

WATER REUSE IN INDUSTRIAL PROCESSES

We are always hearing about the dark and apocalyptic future regarding our water resources, and that industrial processes should reuse water. Much of what is said is true. However, there are a lot of myths about tackling the possible lack of water in the future.

There are engineering treatments that can get raw water into absolutely any condition for end use. The most instructive example is the reuse of water in the Space Station. It has no huge stock of water and sewage, for obvious logistical and cost reasons, so 100 percent of the water is recycled via processes that provide potable water that can be consumed again.

Reusing industrial water: lots of myths, little action.

The reason we have made such slow progress in this area is not a shortage of trained professionals, or a lack of technology. It is financial. In the current water abstraction and return model adopted in most of Brazil, it is far more attractive to abstract water that is already in a satisfactory condition than to invest heavily in getting bad water to an acceptable condition. There are no economic incentives and, in most cases, the investment gap is very high, which also makes it difficult to justify any marketing by industry.

Not coincidentally, most industrial water reuse projects are in countries that have imposed financial burdens on water abstraction and have set quality standards for water to be returned. Take, for example, companies with high-pressure boilers. The cost of clarified water is up to R\$0.15/m³. Demineralized water, meanwhile,



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costs up to R\$0.40/m³. If they want to reuse effluent, depending on the industry, the cost can increase by five to ten times. What makes more sense: reusing

water or abstracting water?

The answer is the one we don't want.

It is useless discussing the reuse of industrial water without establishing an appropriate model to regulate and charge for water use. Otherwise, we will continue to pollute our water sources, inevitably driving up costs and having a major impact on nature.