

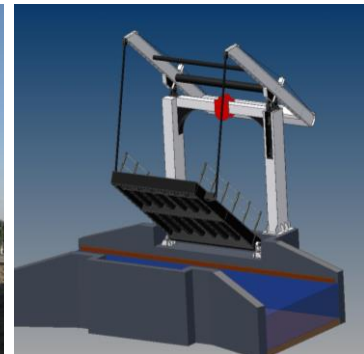


Dynamics of movable bridges

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Description:

Movable bridges must operate with a high degree of reliability, because defects can lead to serious consequences on the boating and road traffic flows. However, the calculation rules in the current standards (NEN 6786) for designing or assessing of movable bridges are often too conservative. This has resulted in operating equipments of movable bridges being overdimensioned or replaced unnecessarily and not being fully utilized.



In this research an advanced dynamic model will be developed to fundamentally examine the dynamic behavior of movable bridges, concentrating on the theoretical durability of the mechanical parts. Verification and validation of the model will be obtained by means of accurate measurements of the dynamic loads in the drive mechanisms of existing bridges.

Goal:

The purpose of this research is to design a realistic and reliable assessment model for the mechanical operating equipments and related parts of movable bridges. This should result in extending the service life of existing bridges with significant environmental benefits and financial savings in maintenance and renewal budgets for key infrastructure.

Sponsors:



Dutch Ministry of
Infrastructure and the
Environment



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