



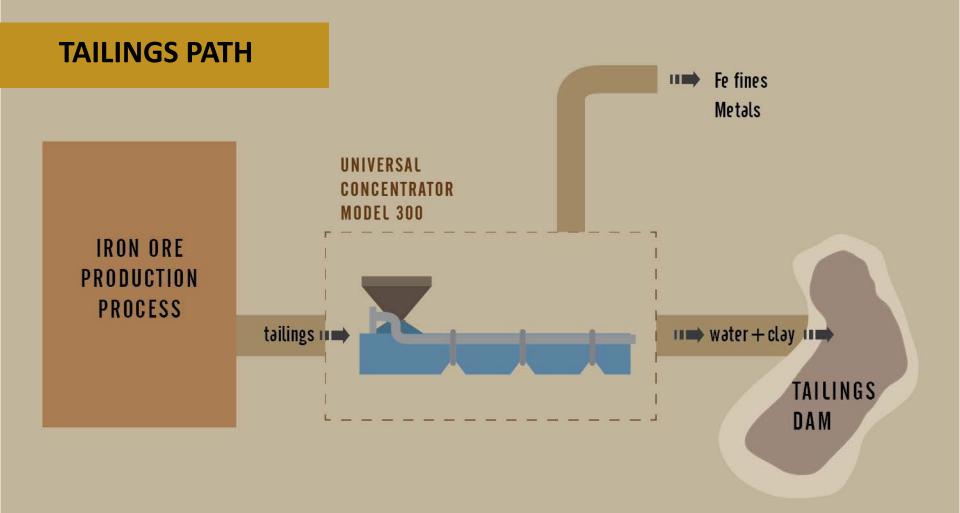
EQUIPMENT CONCEPT

Universal Concentrator model 300 recovers and classify ores and metals from tailings of mining production process.

Through gravimetric process, the material is sorted according to density.

Output Estimation: 98% of ore/metal recovery.

Equipment designed, created and developed by Universal Concentrator Technology Inc., Canadian company based in Vancouver.



HISTORY

In the early 90's, the first concentrator prototype was developed and assembled in Itabira, including Vale engineers participation.

The original goal was to recover mainly gold and iron ore contained in tailings.

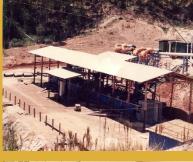
The excess of iron ore fines recovery practically colapsed the concentrator.

UCT partners internal divergencies and focus on gold recovery has limited Vale experiment and equipment development.

















- Thomas Kogler (UCT partner) has resumed and perfected the concentrator development, now adjusted to iron ore and gold recovery.
- There is an available equipment ready to be shipped to Brazil. It was constructed in Austria in 2014 and sent to Western Canada.
- It is a custom built by a first class manufacturer in Austria, with german technology, consisting in almost 10.000 parts.
- Thomas Kogler owns Brazilian patents which were issued in the late 1990 and which he assigned to Universal Concentrator Technology Inc.
- The equipment is packed and currently stored in Vancouver, British Columbia. The concentrator has dimensions of 34 x 4 meters. It is packed in two extra height 40 foot containers with all parts ready for assembly. When assembled the concentrator will be 1.5 meters high at the start to 7 meters at the highest point.

EQUIPMENT SCHEME

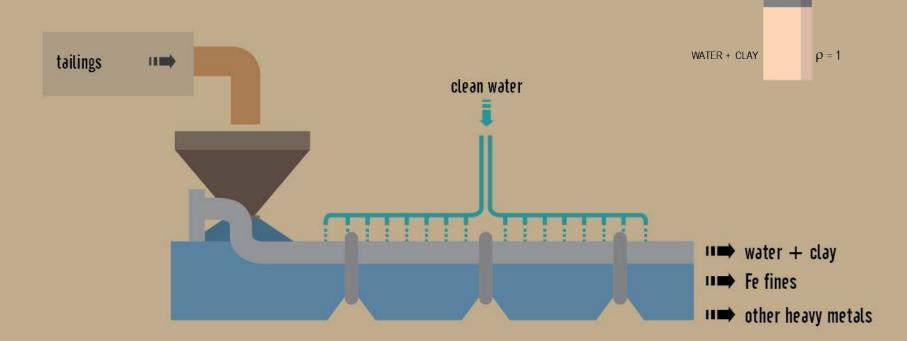
• Moviment (2 m/s)

• Vibration: 500 to 1,200 rpm

Geometry: machine angles

Design: belt slots

• Clean water: low pressure



SOME EXAMPLES

 $\rho = 19$

 $\rho = 9$

 $\rho = 5$

PLATINUM

PALLADIUM

GOLD

SILVER

COPPER

FE FINES

ENVIRONMENT

- Clean water and electricity are the only inputs of the concentration process.
- There is automatic water filtration to provide recirculation of water.
- Low electricity consumption, mainly to water and tailings pumping, concentrator vibration and conveyor belt movement.

- There is NO use of any chemical product.
- The concentrator is very environmental friendly. NO carbon footprint.
- **Equipment recovers** up to 98% of iron ores fines and other metals.
- Tailings will be water + clay + silica



PRODUCTION AND

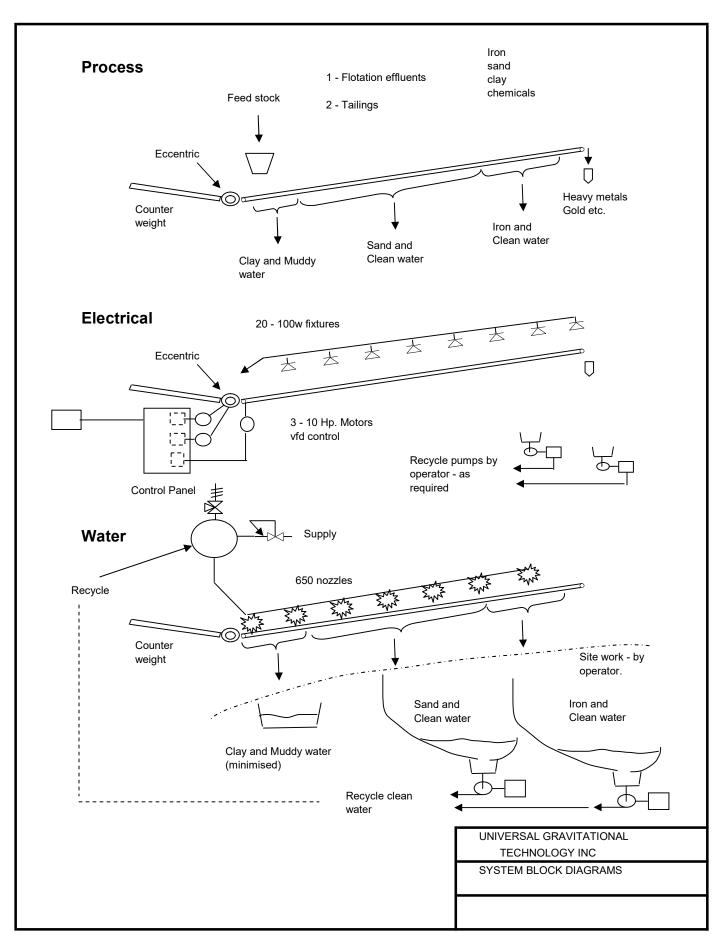
- Installation will take 3-4 weeks and an austrian engineer will fly to Brazil to supervise assembly and startup.
- The available concentrator throughput capacity, at 80% eficiency, is a minimum of 8 m³ of solids per minute.
- Studies in Canada and USA has shown iron content of 25% in the tailings. Former test in Vale presented a much higher iron content.
- Production capacity at 80% utilization:
 Iron content 25% 4,2 Mtpy
 Iron content 15% 2,5 Mtpy





BUSINESS MODEL

- Universal Concentrator Technology Inc. do not sell, rent or lease the concentrator. The company will own and run the equipment.
- The mining company will provide local adjustments and pipeline of tailings feed. Electricity and water are to be provided too by the mining company.
- The mining company capex is close to zero. There are no risks. Quick Win.
- The iron ore fines and other metals production will be shared between UCT and the mining company according to agreed proportion (Joint Venture).



C:\Users\user\Documents\Engineering\Thomas Kogler Enterprises\Concentrator\10 Cu meter per minute\10 yd unit -Technical\Process Block Diagram - version 3

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