

Verification of fire sprinklers and piping systems

Evaluation of the proper functioning of fire sprinklers by carrying out destructive tests, checking their performance and analyzing any possible pathologies after several years in service in wet pipe installations.



The proper functioning and activation of fire sprinklers is essential to ensure that the fire is quickly controlled and to prevent fire development and spread from affecting the safety and security of persons and facilities. In Spain, fire sprinkler systems are required to undertake mandatory, periodic verifications and inspections.

The Spanish *Regulation on Fire Protection Installations (RIPCI) RD 513/2017* requires annual verification of fixed firefighting systems' components, with special regard to trip and alarm devices. In addition, the standard **EN 12845:2016** Annex K specifies the inspections to be performed on piping systems and fire sprinklers to check they still meet the performance requirements after 25 years in service.

Our Solution

Applus+ Laboratories is specialized in Fire Protection Systems and offers its services to the fire protection system maintenance companies registered in the RECI (*Record of Fire Protection Systems Installation and Maintenance Companies of Spain*) in order to verify the correct maintenance of active fire protection systems.

To that end, our technicians carry out periodic tests on fire sprinkler systems and verify the sprinkler systems' components.

Sprinklers: we will check the samples of fire sprinkler received in laboratory, according with standard EN 12259-1:2002.

- Test to determine the operating temperature
- Functional test
- Water flow test (K-Factor)

Piping system: pipes or tubes need to be inspected. We will carry out the analysis of the ducts' cross-section including substrate solidification, changes in the cross-section and alterations of the service flow which may have arisen since its installation.

- Non-Destructive Testing (NDT) – Ultrasonic Testing
- Metallographic Testing

Water: fire sprinklers and piping systems contain stagnant water. It is therefore necessary to **analyze the water's quality** and verify that it does not contain **substances harmful to human health**. A sample of water will be collected from the installation and we will analyze it in our laboratories.

Applus+ Laboratories has in the facilities of the LGAI Technological Center in Bellaterra one of the leading fire laboratories in Europe in terms of equipment, testing volume and ENAC accreditations.

Benefits

- Have fire expert technicians to verify the good functioning of your fire equipment.
- The possibility of detecting and correcting in early stages anomalies which may affect and compromise the good performance of the automatic water extinguishing system.
- Help maintenance companies to certify the correct maintenance and proper functioning of Fire Protection Installations to the owners, even through years of use.