

Structural Health Monitoring from an Industrial Perspective

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Progress and innovation in construction technologies have led to the construction of a remarkable number of large-scale and innovative structures, including bridges, dams, tunnels and buildings. In our daily consultancy on fiber optic monitoring systems, we observe how maintenance engineers are increasingly involved in quantifying the effects of aging and possible damages to structures, as well as in the evaluation of safety, material failures and determination of remaining service life.

Although automatic structural health monitoring, providing quantitative data on structural behaviour, is not yet compulsory even for large-scale structures and corresponding budgets have often been of low priority, we are experiencing a consistent and continuous growth in this market, with very positive feedback from the early adopters. The main markets for our structural health monitoring system are existing structures with known structural or service problems and new structures built with innovative materials, techniques or design. In terms of world distribution we are witnessing the largest growth in Asian countries and emerging economies, in particular eastern Europe.