keratec

ADVANCED CERAMIC MATERIALS

WELDING & LOCATING PINS

- HIGH STRENGTH AND TOUGHNESS
- NOT-ELECTRICALLY CONDUCTIVE
- NON-MAGNETIZING
- HIGH WEAR RESISTANCE
- LOW ADHESION OF WELDING SPARK
- HIGH SURFACE FINISH AND LOW FRICTION
- VERY SHORT LEAD TIME
- CONSIGNMENT STOCK ON CUSTOMER PREMISES

MAIN USES

NANOKER manufactures a wide range of welding and centering pins for use in the automotive industry, generally associated with resistance welding processes. We serve the automotive industry and heavy equipment manufacturers among others.

The appropriate choice of pin composition and geometryimproves customer productivity ratios and increases their cost savings.

MATERIALS

KZY1000: Yttria partially-stabilized zirconia (Y-TZP).

NC2: Nanocomposite material (European patent EP2460782 and US patent 8,546,285). High toughness, better performance.

Zirconia based material are hard, chemically inert, stable at high temperatures, and resistant to corrosion, wear and thermal shock.

These properties, alongside a correct selection of composition can improve performance over the metal surface treated pin; providing longer life, less maintenance shutdowns and a better surface finish of welded joints which decreases the rate of rejection of the manufactured parts.

ADVANTAGES

NANOKER manufactures pins according to custom-made drawings including standard metric threads as well as mixed ceramic metal pins. We also manufacture anti-wear plates to protec sensitive areas of machines according to customer needs.

All products are easily adapted to existing machines. Prototyping specialists. You are dealing directly with the manufacturer.

For more details of the products and services or to specifically discuss your needs, please contact one of our sales engineers.

Properties	NC2	KZY-1000
Density (g/cm^3)	5.40	6.05
Thermal expan. Coef. (x10^{-6}/ºC)	9.3	10.5
Thermal conductivity (W/mºK) 20ºC	10	2
Fracture toughness MPa x m$^{1/2}$	10	6
Flexural strength 20ºC (MPa)	1036	1100
Hardness HV	1130	1326

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