

The Trade Magazine "STAHL MARKT" reports about the IKS Klingelberg Group

### **Easy Cutting Tools not only for Steel Service Centers - IKS Klingelberg - Cutting Edge by Sharpness**

Almost every item which you pick up today was somehow cut or processed by means of a tool, and a knife of the IKS Klingelberg group was probably used during production. The company manufactures knives and saws for various applications. Further growth is scheduled for the Metalworking Division. The paper, wood and metalworking divisions are the core business of the IKS Klingelberg group. As regards round products, the Metalworking Division is a global player. IKS Klingelberg manufactures tools and accessories for slitting lines and cut-to-length knives for the steel industry. This includes rotary slitter knives, spacers, light-weight, steel stripper and spacer rings, cut-off knives etc. as well as a slitter assembly software and a polishing machine.

The scope of supply further includes hot shears such as bloom shears and slab shears as well as cropping shear and billet shear blades. For the hot shears, special materials, e.g. from nickel alloys, are used. In the cold work range, medium and high-alloy tool steels but also sophisticated powder metallurgic heavy-duty steel is used. Squaring shear blades, scrap chopper knives, profile shear blades and cut-to-length knives are made thereof. In addition to steel service centers and cold rolling mills, iron and steel works, non-ferrous metal working plants, tube mills, manufacturers of profiled steel and packaging material are among the customers of IKS Klingelberg all over the world.

### **Know-how in the High-precision Range**

The permanent development of new steels with ever rising strength requires up-to-date and extensive know-how of the cutting specialists. The IKS Klingelberg Group already specialized in the solution of such problems and supports its customers in the selection of materials, optimum heat treatment of the cutting tool, highly precise processing up to the final product and gives technical advices. We see ourselves as partner for our customers and would like to help them to provide a perfect solution for their cutting applications. This requires application-oriented research, innovative production technologies and decades of experience.

As only by means of highly precise tools the great demands on the desired cutting result can be satisfied. In this case, extremely narrow tolerances regarding thickness, parallelism, smoothness and bore hole are to be achieved above all. Thickness tolerances of +/- 0.001 mm are meanwhile standard values. In extreme applications (e.g. cutting of very thin aluminum or copper foil), a guaranteed thickness tolerance of the tools of +/- 0.0005 mm (+/- 0.5 µm) is indispensable. The above is necessary when the customer has to cope with cutting tasks where very narrow width tolerances and almost burr-free operation is required. The setting of clearance and overlapping is to be highly precise. In this case, the mechanical engineer reaches the limits of its capabilities and precision of the tools is then required. Just imagine you have to cut 80 or more strips from one coil; in this case, there are more than 200 tools (rotary slitter knives, rubber-lined spacers etc.) on one single shaft. If each of these tools shows a thickness which deviates from the nominal dimension by 1 µm, the added-up error of all tools would already amount to more than 0.2 mm.

In order to avoid this addition of errors, IKS Klingelberg manufactures the above mentioned highly precise tools. Within their tolerance they are further categorized in three groups (+ / 0 / -). Accordingly, the added-up error is almost zero when perfectly combining these tools - here, the knife manufacturer proves its skills. But without the utilization of the special slitter assembly program developed by IKS Klingelberg, this perfect combination of highly precise tools would not be possible. In extreme cases, the slitter assembly is even carried out in the climatic chamber in order to prevent dust particles between the tools from falsifying the result.

Furthermore, many parameters such as the thickness and quality of the material processed by the customer are contributing factors when selecting the optimum cutting tool. This is where the know-how of our globally operating sales engineers comes into play; they aim at offering an overall solution to the customer. This is very important in particular in such cases where the customer cut different materials or had other quality requirements in the past.