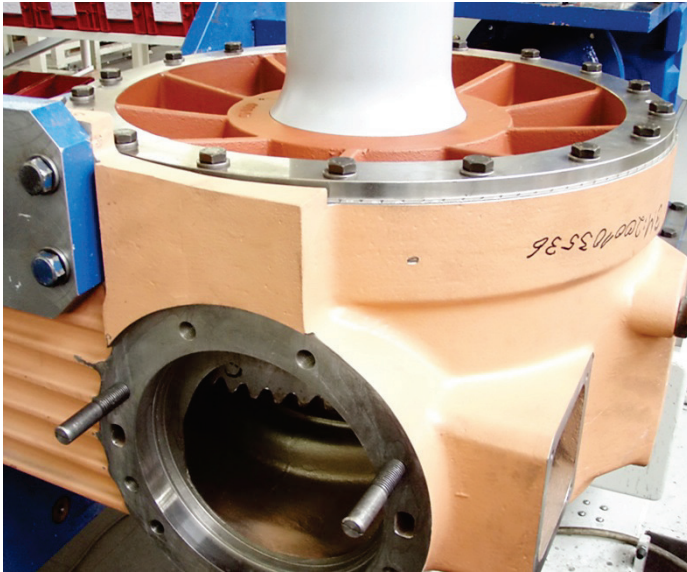


PRESS INFORMATION

Drive technology/ Transmission engineering/ Supply system/ Construction

Tolerance Compensation with Consequences

Transmission manufacturer place their trust in metallic shims from Georg Martin



The metallic shims come in customized shapes and sizes, here in the form of rings or circular blanks

For many drive technology manufacturers, metallic shims are regarded today as indispensable installation parts. Tolerance compensation can be built into a subassembly directly with the help of fitting discs and layered shims on the one hand, while the subassembly is ideally prepared for low-cost assembly and maintenance on the other. Designed as rings or circular blanks, metallic shims are used in the construction of transmissions by the railway specialists at Voith Turbo, for example.

The developer and manufacturer of these layered shims is Georg Martin GmbH. Active all over the world, the company is one of the leading providers of shims, which are supplied in customized shapes and sizes to numerous buyers in the field of drive technology. In the case of Voith Turbo, it is customer-specific M-Tech®L laminated shims made of unalloyed stainless steel which are

glued on to a solid element of the same shape. These laminated shims ensure the precision which is required in the final drives of trains at the joint between the drive axle and the transmission housing.

Precision connections in the transmission

These peelable shims consist of high-strength layers of up to 64 laminated metal films with thicknesses of 50, 75 and 100 µm. The thin layers can be peeled off individually for use in assembly – or maintenance – until the thickness required to compensate the tolerance has been reached. Georg Martin GmbH punches and stamps these shims to turn them into ready-to-use shaped parts made of steel, aluminium brass and composites. When doing so, they are always formed in accordance with the customer's constructive specifications. The punched parts can have total thicknesses of up to 3.2 mm and edge lengths of max. 600 x 1200 mm. Martin® is able to satisfy virtually all customers' wishes here because the company uses machine-cutting as well as laser-cutting processes.

In transmission engineering, M-Tech®L is often used to adjust and compensate the axial play of shafts. Georg Martin usually supplies closed or split rings for this purpose. Beyond their use in drive technology applications, however, shims serve the cause of safety and precision wherever complex subassemblies and components have to be assembled. Considerable cost-saving effects can also be realized by using shims systematically along the entire value-added chain: the constructor does not have to bother about tight tolerance requirements; the joints created with the help of shims require no further machining; processing times can be further reduced if the use of shims is planned during

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assembly and last but not least, the expense and effort of maintenance and upkeep are reduced because the joints can be readjusted easily via the shims.

Overall cost reduction

The company will be presenting its complete shim range in Hall 6 (Stand 6505) at the forthcoming Blechexpo 2009 fair. In addition to the basic M-Tech[®]L shim type, fair visitors can discover all of the advantages of the M-Tech[®]S and M-Tech[®]P shim versions. M-Tech[®]S are solid shims which are available as ground or self-adhesive shims or as an assortment, whereas M-Tech[®]P are edge bonded shims of different thicknesses which are glued on one edge so that they can be removed like the pages of a calendar.



The M-Tech[®]L product line offers up to 64 laminated films (25 to 100µm) with overall thicknesses of 0.50 to 3.20 mm