

Coagulation/flocculation prior to TenCateGéotube® dewatering

Reischtett - France (67)



Dewatering drilling mud

Reischtett geothermal drilling site FRANCE (67)

FONROCHE Géothermie drills deep geothermal boreholes that produce a large volume of drilling mud (free from cuttings).

In order to improve its environmental footprint, Fonroche Géothermie decided to implement a solid waste disposal solution as opposed to the liquid mud currently produced by its drilling operations.

This drilling mud has complex physical properties: high density, high pH, high dry matter content and very low settleability.

The implemented solution involved:

- Breaking down the mixture by adding ferric chloride,
- Flocculating the contents before being transferred to the Geotube for dewatering.

	Coagulation dosing	Flocculation dosing
QUANTITY	1 pump D3RE10	1 pump PU1 D25WL2 IE PO
SETTINGS	from 1% to 10%	from 0,2% to 2%
ADDITIVES	Fecl3 5% dosage	SNF Polymers Flopam EM 240 5g/L dosage
PRESSURE	from 0.3 to 6 Bar	from 0.3 to 6 Bar
OPTIONS	PVDF body	Dynamic mixer



**Reliable
installations**

Founded in **1974**, has been a leading **FRENCH** water dosing company for over **45 years** and has many satisfied customers in the water industry.

D3RE10



Container with two dosing cabinets - FeCL3 and flocculating agent



Our solution

The solution developed by GEB Conseil involved:

- First of all, breaking down the mixture by adding a coagulant,



- Next, flocculating the drilling mud before being transferred to the Geotubes.

Once the process was established, they decided to use the following equipment:

- A Dosatron D3RE10 PVDF dosing pump with Kalrez seals, suitable for use in the extreme pH conditions associated with Ferric Chloride.
- A PU1D25WL2IEPO dosing pump for the flocculating agent, with an in-line Dynamic mixer.

The entire unit was installed (in partnership with Fonroche Géothermie and Environium) in a 20-foot container, which includes an additive storage section, a dilution section, an injection section and a testing section.

Mounted on a bypass tube, the DOSATRON proportional dosing pumps use the water supply as an energy source.

The pressure and water flow drives the motor piston, which is directly connected to the dosing piston.

The additives are proportionally dosed and continuously injected with the water according to the selected injection ratio.



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