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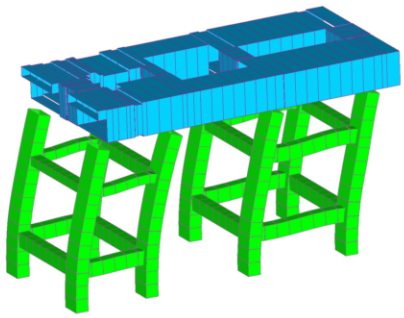
A PASSION FOR ENGINEERING

TABLETOP FOUNDATIONS

The design, calculation and construction of machinery foundations requires a high degree of accuracy and competence. The failure of a turbine because of an insufficiently designed or constructed foundation can cause costs, that can be very high compared to design and construction costs. Requirements to foundations of different turbine manufacturers may differ from minimum reuqirements by codes and regulations. This can lead to difficulties in the judgement of the foundation behaviour and requires that the civil designer has also an understanding of the machinery equipment.

convex ZT GmbH prepares the statical and dynamical analysis of tabletop foundations in close cooperation with the turbine/generator manufacturers. In regions with high seismic loads, an intergration of the table foundation in the load bearing structure of the hall can give economical results.The analysis includes the calculation and evaluation of the foundation eigenfrequecies, the dynamic velocities- and amplitudes in operation and the dynamical stiffness of the foundation. The subject was discussed in detail in papers, published in prestigious journals (see below).



„Static and Dynamic Analysis of Concrete Turbine Foundations" Uzunoglu, T. et al. in Structural Engineering International 3/2008, Zürich
download **paper**

„Statische und dynamische Berechnung von Turbinenfundamenten aus Stahlbeton" Uzunoglu, T. et al. in: Beton- und Stahlbetonbau 100, Heft 10, 2005, Ernst & Sohn, Berlin
download **paper**

Current reference projects

convex ZT GmbH
CRN FN 194475 v
VAT ATU60801715

Am Katzelbach 7, A-8054 Graz, Austria
T +43 316 28 11 80 - 0 • office@convex.at
www.convex.at

Steiermärkische Bank
IBAN AT86 2081 5021 0040 5451
BIC STSPAT2GXXX

Biomass Thermal Power Plant Boras, Sweden (2016)

Machinery:
Turbine with Generator
Type:
Tabletop foundation in reinforcement concrete
Tuning:
low tuned
Support type:
Top deck supported on spring elements

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Photos:
T. Uzunoglu, D. Swaldi

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