



Bhise Ceramics Pvt. Ltd.

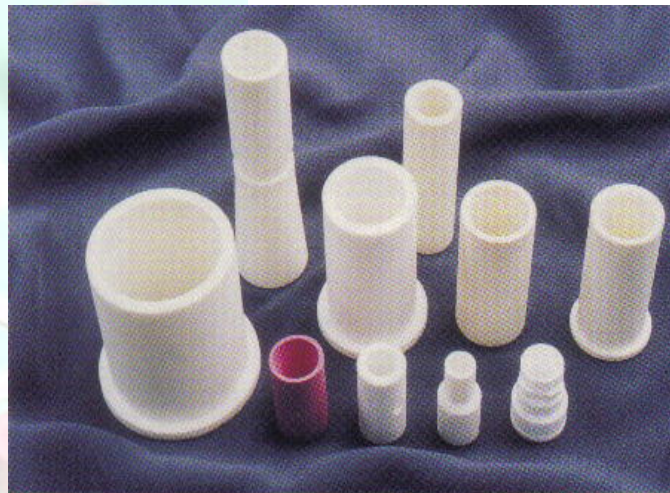
.....A manufacturer of world-class ceramic products.....

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*Product Catalogue: Ceramic Wear Resistant Products for Wire
and Cable Industry*





Bhise Ceramics Pvt. Ltd.

Company Introduction

We, at Bhise Ceramics Pvt. Ltd., have a wide array of products that serve a broad spectrum of industrial applications. Our products/services, typically, may be classified to four categories on basis of their end use:

- ◆ Customized Insulators
- ◆ Wear Resistant Parts
- ◆ Refractory Products
- ◆ Special Turnkey Projects

Our core ability is the ability to customize and innovate. With the backing of the solid experience of our product development team, we are in a position to manufacture products as per the commercial and technical requirements of the client. For us, component geometry is not a restriction. As we say, if you can draw it, we CAN make it.

We have been in this field for more than 35 years and have developed the technology indigenously, so have total mastery over managing the efficiency of the applications. We believe in adding competitive advantage to the client by enhancing the operational effectiveness of their processes.

Bhise Ceramics Pvt. Ltd. is a quality conscious organization: We are ISO-9001 Certified for our quality assurance in design, development, production and delivery. This shows our commitment to quality. We believe in setting very high standards to exceed the expectations of our customers.

Our expertise enables us to have the optimum quality at the optimum price.

After establishing considerable expertise in component manufacture, we have now moved into executing turnkey projects in chemical and petrochemical industries. In the high temperature arena, for certain applications, we can provide custom furnaces as well.

We have the perfect blend of product and service offerings, making us the most reliable partner for an array of industries

If you have any queries about our products or need more information, feel free to contact us. We look forward to having a long and a mutually beneficial business relationship with you.

Count on us to deliver the best, always!

Thanks,

The BCPL Team

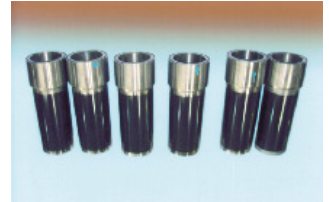
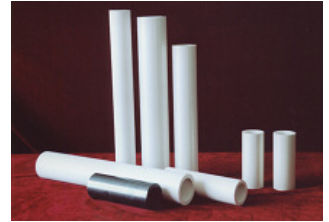


Bhise Ceramics Pvt. Ltd.

Our Product Range:

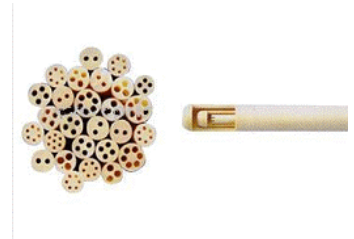
Customized Wear Resistant Products in Alumina, Yttria / Magnesia Stabilized Zirconia

- ◆ Wire Drawing Guides, Pulleys, Assemblies
- ◆ Mechanical and Chemical Seals
- ◆ Erosion and Corrosion Resistant Chemical Pump Bearings, Liners, Sleeves and Pistons
- ◆ Erosion and Corrosion Resistant Ceramic Coatings for Valves, Pump Shafts and other areas exposed to high wear and tear
- ◆ High Alumina Wear Resistant Liners: Custom Pre-Engineered Wear Tiles for the most demanding applications.



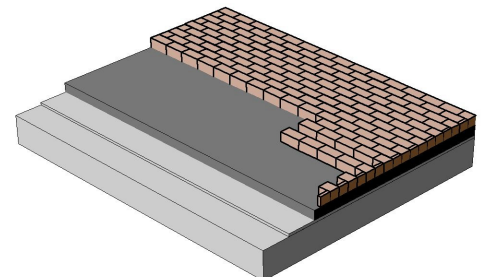
Special Refractory Products

- ◆ Crucibles
- ◆ Ferrules and other Custom Shapes
- ◆ Thermocouple Sheaths and other labware.



Turnkey Assignments

- ◆ Turnkey Assignments for custom fabrication of furnaces
- ◆ Turnkey Assignments for Acid-Proof Lining Turnkeys of Platforms, Storage Tanks and Work Floors





Bhise Ceramics Pvt. Ltd.

Product Introduction

In order to meet the needs of high quality and productivity of metal wire drawing machines productions, our company has successfully developed the ceramic solutions to reduce wear problems and maintenance downtimes.

Bhise Ceramics Pvt. Ltd. offer High Wear Resistant products like wire drawing guides, wire drawing dies, pulleys and metal ceramic composite assemblies are being used to affect/increase the performance of wire and cable industry. These are largely used in high wear prone applications.



We produce this product by various process technologies such as Uni-axial Pressing, Isostatic Pressing, Extrusion and injection molding. The manufacturing process is based on the component size, geometry and the required production volume. Since we have developed the technology, we know how to manage the critical parameters to produce the best quality products. We can machine the

components to very close tolerances and can give a high surface finish of **Ra~0.2 microns**. This speaks volumes about our technical capabilities.

Our standard materials for wear resistant ceramics include **Alumina (from 85% to 99.8%), Yttria Stabilized Zirconia, Magnesia Stabilized Zirconia and Tungsten Carbide**. Chemically inert and having hardness only surpassed by diamond (9 on Mohs Scale), they are capable of withstanding high wear applications.



Bhise Ceramics Pvt. Ltd.

Product Details:

Wire drawing guides

Ceramic wire drawing guides are totally durable, dependable and provide economic solutions to the wire and cable manufacturers. Specially formulated for wire drawing applications, they provide extreme hardness, an exceptionally smooth wire drawing surface and excellent corrosion resistance. The superior surface of the guide by high polish processing results in high quality of the drawn wire plus extended life.

Wire drawing dies

Whether you are drawing Copper, Aluminum, Gold, Stainless Steel or other metals, ceramic wire drawing dies are helpful in every conceivable shape and size for every application. Our control on the manufacturing process enables us to provide dies to any specific hole size.



Pulley

Ceramic pulleys manufactured by us solve the wear problems of the pulleys without affecting the wire. These also reduce maintenance downtimes. It provides problem-less production of bare, plated and ultra fine wires. They possess extreme hardness, an exceptionally smooth peripheral surface and excellent corrosion and wear resistance.



Metal –ceramic composite assemblies

Wire drawing cones, capstans and pulleys use a metal ceramic composite design. This avoids the thermal expansion mismatch and also protects the ceramic components from damage. Replacement of only grooved rings is another cost saving realized when using a metal ceramic composite assembly.

However, the materials, the product, the processes do not define our core competence. Our core ability is the ability to customize and innovate. With the backing of the solid experience of our product development team, we are in a position to manufacture products as per our customer’s technical requirements. For us, component geometry is not a restriction.

As we like to say, if you can draw it, we CAN make it.



Specifications Sheet for Alumina 997 components

Alumina Content	99.7%
Density (g/cm³)	3.9
Hardness (Gpa)	83
Elastic Modulus (GPa)	370
Poisson Ratio	0.22
Tensile Strength (MPa)	260
Fracture Toughness(MPa m^{1/2})	4 – 5
Compression Strength (MPa)	2600
Thermal Conductivity (W/m °K)	30
Flexural Strength (MPa)	375
Coefficient of Thermal Expansion (/°C)	8.2 x 10 ⁻⁶
Maximum Application Temperature	1650 °C
Specific Heat (J/kg*K)	880
Color	Ivory

Important Note:

Please note that the above results are from test samples and should be used only for guidance. This chart is intended to illustrate typical properties of advanced ceramic materials available from M/S Bhise Ceramics Pvt. Ltd. The buyer should recognize that exact properties may vary according to product configuration and may sometimes be tailored to meet specific requirements. The information set forth herein is offered for comparison only, and is not to be construed as absolute engineering data or constituting a warranty or representation for which M/S Bhise Ceramics Pvt. Ltd assume legal responsibility.



Specifications Sheet for Yttria Stabilized Zirconia components

Property	Specification
COMPOSITION	ZrO ₂ – 94.6% Y ₂ O ₃ – 5.4%
DENSITY	> 6.0 gm/cm ³
HARDNESS ON VICKERS (HV)	1250
HARDNESS ON Mohs	>9
ELASTIC MODULUS	205 GPa
WATER ABSORPTION	NIL
POROSITY	NIL
FRACTURE TOUGHNESS	>9 Mps.m ^{1/2}

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Specification sheet for Tungsten Carbide components

TC Physical Properties							
Technical parameter		Unit	BN6	BN8	BC6	BC6	BS60
Composition	WC	%	94	92	94	92	
	Ni	%	6	8	--	--	
	Co	%	--	--	6	8	
Density		Gm/cm ³	14.5-14.9	14.4-14.8	14.6-15	14.5-14.9	6.5-6.8
Hardness		HRA	≥88.5	≥88	≥89.5	≥89	≥90
Fractural Strength		MPa	1490	1470	1421	1470	1480
Co-efficient of Thermal Expansion		10 ⁻⁶ /K	5.2	5.3	5	5.1	7.5

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