

BALANCED LIFT BRIDGE CONSTRUCTION

TECHNOLOGY

This new bridge construction method consists in building the bridge girders in a vertical position and in rotating the bridge girders into the final horizontal position. The span of the bridge girders is reduced by the compression struts, which enables considerable savings in construction materials.



Fig. 1 Construction of the prototype

APPLICATIONS

The proposed method will be especially advantageous for bridges with high piers and span length between 50 m and 250 m. The usage of temporary piers (see Fig. 1) enables the expedient application of the balanced lift method for bridges with piers of modest height. The method is also applicable for temporary bridges and lift bridges.

BENEFITS

- Savings in construction materials (20 to 30 % in comparison to balanced cantilever method)
- Fast vertical assembly of bridge girders and compression struts
- Concentration of construction at the pier locations
- Established technologies are available for the lifting or lowering process and the hinges.

REFERENCE:
M025-06

OPTIONS:
License Agreement,
project based cooperation
and consulting

KEYWORDS:

- Bridge
- Balanced lift construction method
- High piers, span length 50 - 250 m
- Temporary bridge, lift bridge

DEVELOPMENT STATUS:
Prototype available, pilot
project in AT in realization,
call to tender 2016

PATENTS:
DE, FR, GB, AT, CH, ES, FI, IT,
PL, SE (EP 2054553), NO
AU, CA, CN, JP, RU, US

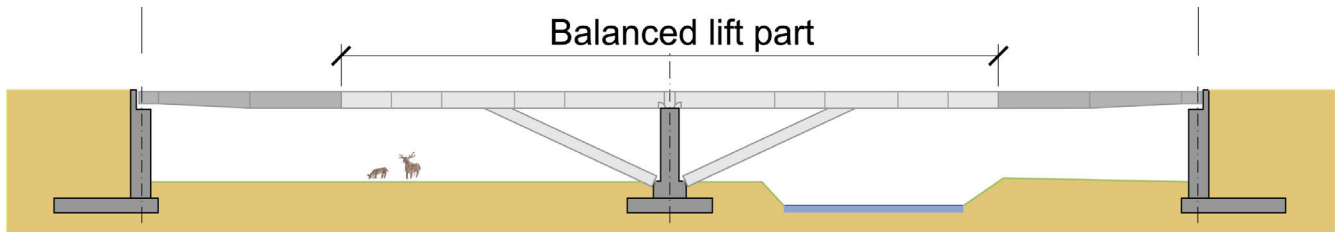
INVENTOR:
Johann KOLLEGER

CONTACTS:

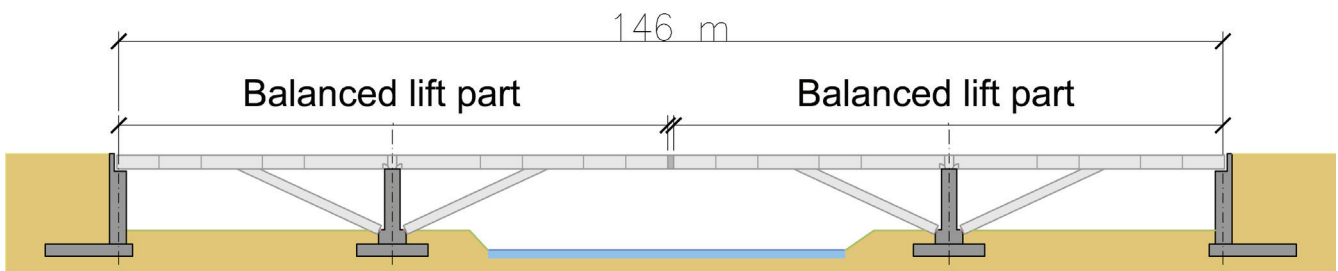
Claudia Doubek
TU Wien
Research and Transfer Support
Claudia.doubek@tuwien.ac.at
T:+43-1-58801-41539
www.rt.tuwien.ac.at

Johann Kollegger
TU Wien
Institute for Structural
Engineering
Johann.kollegger@tuwien.ac.at
T:+43-1-58801-21201
www.betonbau.tuwien.ac.at

DESIGN FOR BRIDGES ON THE S7 MOTORWAY IN AUSTRIA



DESIGN FOR THREE SPAN BRIDGE



DESIGN FOR VALLEY BRIDGE

