



THE EXCELLENCE IN **FILTRATION**, BY NATURE

CONCRETE & TUNNELING



MATEC GUARANTEES:

**DRY CAKES WITH
MOISTURE <15%**

CLEAN WATER

COMPLETE TURNKEY PLANTS



CONCRETE & TUNNELING

Matec is a leader and the leading producer of hi-tech machinery for filtration of water derived from trucks, mixers, pumps and concrete, and generally all water derived from the process.

Waste water and sludge treatment arising from washing processes in concrete production sites. Matec designs and manufactures

complete CWR (Concrete Water Recycling) filtration plants.

By using the filter press, our plants treat waste water and sludge arising from various washing processes.

Matec CWR plants are designed to maximize the returns of

concrete production sites and to recover and re-use washing water, which has been clarified automatically and without using chemical additives. Thus we can guarantee cutting down disposal costs, also thanks to the production of dry cakes easy to shovel and move.



Matec CWR plant in Italy



CWR plant in Russia



CWR Filter Press in South Carolina

THE FILTER PRESS

Matec filter press is used in the CWR installations for the mud dehydration. The machine is completely automatic, for the opening and closing of plates, the washing of cloths and plates and their shaking, to guarantee that no mud remains attached to the cloths. Through the dehydration process, we obtain clean water that can be reused for washing mixers and concrete recovery units (screw separator or dewatering screen) and to obtain dry cakes easy to be disposed of. MATEC, through its CWR plants, can recover concrete at the end of its working cycle.

CONCRETE RECOVERY UNIT**SCREW SEPARATOR**

The screw separator is used to separate aggregates, which will be washed during this process, from water, which still contains the finer particles and is ready to be purified by the filter press. Recovered aggregates are piled up at one end of the screw separator, ready to be reused in the concrete production cycle.

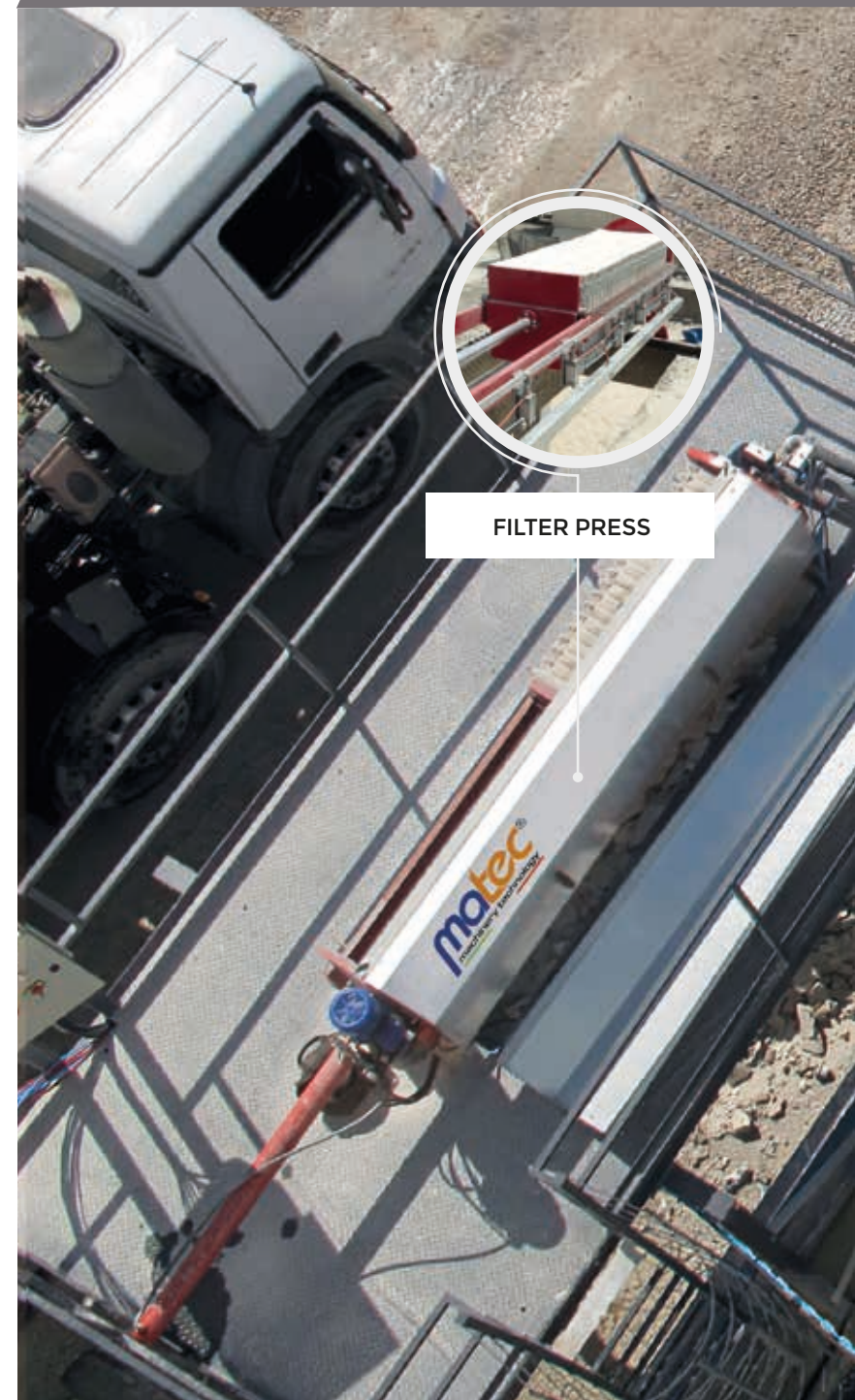
DEWATERING SCREEN

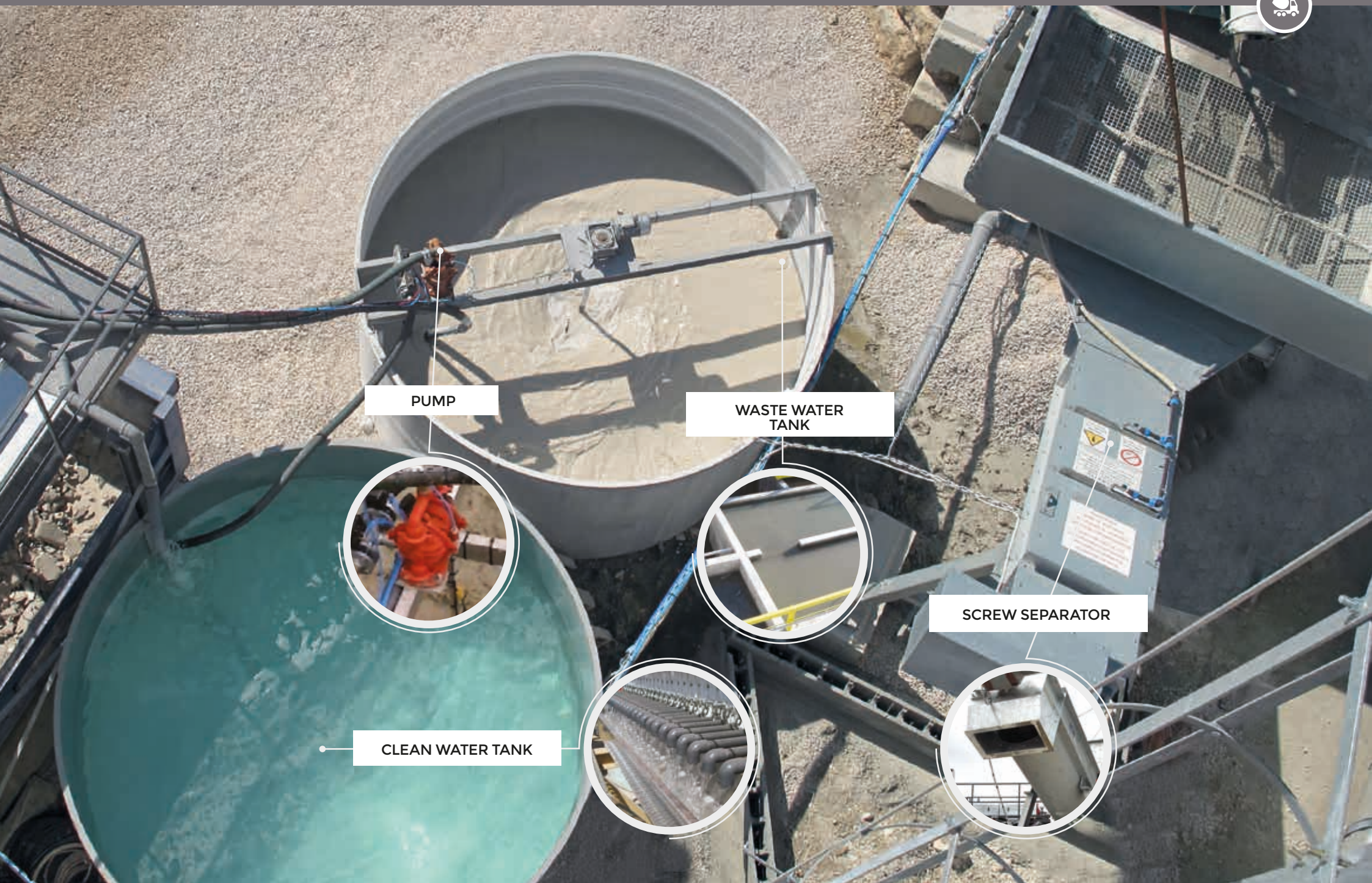
As well as separating water from washed aggregates, the dewatering screen selects the washed materials, depending on the installed number of meshes and its holes' size and allowing concrete producers to use precise mixtures. The dewatering screen is placed over a tank, where the water falls, ready to be treated by the filter press.

OPTIONAL ACCESSORIES

- Submersible pump for washing water feeding;
- Submersible pump for hopper feeding;
- Electroagitators;
- Dosing system;
- Conveyor belt.

**CUSTOMIZE YOUR FILTER PRESS SYSTEM
TO YOUR NEEDS**





PUMP

WASTE WATER
TANK

SCREW SEPARATOR

CLEAN WATER TANK





WHAT MAKES MATEC THE BEST SOLUTION FOR YOUR BUSINESS

PRESSURE

MATEC is the only 100% HPT company using pressure up to 21 and 30 BAR.

OPENING TIME

The TT2 patented system reduces discharging times of big machines from 15/20 minutes to less than 3 minutes.

CAPACITY

We design and build plants to process from 0,5 to 100 m³/h, every plant is automatic and customized.

AUTOMATION

MATEC produces only 100% automatic and hi-tech plants.



Plant in Colorado

HIGH QUALITY

Matec only uses top brands: Siemens and Allen Bradley for the electrical part, Bosch Rexroth for the mechanical part and feeding pumps 100% made in Italy.

WARRANTY AND ASSISTANCE

MATEC has a technical office with 10 engineers dedicated to blueprint design, project engineering and the providing of different platforms, 1 dedicated engineer during installation, 10 technicians for the plant assembling and start-up, and for the after-sale assistance within 24/48 hours.

100% AUTOMATIC SYSTEM

FROM 2 TO 200 TRUCKS AND MIXERS

MORE THAN 300 INSTALLATIONS IN THE SECTOR



HIGH LIGHTS

HPT (High Pressure Technology):

Our machines work at higher pressure than competitors'. Higher pressure means better components to sustain it, but it means better results and shorter cycles especially.

GASSER SHAKERS:

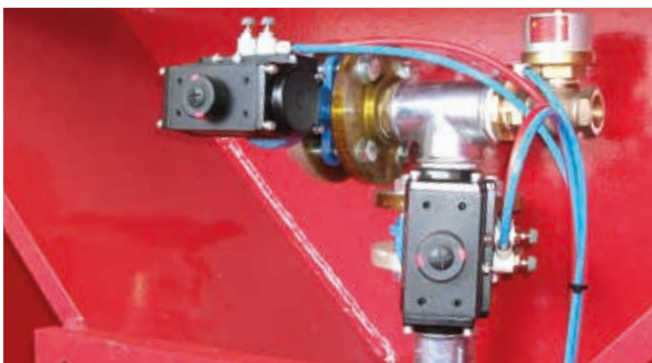
Dedicated hydraulic cylinders which lift up the plates to shake them and eventually will discharge some mud still attached to the plates.



HPT[®]
HIGH PRESSURE
TECHNOLOGY
16BAR

GASSER[®]
SHAKERS

DOSCON
DOSING SYSTEM ANALIZER by MATEC



OPTIONALS

REAL WASHING: 100% automatic washing system that washes 20 by 20 plates for a fast process and excellent results. With our system you can wash cloths and piping. The best thing is that the operator can immediately check the result

NO EXTRA PUMP, NO WASTE OF EXTRA WATER

DRIP TRAY: it is a special drainer positioned below the filter press to collect any drops of water from the plates.

CORE BLOW: the core blow system is a system conceived to clean out the central feeding residual liquid mud which remains in the diffusion conduit through the plates. The blowing occurs when the filtration cycle has ended, but before the cake discharging. One dedicated valve system allows the blown mud to bypass the mud feeding pump and to be discharged in the mud homogenizer tank again.





BENEFITS

Matec manufacture complete turnkey plants (fixed and mobile ones), which consist of:

- Filter presses, side beam 400, 500, 630, 800, 1000, 1200, 1300, 1500, 1500x2000, 2000, 2500x2600 for about 120 models;
- Thickeners, vertical (from 2 to 600 m³) and horizontal ones (from 8 to 50 meter diameter) for about 60 models;
- Flocculant dosing systems;
- Homogenizing tanks.



24 Hours on site assistance



24 Months full warranty



10 Years warranty on stainless steel products



HPT technology



Best brand high technology components



Automatic shaking and washing



TT2 fast opening time less than 4 minutes









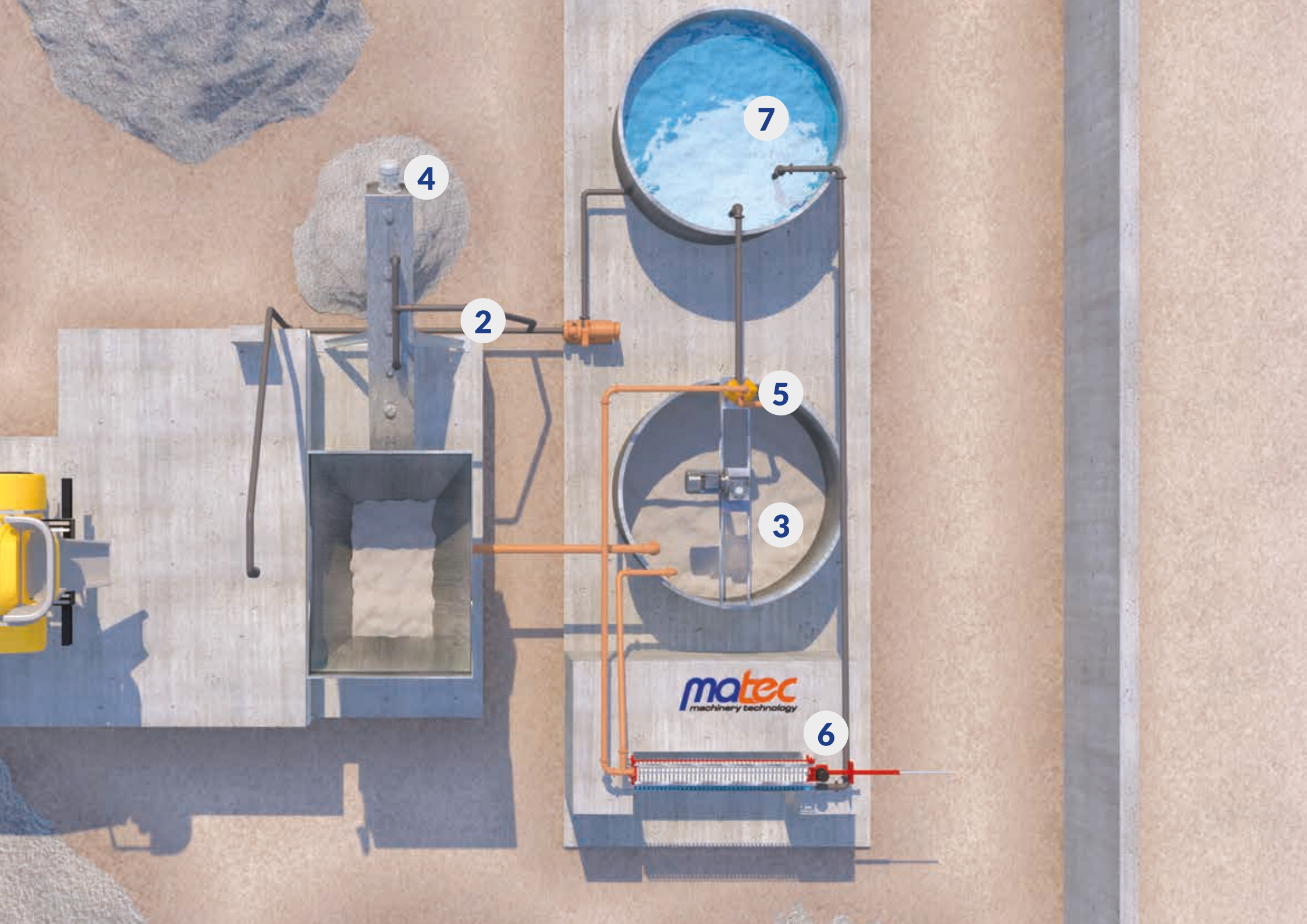


THE PROCESS

The mixers/trucks **(1)** are washed and the residue is discharged into the screw separator or the dewatering screen. The screw separator, **(2)** or the dewatering screen, recovers washed material. The recovered material is ready to be reused **(4)**. The dirty water **(3)** is stored in an external tank ready to be filtered. The dirty water is agitated in the tank.

The dirty water is pumped directly into the filter press by an HPT pump **(5)** without adding flocculant and without being clarified. The filter press **(6)** filters the water by retaining all solids, returning completely clean water **(7)** ready to be reused in the production cycle. The filter press produces dry mud cakes (max 15% of residual moisture) completing more than 5 cycles per hour and reducing sludge volume by 85%.







**CONCRETE &
TUNNELING**
DIVISION



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SOIL WASHING**
DIVISION



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DIVISION



**MINING,
TAILING &
CONCENTRATE**
DIVISION



**STONE
CUTTING,
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GRANITE**
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**GLASS &
CERAMICS**
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**CHEMICAL,
PLASTIC,
INDUSTRIAL**
DIVISION

EN

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machinery technology

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