

REVOLUTIONARY TINES

SOLVING PROBLEMS IN AGRICULTURAL WEAR PARTS WITH NEW ANGULAR TUNGSTEN CARBIDE

“Wow – it looks like the Dorset Tiger!” – when English farmer James Tory uttered this enthusiastic exclamation on the occasion of a product test, he also coined the product name for the new Betek chisel plough tip from one of the world’s leading agricultural equipment manufacturers, Kverneland: the “Dorset Tiger”. The success is achieved by a newly-developed angular tungsten carbide from Betek, which is particularly beneficial in agricultural wear parts.



The person responsible for agricultural wear parts at Betek, Florian Smeets, formulated the target of the new development: “Steel body wear that is too high in relation to tungsten carbide wear or substandard tungsten carbide and brazed joint quality have always been the order of the day in our competitors’ tungsten carbide tools in agricultural wear parts. However, we can minimise this wear effect on the steel parts of the machine with the new angular tungsten carbide from Betek. As far as brazed joints and tungsten carbide quality are concerned, Betek

is the leader. The goal of having a balance between tungsten carbide and steel body wear is achieved with the new angular tungsten carbide from Betek. Farmers can therefore solve problems in the quality, time and costs areas”.

The material has been thoroughly tested in both England and Switzerland. Flint in the form of large irregularly shaped stones or slabs is frequently found in the county of Dorset in south-west England. The stress on the cultivator tines, particularly the tungsten carbide, is the-

refore considerable. Farmers have been suitably delighted with the extremely good result. The “Dorset Tiger” has now also multiplied the service life compared to conventional steel tools by a factor of between four and eight in England (depending on the type of soil, the moisture content, the machine type, the working speed, the working depth, the machine width and the attachment position).



The soil contains a considerable amount of flint in Dorset/south-west England: The battle against rapid wear in agricultural wear parts is succeeding with the "Dorset Tiger".

A private contractor from Switzerland also experienced the same thing. Bernhard Kappeler has been battling against the extremely stony and abrasive soil in the Berner Hinterland with tremendous circular harrow tine wear for a considerable time. However, his everyday working life looks quite different with the new angular tungsten carbide tines from Betek. Kappeler: "The angular shape of the tungsten carbide in combination with an extremely tough type of tungsten carbide ensures that the tines themselves withstand the extremely impact stresses caused by the high stone content. For the first time we have been able to actually make use of the advantages of using tungsten carbide in Switzerland. Tungsten carbide breakages and losses because of poor soldering occurred continuously in all competitor tines. The circular harrow tines developed by Betek are a milestone for us, and a small revolution".

For cultivators and circular harrows, in practice this means no wear-related adjustment of the depth guide, time and cost saving because of fewer plough changes and improved penetration and less pulling force requirement due to the cutting edges being permanently sharp. Betek is currently also testing angular tungsten carbide on ploughshares and plough tips. The angular tungsten carbide was registered for patent quite some time ago, says Florian Smeets. Smeets: "Of course, we are impatiently waiting for the patent to be granted".



Even the experts are amazed: quality, time and cost benefits are being reaped by farmers in soil processing by using Betek angular tungsten carbide tools for agricultural wear parts. From left to right: Arnold Furre, Laboratory Manager, Kverneland; Richard Bennett, Parts Marketing Manager Kverneland UK, Phil Vickery (front right), Key Account Manager Kverneland and Farmer James Tory (rear right).



Bernhard Kappeler from Switzerland uses the tremendous advantages of the new Betek angular tungsten carbide for the financial success of his contracting company.