Fraunhofer IZFP inspects the deck slab of the Fechingen Viaduct

In recent months, many Saarlander have suffered from the full closure of the Fechingen Viaduct that has plunged the traffic in the capital region into chaos. Due to expert assessments forecasting the risk of sudden failure of the bridge piers, the bridge had to be closed. In order to re-integrate this important infrastructure construction into the traffic network, at least in a restricted extent, it was necessary to reduce the load of the supporting structure.

On behalf of the “Landesbetrieb für Straßenbau” (LfS – State Office for Road Construction) researchers and engineers of the Fraunhofer Institute for Nondestructive Testing IZFP checked the concrete roadway out: Due to Fraunhofer IZFP providing market-ready methods to detect critical changes within the structure of bridges and other infrastructure buildings in very early stages, the LfS had commissioned Fraunhofer IZFP to measure the concrete thickness of the deck slab. “Our task was to perform random measurements by ultrasonic echo method on a specified reference surface of the Fechingen Viaduct to determine the exact concrete thickness,” explains Prof. Ute Rabe, responsible group leader of Fraunhofer IZFP’s “In-Service Inspection and Life-Cycle Monitoring” department. After the successful completion of the measurements the obtained results now serve as comparative values for additional large-scale surveys of the bridge structure and for lasting optimization of the future bridge safety.