

Water Mist Fire Protection for Historic Sites

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Bio: For the past 12 years, Joachim has been dedicated to developing high pressure water mist business globally for a large range of key verticals representing the building industry, food industry, automotive industry and power gen. Today he holds the position as Director, Marketing & Training at Marioff Corporation.

Abstract

Notre Dame is not the only historical monument suffering from fire. We have seen several in the recent period. For example, Brazil's oldest and most important historical and scientific museum was consumed by fire last year in September, and much of its 20 million items of historical interest were destroyed. Historic buildings pose many challenges for those tasked with protecting them from fire. The threat and consequences of fire in any building are serious. However, in the case of historic sites, the loss of irreplaceable artifacts of high monetary and historic value is permanent and costly to our heritage.

Furthermore, given their unique nature, many historical assets can only be insured for damage rather than total loss by fire. Added to this, these buildings frequently have permanent/volunteer staff and attract high numbers of visitors, so life safety must be of paramount importance. Ensuring that lives, as well as the historic value and authenticity of buildings, are safeguarded is extremely challenging and demands specialist knowledge and solutions. Only in Europe, we lose one cultural heritage building a day due to fire. With a greater awareness of the issues involved, and the increased adoption and utilization of modern fire-fighting technology, this can be combated and reduced. However, the installation of fire protection measures, as with all conservation work, should best follow the principle of minimum intervention. Schemes should be specifically tailored for each buildings need, taking into account its importance, function, character, construction, finishes and detail. This is where water mist fire suppression technology has proven to be a superior alternative compared to conventional solutions.

The presentation will cover specific considerations related to fire risk assessment, causes of fire as well as supplementary factors contributing to the spread of fire in historic buildings. By sharing Marioff's experience, the audience will learn about performance based approach and how water mist has been applied to numerous historic sites. Via a couple of case studies, the audience will learn how water mist, as a performance based technology, can be applied to protect e.g. wooden attics as well as protect irreplaceable artifacts. Reference will also be made to relevant fire codes & standards.

As an outcome, the audience will learn how the benefits of water mist fire suppression technology, adds value for the heritage building owners and visitors of heritage sites.

KEYWORDS: heritage building, historic site, wooden attics, water mist systems, NFPA 909, NFPA 914