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Longer service life even with heavily loaded guiding elements SNS-sintered metal as a durable sliding layer

Lüdenscheid, 22nd March 2019. Strack Norma, one of the leading standard part producers in Europe, is continuously expanding its range of guiding elements by including variants with sintered metal layer. The sintered metal sliding layer makes the elements in the tool- and mould making more resistant, improves their service life and thus reduces maintenance costs and increases the productivity.

Often guiding elements and guide bushes out of bronze with solid lubricant are used at guiding systems. Strack Norma offers guiding elements with a sliding layer that can significantly increase the running performance of the moving sliding pieces: the standard part producer provides a selection of its guiding elements with the so-called SNS-sintered metal sliding layer, which is sintered together with the embedded solid lubricant in a thickness of about 1,5 bis 2 millimetres on a steel base body.

This gives the guiding element a high pressure- and friction wear resistance and makes it more durable even at medium to high process speeds, which occur especially in the production of high-strength sheets. Thus, SNS-coated elements can be driven with a twice as high surface pressure and a nearly five times higher sliding speed of 70 m/min. The PV-value (relation between surface pressure and speed) ranks three times as high as when using bronze with graphite and also the unlubricated running time can be multiplied. Temperature-resistant up to s 250°C, these guiding elements are also ideal for the use in the toolmaking or hot forming. Generally, they are mainly used where high dynamically-effective bearing forces have to be absorbed and where a regular maintenance is not always guaranteed. The flat material can easily be processed and can thus be individually adapted to your own application cases in the own toolmaking.

Also tests in the automotive industry have already confirmed that the service life of sintered metal is many times higher than that of bronze with solid lubricant. Here, the SNS-guide strips have been successfully used in the Medium- and Premium-version of the PowerMax standard cam series in the recent years.

The new SNS-guide bushes

Strack Norma has gradually expanded its product portfolio. In the meantime, in addition to flat guide strips, also prism guidings and guide bushes as well as special solutions are part of the fixed program. The two-part guide bushes out of steel with glued-in sintered sleeve which have already been offered for a long time, will be replaced this year by a guide bush with SNS-sliding layer. The proven structure with sintered sleeve always reached its limits when external influences caused too much friction into the guiding system and the glue lost its grip due to the emerging friction heat. The new SNS-sintered sliding layer allows high process temperatures, because the SNS-layer is firmly connected to the carrier material by a process based on heat and pressure. The new bushes are available in different dimensions and are compatible with the already existing guide bush program, so that customers can easily renew and exchange them with each other.

Picture: Press photo_SNS guiding elements

Text: STRACK guiding elements out of SNS-sintered metal

About Strack Norma

Strack Norma GmbH & Co. KG develops and produces with more than 150 employees standard parts for the tool- and mould construction and supplies them all over the world. Founded in the 1920s in Lüdenscheid, the family-owned business belongs today to the leading standard part suppliers in Europe. The claim THINK. TECH. STRACK. describes the unique selling proposition of the company: THINK stands for its innovative developments for the tool- and mould construction, TECH stands for the customer-specific special productions, product modifications and individual solutions and STRACK stands for the wide range of standard products. Strack Norma owns patents on innovations such as in the product fields standard cams, and latch locks.

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