Amapex
smart enviro treatments

# Success case
# of the metal-mechanic motor industry

Component factory for wind turbine engines of energy.

Southern Netherlands

10 $m^3$ per day of industrial wastewater to be purified as a product of the cooling and lubrication of the components for the motors of power wind turbines.

4 months

## Customer needs

- Purification of industrial wastewater with a high content of special oils and other chemical components, as a result of the use of "Taladrines", water emulsions with special oils used as coolant and lubricant.
- Reduction of the high annual costs derived from the treatment of residual waters that suppose around 200 € / $m^3$.

## The solution

Direct and tailored application of the biological system of AMAPEX that consists of separating the oily and aqueous phases in order to reuse them.

Contaminated water is treated by passing through retention tanks, in which a solution containing a mixture of bacteria and nutrients is applied, designed to measure for each client.

The bacteria are activated very quickly, acting effectively in the elimination of the contaminants present in the water (oils, fats, surfactants and metals).

For bacterial activation, an intelligent unit has been designed that, reading the parameters of the waters to be treated, activates the biological mixture to provide it with optimized activity.

The water can be reused in the same factory and the oil could be reused for lubricating uses without special requirements.

## Results

- More than 60% reduction in the current cost of conventional wastewater treatment.
- Reuse of 70% of the treated wastewater.
- Potential reuse of 80% of oils for lubricating uses.

## Applications

This specific AMAPEX solution can also be successfully applied in engine factories and in car repair shop waste collection plants.

## Separation of water and oil after applying Amapex biological solution

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