ESZ Type 200

Non-reinforced elastomer bearing for maximum stresses

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Supervisory approval

The bearing has been approved by the Institute of Construction Engineering (Institut für Bautechnik, IfBt) for the bearing class 1 and the bearing class 2 to DIN 4141 part 3.
(Approval no. Z-16.32-408)

Advantages for the designer

The bearings can be charged with pressures of up to 20 N/mm² within permitted torsions between 0.0 and 0.05. For the first time, the design concept with supervisory approval allows the bearing problem to be treated with an engineering approach, in particular for heavily stressed components. Depending on the statically-constructive marginal conditions, components and/or bearings can be optimised. Within the variables of "pressure, bearing torsion and support geometry", technically and economically beneficial solutions result.

Design tables

The following pages contain the design tables for the permissible loads and unit pressures as well as the associated permissible angular distortions.
The mean bearing pressures and the corresponding angular torsions are determined according to the linear-elastic theory of Topaloff, with the calculated shear stress limited to 7.5 N/mm². The shear module G has been assumed to be 1.5 N/mm².

Advantages in practical applications

The elastomer bearing ESZ type 200 avoids the risk of damage (chipped edges) in case of obliqueness and inaccurate placing due to the moderate stress distribution and load centring in case of eccentricities (bearings torsions). Explanations can be found on page 18.

Fire resistance grading

Report by AMPA at the TU Braunschweig
no. 3166/1589.
The ESZ bearing type 200 shall be categorised by fire resistance grading F 90 – labelled F 90 B to DIN 412 part 2 issue 1977.

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2.6.C/1000/04.03/SD