University of Ljubljana
Faculty of Civil and Geodetic Engineering

ANALYSIS OF DEGRADATION PROCESSES ON SLOVENIAN BRIDGES

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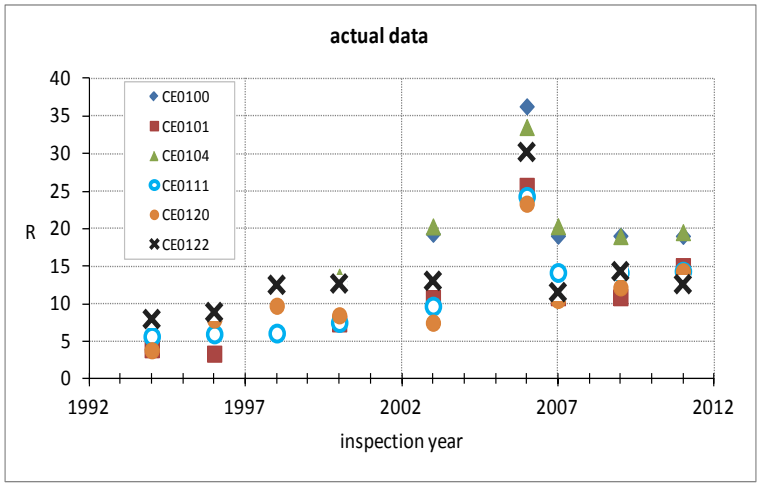
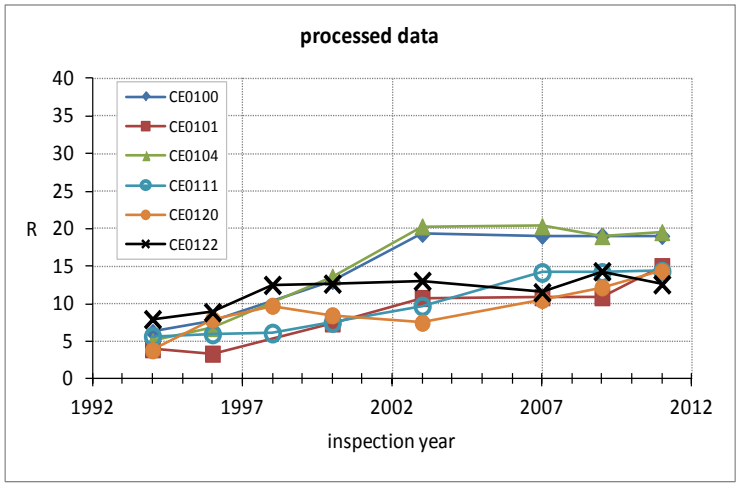
What was analysed?

Condition rating data:

- 1.271 state road bridges
- 18 year time period
- data gathered bi-annualy (regular inspections)

Assessment of data quality

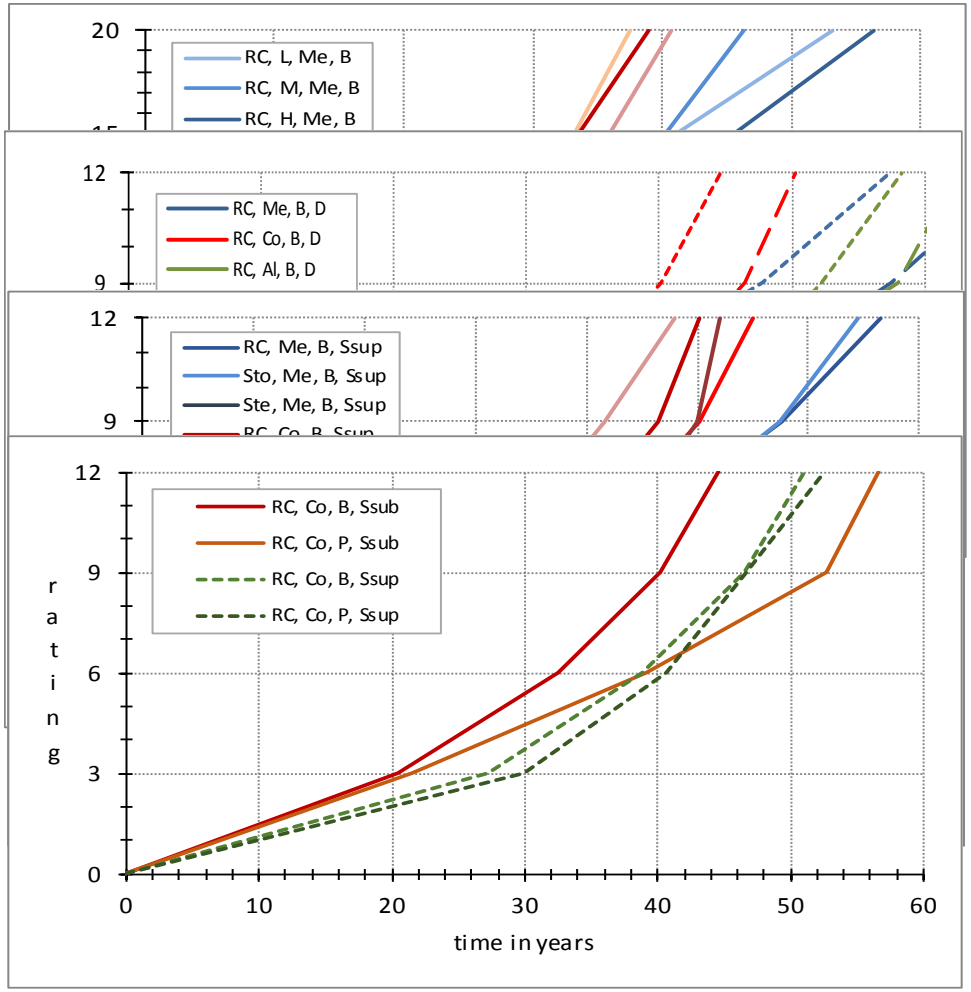




$$SE = \sqrt{\frac{1}{(n-2)} \cdot \left[\sum_{t=1}^{s} (y_t - \bar{y})^2 - \frac{\left[\sum_{t=1}^{s} (x_t - \bar{x}) \cdot (y_t - \bar{y}) \right]^2}{\sum_{t=1}^{s} (x_t - x)^2} \right]}$$

Parameters of influence

PARAMETER OF INFLUENCE	NO. OF VALUES	VALUE
struct. material, *M*	4	*RC* (reinforced c.), *PC* (pre-stressed c.), *Sto* (stone), *Ste* (steel)
climate zone, *Cl*	3	*Me* (Mediterranean), *Co* (Continental), *Al* (Alpine)
traffic load, *T*	3	*L* (light), *M* (medium), *H* (heavy)
structural type, *F*	2	*B* (bridge), *P* (overpass, underpass)
structural part, *Be*	3	S_{sub} (substructure), S_{sup} (superstructure), *D* (deck)

Results

- Traffic load
- Climate type
- Structural material
- Structural type