Assessment and Strengthening Experience with Bridges in Germany

Wolfgang EILZER
CEO
Leonhardt, Andrä und Partner Beratende Ingenieure VBI AG
Stuttgart, Germany
wolfgang.eilzer@lap-consult.com

Volkhard ANGELMAIER
Executive Officer
Leonhardt, Andrä und Partner Beratende Ingenieure VBI AG
Stuttgart, Germany
volkhard.angelmaier@lap-consult.com

Summary

Repair and maintenance of engineering structures constantly gain in importance especially for the infrastructure sector.

This can be seen by only considering the 40.000 bridges of federal highways in Germany; their functioning is the mandatory basis to ensure the mobility of a modern society (Fig.1).

Fig. 1 German Federal Highway Bridges

After successfully having built up and expanded the road network in the eastern part of Germany the strengthening of existing structures in the western part of Germany will become the major challenge for the future.

The presentation will focus on the wide range of engineering services involved in such a rehabilitation planning of and the specific experience gained through strengthening projects.

Keywords: Assessment, strengthening, surveying, rating, checking, monitoring, approval, recalculation, emergency repair, coupling joints

1. Scope Definition

The key questions in terms of strengthening of engineering structures need to be lead by a holistic consideration.

Beginning with evaluating the current conditions of existing structures, continuing with analysing these conditions will lead to an adequate realization of required technical operations.

Therefore the whole spectrum of the engineering discipline starting with evaluation and finishing with the professional realization of the operations is required. Especially the planning of the required work will play a key role for a successful project.

https://doi.org/10.2749/222137814814070181