



## Quality Specifications for Highway Bridges: Standardization and Homogenization at the European Level (COST TU-1406)

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## Summary

Roadway bridges, being one of the most critical road infrastructures components, require regular maintenance actions. Therefore, it becomes important to define strategies to maximize societal benefits, derived from the investment made in these assets. Consequently, this investment should be planned, effectively managed and technically supported by appropriate management systems. For this purpose, authorities need to produce an asset management plan which should, not only define the goals to be achieved by exploiting the roadway bridge network, but also identify the investment needs and priorities based on a life cycle cost criteria. Additionally, a proper condition assessment based on pre-defined performance indicators of these assets must be conducted to support the decision-making process regarding their preservation. It is obvious that there is a large disparity in Europe regarding the way these indicators are quantified and how their goals are specified. Therefore, due to the considerable number of methodologies, arises COST Action “TU1406: Quality specifications for roadway bridges, standardization at a European level (BridgeSpec)” which aims to bring together, for the first time, both research and practicing community in order to accelerate the establishment of a European guideline and homogenization in this subject through Europe. This paper gives an overview of COST Action TU 1406, namely, its objectives, methodology and main deliverables.

**Keywords:** performance indicator, quality control, highway bridges,

## 1. Introduction

During implementation of asset management strategies, maintenance actions are required in order to keep assets at a desired performance level. In case of highway bridges, specific performance indicators are established for their components. These indicators can be qualitative or quantitative based, and can be obtained during principal inspections through visual examinations, non-destructive tests or temporary or permanent monitoring systems. Then, obtained indicators are compared with performance goals, in order to evaluate if quality control plans are accomplished. It is verified that there is a large disparity in Europe regarding the way these indicators are quantified and how such goals are specified. This is a source of problems when a common and transnational transport policy has to be implemented across Europe. In fact, due to the lack of common standards and homogenization, bridges that may be considered to have a good performance level in one country may not pass the quality control in another country. Therefore, due to the considerable number of existing methodologies, arises COST Action TU1406, “Quality specifications for roadway bridges, standardization at a European level (BridgeSpec)” which aims to bring together, for the first time, both research and practicing bridge community in order to accelerate the establishment of a European guideline or recommendation in this subject in order to define a common quality specification of performance for highway bridges and also to derive an optimum management policy.

Management systems are supported in quality control plans which in turn are supported in