

## Water analysis versus Risycor

Comparing a water analysis with a Risycor is like thinking that the annual inspection by the fire brigade could replace smoke detectors. They are two different things that can complement each other, but not a substitute.

### **A Risycor corrosion monitor**

continuously monitors and sends a warning in good time if the corrosion rate becomes too high, just like a smoke detector detects the smoke from a starting fire. The user must then identify the cause of the problem and correct it. The Risycor continuously logs the measured corrosion rate (which changes with the ingress of oxygen). The user can thus link causes and effects. Oxygen entry is almost always variable and has very detrimental long-term consequences.

### **A water analysis**

is a snapshot via the chemical analysis of the system water. The main problem (entry of oxygen) however cannot be determined in this way. Any oxygen that may have entered the system will have been consumed within a few hours, due to the corrosion process itself. Even if one were to measure the dissolved oxygen content in situ (this is only possible using expensive and complex equipment), it is still meaningless as it is impossible to determine the correct moment at which the oxygen entry occurred.

Of course chemical water treatment companies like to do water analysis, because it paves the way towards chemical water treatment.

Resus thinks it is better to eliminate the causes of oxygen entry, instead of using chemicals to combat symptoms. For example, chemicals do not repair a defective expansion vessel. Exceptions, such as pH correction when using aluminum, only confirm the rule.

### **Comparing apples with pears**

The idea that a water analysis can protect against problems or provide insights comparable to the Risycor is downright wrong.

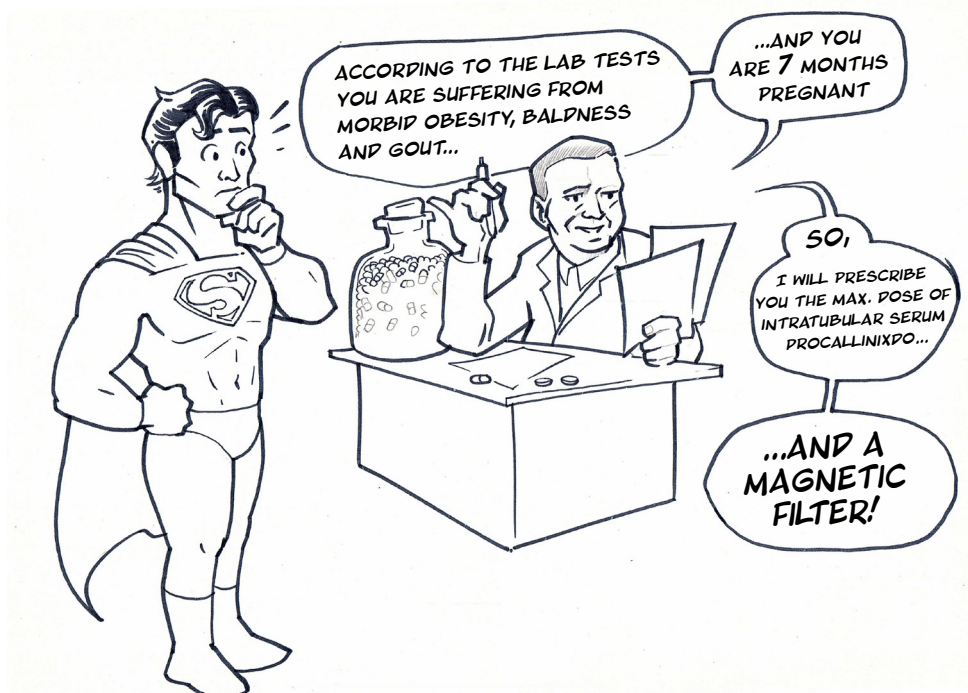
### **Inspection by the fire brigade versus the smoke detector**

When a building is periodically inspected for fire safety, problems are sometimes identified: defective smoke detectors, blocked emergency exits, fire doors that are blocked open, outdated fire extinguishers, unusable fire ladders etc. An annual inspection is therefore absolutely worthwhile and potentially life-saving.

Comparable to the annual fire inspection would be a thorough heating system inspection but hardly a water analysis. After all, does a water analysis include the check of the pre-pressure of the expansion vessel? Checks the zero point? The safety valves? The water meter of the water make-up? The green zone of the pressure gauge? The correct working of the pressure gauge? And does all this get noted in the log book? Definitely not!

Usually, a water analysis results in a recommendation that the system should be flushed, filters changed and chemicals topped up or replaced. But none of this addresses the underlying cause (oxygen entry). In fact it often makes it worse by introducing fresh water and thus more oxygen.

The illustration below shows how we think about this.



PS: This is not to suggest that water analyzes are wrong by definition.

However, too often we see a non-representative water sample taken in a glass jar that was previously used for gherkins, being analyzed for parameters that are of little relevance. We want to make it clear that a mere water analysis cannot be a sound basis for a systemic health check of a system, and it certainly is no protection against any corrosion problems that may arise.

And above all we want to emphasize that the real problem is due to oxygen ingress for which a water analysis is irrelevant.