



BALNEOTHERAPY

PERSONAL CARE

The term "balneotherapy" is generally applied to everything relating to spa treatment, including the drinking of waters and the use of **hot baths** and natural **vapor baths**, as well as of the various kinds of **mud and sand** used for hot applications.

› APPLICATIONS :

- Production and distribution of muds for baths
- Manufacturing of muds for cataplasms
- Extraction and distribution of thermal waters

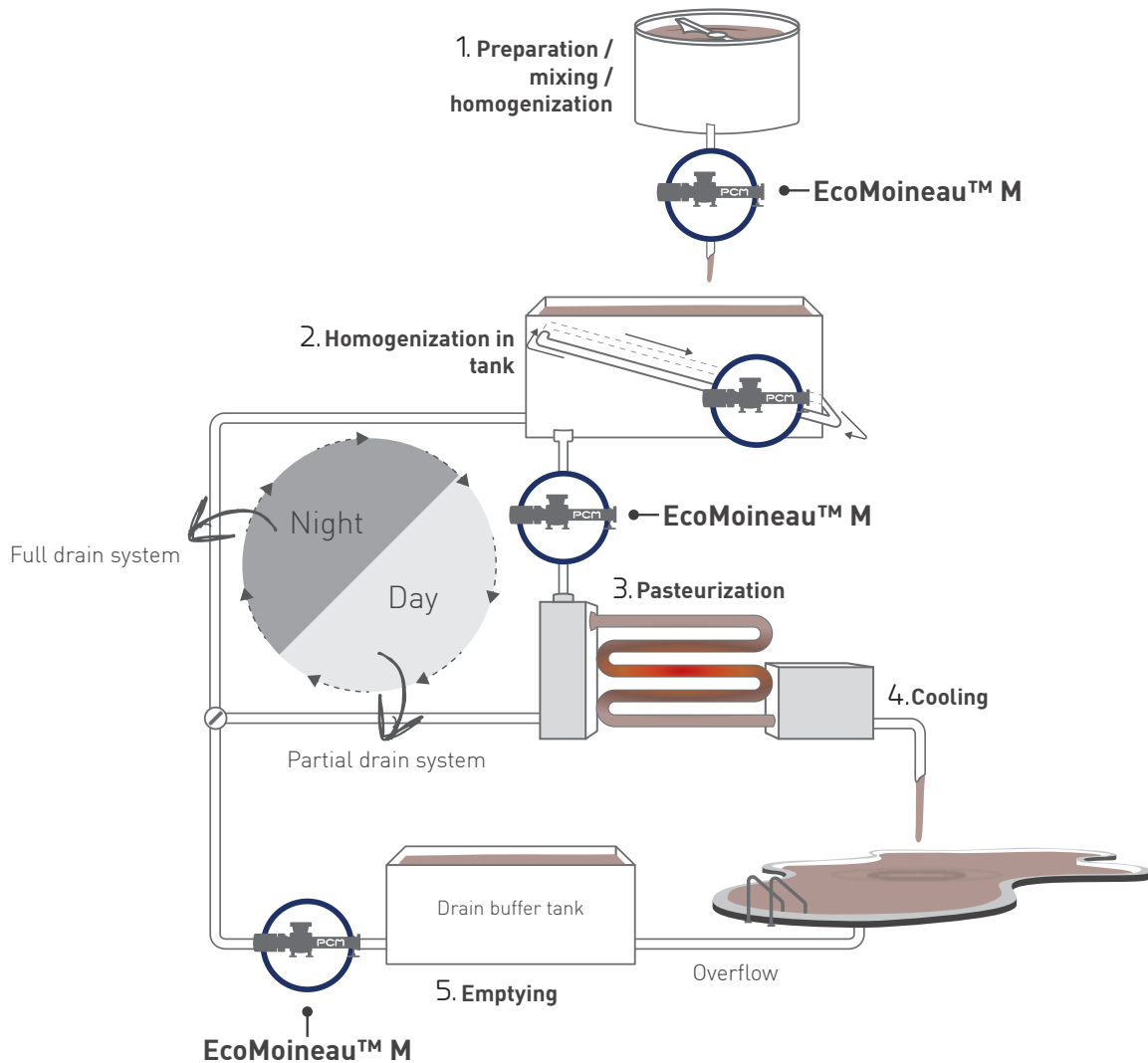


1 ACTIVITY AND MANUFACTURING PROCESS

Several types of muds exist depending on bath resorts :

- **Natural muds or pelose** : naturally formed at the source, the natural mineral water has to pass through a surface layer of peat or silt before the spring.
- **Matured muds or peloids** : impregnation of the substrate takes place over an extended period (weeks or months) required to obtain a fiber and of specific biological compounds.
- **Extemporaneous muds** : made from an organic and / or mineral substrate, mixed or not with a natural mineral water. The most commonly used organic substrate is kaolin.

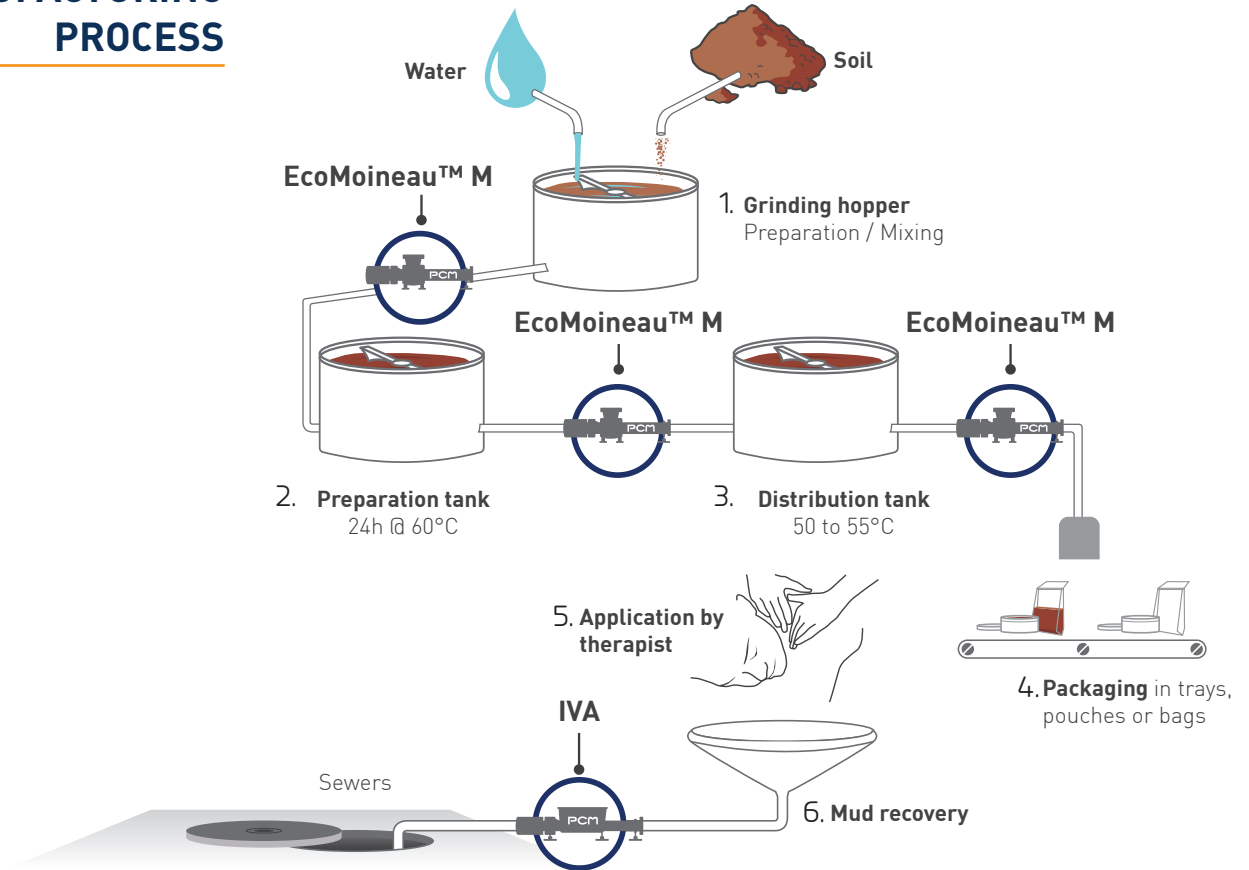
Production and circulation of muds for baths



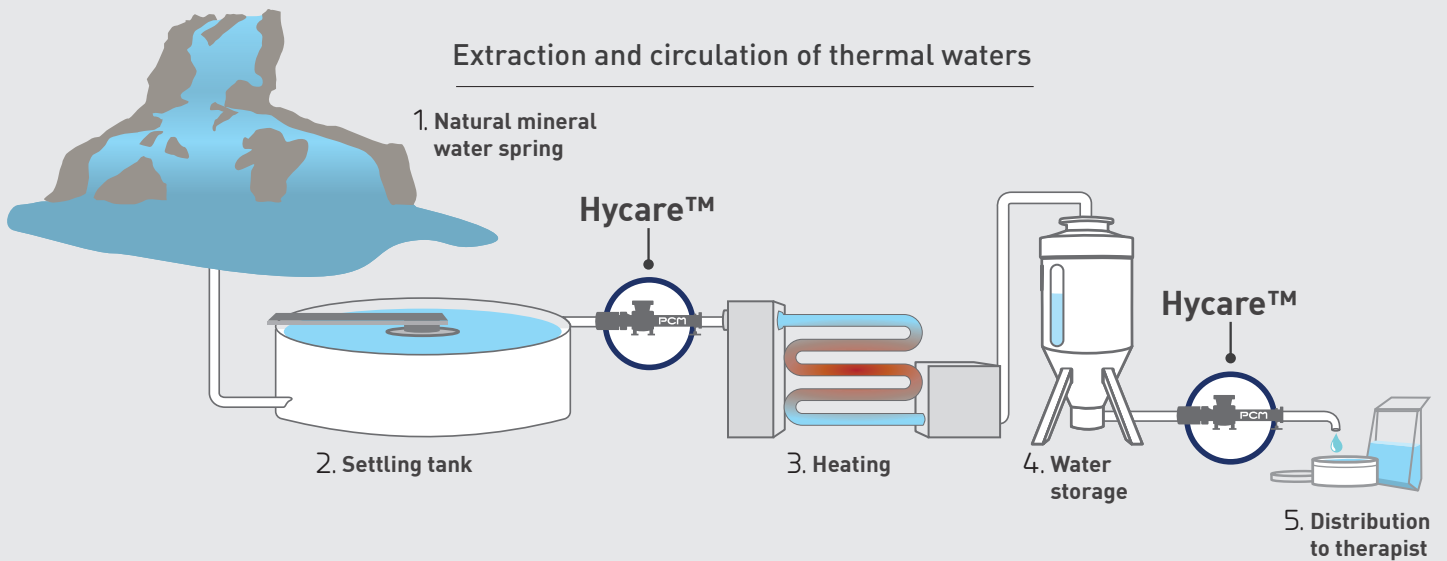


1 ACTIVITY AND MANUFACTURING PROCESS

Manufacturing of muds for cataplasms



Extraction and circulation of thermal waters



Natural Mineral Waters (NMW) can often require PCP pumps in order to limit the effects of shear and to preserve their structural qualities.



2 TECHNICAL DATA & PROCESSING RESTRICTIONS

» MUDS :

- Viscosity : 500 to 1 500 mPa.s
- Discharge pressure : 2 to 4 bar
- Suction pressure : Flooded

» NATURAL MINERAL WATERS :

- Viscosity : 1 to 10 mPa.s
- Discharge pressure : 2 to 4 bar
- Suction pressure : Flooded



3 EQUIPMENT & PROCESSING RECOMMENDATIONS

» FOR MUDS :

- Consideration of piping diameter according to the pressure loss calculations.
- Compliance with lower wear rates and maximum permissible internal leakage.
- Choice of materials see § 4

» FOR NATURAL MINERAL WATERS :

- Consideration of piping diameter according to the pressure loss calculations.
- Choice of materials see § 4

4 PRODUCT RECOMMENDATION

» ECOMOINEAU™ M

- **Rotor** : Chrome stainless steel (400 µm) – 0-50°C
- **Stator** : CR/IR/NR – 0-40°C
- **GM** : Type 2 simple – Sic/Sic
- **Speed** : as per the configurator – 150 / 250 RPM depending on model and leakage %



MUDS

» IVA

- **Rotor** : Chrome stainless steel (400 µm) – 0-50°C
- **Stator** : CR/IR/NR – 0-40°C
- **GM** : Type 2 simple – Sic/Sic
- **Speed** : as per the configurator – 150 / 250 RPM depending on model and leakage %



NATURAL WATERS

» HYCARE™

- **Rotor** : Stainless steel or chrome (HyCare™ standard) – 0-50°C
- **Stator** : Light NBR (HyCare™ standard)
- **GM** : Standard
- **Speed** : As per the configurator (ie : 350 RPM for 13HY12)

