BRIDGE EDGE BEAMS

CARBON GRID REINFORCED BRÜCKENKAPPEN



Expressbrücke Modular Bridge System – Germany

THE CHALLENGE

The most exposed components of bridge structures:

- Chloride exposure (de-icing salts – XD3)
- Splash water and environmental attack
- Traffic barrier anchorage loads
- Early corrosion of steel reinforcement

Traditional solution required:

- ≥ 45–50 mm concrete cover
- Heavy steel reinforcement
- Increased section thickness
- Long-term corrosion risk
- Repeated maintenance interventions

25 mm
OVERAL Cover

-50%
REDUCED COVER VS TRADITIONAL METHOD

THE CARBON GRID SOLUTION

Replacement with 60mm carbon-reinforced precast panels

System Components:

- HITEXBAU HTC 38/38-80 / HTC 34/34-80
- Pefabricated element
- Reduced concrete cover (20–25 mm)

STRUCTURAL CONCEPT



STEEL

- Corrosion risk in chloride exposure (de-icing salts – XD3)
- Large concrete cover required (≥ 45–50 mm)
- Increased section thickness and weight
- Risk of spalling due to corrosion expansion
- High lifecycle maintenance costs

IDEAL FOR

- Modular bridge systems
- Express bridge construction
- Highway bridge edge beams
- Replacement of corroded Brückenkappen

Innovative Carbon Grid Reinforcement

THINNER. LIGHTER. LONGER-LASTING

HITEXBAU