

# Sprinklers are protecting you... MIC-Europe protects your sprinklers!

**C** VDS: "73% of Dry Pipe Systems fail test after 12,5 year operation !"

*"Corrosion (MIC) is the biggest problem in sprinklersystems". This statement of NACE (National Association of Corrosion Engineers USA) was confirmed by VdS when presenting their inspection of sprinklersystems, during the 7th International Fire Sprinkler Conference and Exhibition in Copenhagen the 24th of June 2008. VdS is inspecting wet systems after 25 years and dry systems after 12,5 years of operation. Sprinklers and pipes are inspected Visually, Endoscopically and Electrosonically on site. The outcome is devastating; 35% of the wet systems and 73% of the dry systems fail because of critical corrosion deposits inside of the sprinkler pipes. The outcome underlines the findings of a recent investigation in deluge- and open foamsystems in the petrochemical industry in Northern America, Europe and Middle East.*

*"MIC-Guard : Broad Spectrum Corrosion Inhibitor Specifically developed for Sprinkler Fireprotection Systems."*

We find all ingredients for these destructive corrosionactivities in the stagnating water of sprinklersystems. In short: Electrochemical corrosion processes provide energie for micro-organisms. Micro-organisms summarised as either MIF or MIC events, provide environmental conditions supportive to electrochemical processes. These conditions are generated by warm ambient conditions, electromagnetic fields, organic material (dirt, cutting oil,tape etc..left in the pipes). The corrosion process continues; creating clogged and perforated sprinklerpipes. The normal alarmtests do not indicate or warn for mentioned problems. Corrosion processes can go very quickly. We reported on several jobsites pinhole leaks whitin 3 years after start-up. November 2006, MIC Europe started a test with two identical galvanized pipes of 2". Both partly filled with polluted water copying a typical situation in a dry pipe system. The pipe with MIC-Guard gives a perfect protection. No corrosion activities occur. Ask your sprinkler installer to protect your sprinklersystem with MIC-Guard.



After 2 months



After 1 year



After 20 months

Pictures above: 3 stages show you how the corrosion process develops. Deposits grow and restrict conduit. Underneath the redox front pitting starts.

Ongoing test, started in November 2006. Two identical galvanized pipes partly filled with polluted water; a typical Dry Pipe System situation. One of the pipes is treated with MIC-Guard. Ambient conditions.



On a regular base, pipes are opened and emptied for inspection and pictures. It clearly show how quickly these corrosion processes continues in the unprotected pipe. The other pipe show surprising corrosion resistance after treatment with MIC-Guard.

Picture below: after 20 months no signs of corrosion. Specially developed for sprinkler systems; MIC-Guard garantees full protection.



After 20 months

**How does MIC-Guard work?** MIC-Guard is a broad spectrum corrosion inhibitor, specially developed for Sprinkler Fireprotection Systems. MIC-Guard creates a mono-atomic film on the anodic sites. MIC-Guard is completely soluble in water and dispersed throughout the system. It protects all parts of the system where water makes contact. MIC-Guard in new systems prevents corrosion damage such as pin hole leaks and clogging. MIC-Guard increases the lifespan and positively contribute to the reliability and durability of your sprinklersystem. MIC-Guard is friendly to the environment, REACH registered, passed testing according: DIN 51360 P1 and P2. IP 287 and IP125. ASTM D4627-86. (methods: EIS, LP, PDP, OCP and gravimetric analysis).