outotec 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 Outotec'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 Outotec'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.

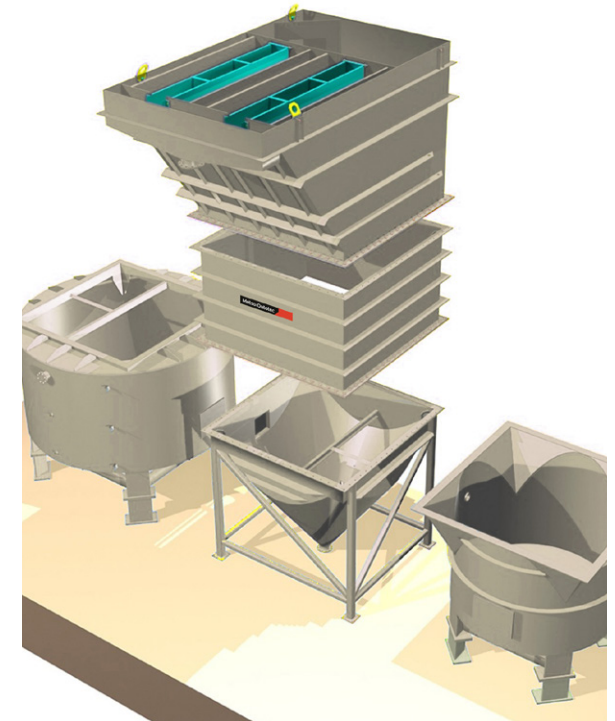
Two basic criteria for gravity settling equipment are good clarity of the overflow liquid and maximum density of the underflow solids discharge. The area needed to clarify a suspension is often greater than that needed for thickening. This means that in a cylindrical thickening tank, the lower section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

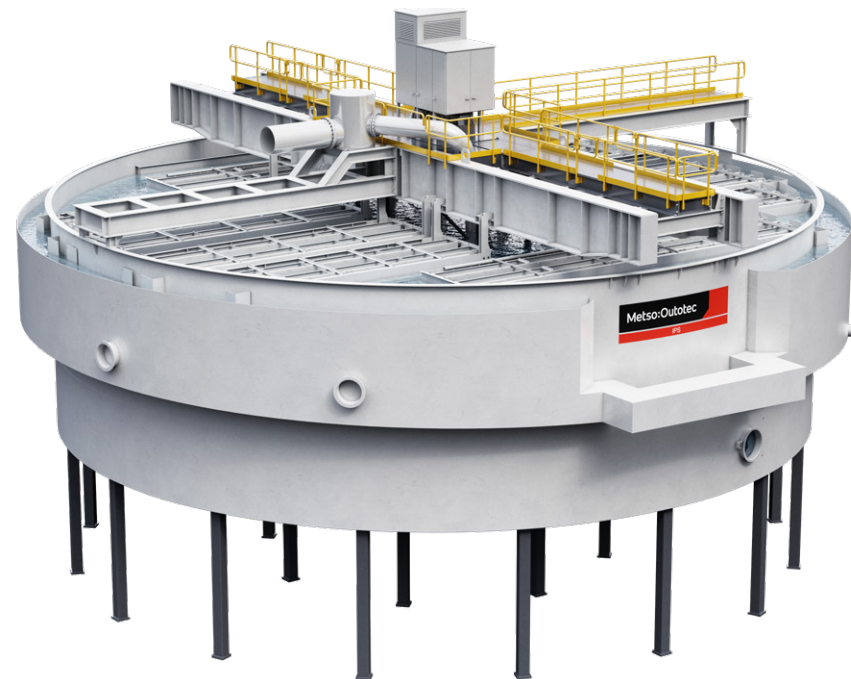
- Metallurgical industries
- Metallic minerals
- Chemical industry
- Coal slurry
- Power plants
- Contaminated soils
- Potash
- Mine water treatment



Thickeners and clarifiers

Inclined Plate Settlers

Metso Outotec'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 Outotec 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



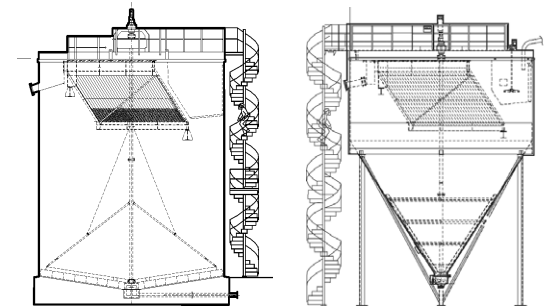
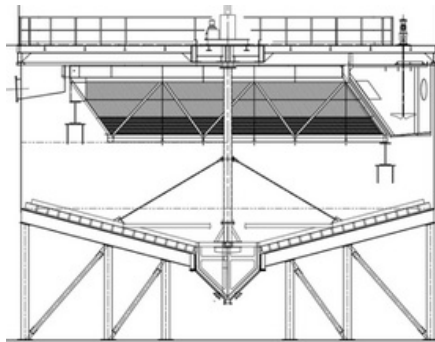
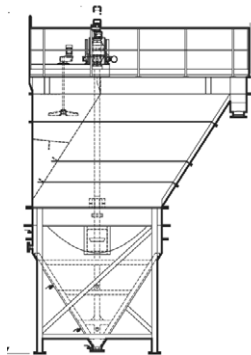
Compact and efficient design reduces plant footprint by ~50%



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

LTC
440 - 5400m²

LTE & LTE/C
220 - 1140m²

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

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

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 Outotec's IPS units.

Clean overflow
with particles below
20 ppm

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

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