

NEXT® 900: High performance... low price

In the 90's, the market of the cutting diamond tools based on metallic binders completely changed. In the first step, this market merged up into big international groups in response to the economy globalization with profitability demands clearly defined. Then emerging countries, and particularly in Asia, were seriously interested in the tools of poor quality or in subcontracting and progressively improved their production to compete with the European manufacturers, traditional leading producers on this market. In the same time, the stone production and cutting increased in Asia to the detriment of Europe.

In this context, competition is getting very tough, causing very significant requests for the decrease of production costs of the tools and imposing productivity gain. Innovation becomes more than necessary for the manufacturers to maintain their market shares. Even if the stone and construction markets are growth areas et regularly grow, each endeavours to reduce the costs while offering some tools technically adapted to the end-users: free cutting in Europe ; blade life in Asia...

That is why cobalt, the traditional binder used for the diamond tools, is getting less and less interesting considering that:

- Its rate fluctuation is a serious nuisance for the manufacturers who must face the doubling of their invoices in a few months ;
- The present rates create a gap of more than 40% between the cobalt and the pre-alloyed powders (NEXT®)
- The pre-alloyed powders (with NEXT® covering the 3/4 of the market) have proved their efficiency. They offer today a credible solution of substitution, both in terms of quality of the finished products -most of the times technically superior - and price level.

➤ eurotungstene anticipated these trends from 1997 and was the first producer to launch throughout the world the pre-alloyed powders NEXT®100 and NEXT®200, today the 2 leading powders on the diamond tools market.

In 2004, the 1,000,000th kg NEXT® will be sold and most of the big groups trust the NEXT® range which is composed of 4 bases, 12 pre-mixed powders and as much as granulated versions. This is the technological reply to the demands of the manufacturers.

The brand-new product, NEXT® 900. (cf. picture 1)

NEXT®900 is the brand new product of the NEXT® range. Combining a very low cobalt content (less than 5%) and a very easy mixing ability with additives, it's a real economic strong point for the manufacturing of dry cutters and polishing tools. It is also benefiting from the outstanding diamond retention of the NEXT® pre-alloyed powder range, better than other cheap solutions like mixed Fe Cu. Graph 3 shows its combination of both a high ductility and impact strength.

Here are some results of the mixing of NEXT®900 with various additives (graph 4, 5 and 6): a large range of possibilities as a function of specific requirements. The addition of additives can both reduce the global cost of the binder and allows a wide range of properties for the tool (more free cutting, blade life...)

Technical strong points :

main components : Fe/Cu especially good performances obtained for drycutters, and stone polishing

- excellent combination with traditional additives to obtain various hardnesses
- high ductility and impact resistance
- Fineness and homogeneity of the bond, strong diamond retention