

Title: Studies on The Retrofitting of Distressed PSC Box Girders Using External Post-Tensioning for Bridges.

Duration: April 2024 to March 2026

Objectives:

- Development of an Improved technology for retrofitting of distressed PSC box girders by external post-tensioning.
- Development of an Analytical model on the retrofitting of box girders by external post-tensioning.

Progress Highlights:

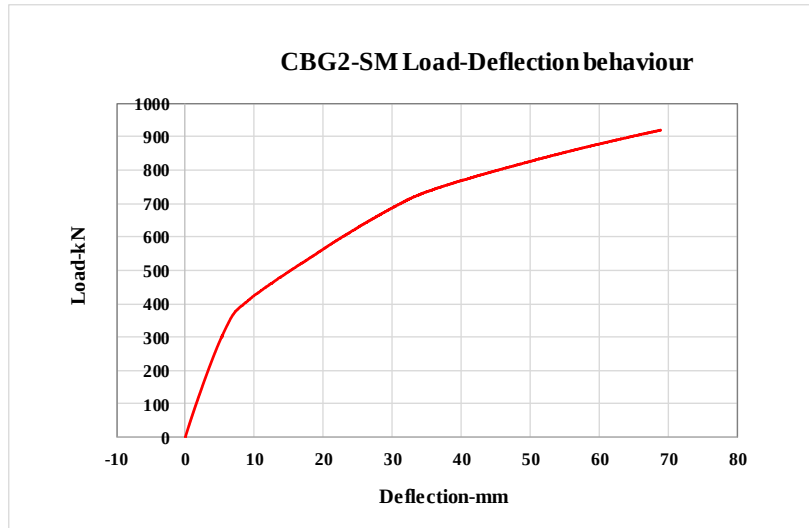
- ❖ Testing of the PSC box girder specimen CBG2-SM under static monotonic load, and predicting the flexural behaviour.
- ❖ Monitoring the prestress was carried out during the load test using Vibrating Wire Load cells.



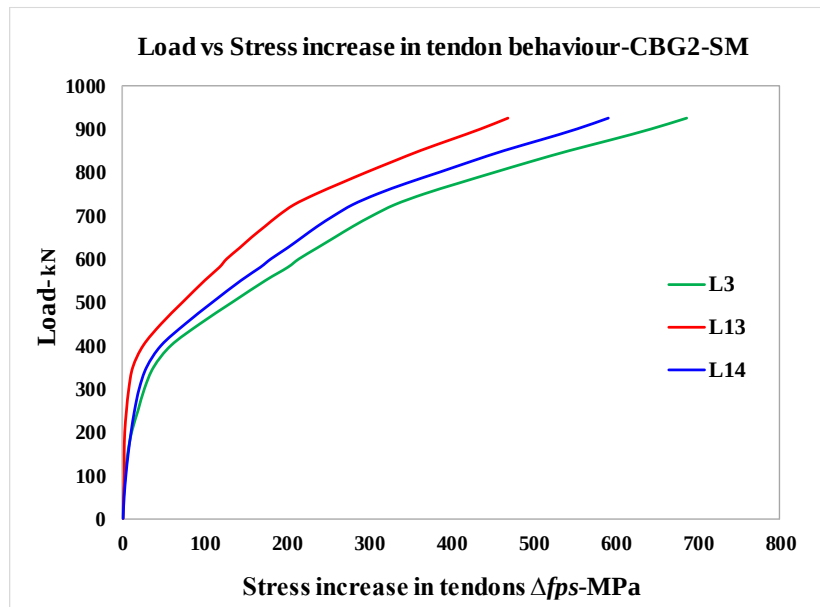
Testing of the PSC box girder specimen CBG2-SM subjected to static monotonic load



Monitoring the prestress using vibrating wire load cells



Load-Deflection behavior of the PSC box girder specimen



Load-stress increase in tendons- Δf_{ps} relation

Future Programme:

- Casting & testing of PSC box girder specimen CBG3-SM by monotonic static loading
- Casting & testing of PSC box girder specimen CBG-HF by high cycle fatigue loading

Project Leader:

Dr. R. Manisekar

Team:

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Date: December 2024