

**AVISTM METAL
INDUSTRIES LTD**

SINCE 1997

TUNGSTEN CARBIDE PRODUCTS



METAL POWDERS





ABOUT US

We the "Avis Metal Industries Ltd", in the field of tungsten carbide business operating from A. K. Road, Surat, since 1997. The Gujarat state is well known for its heavy industrialization. The Two manufacturing facilities spread over 15000 square metres having capacity to produce 250MT of Tungsten Powder & Products. One facility is dedicated for refining of Tungsten & Cobalt powders located at Sachin G.I.D.C., SURAT.

The Tungsten Carbide parts manufacturing unit, which was located at A. K. Road, Surat has now moved to new plant located at Navsari. (30 Km from A. K. Road, Surat) which is more spacious and advanced facility From April 1,2018.

The strengths of our business rely in the application of innovative technology, the well-established and dynamic workforce of more than 120 personals having holds on ever changing product dynamics in the markets and its commitment to research in order to ensure consistent top quality and service to You from more than 22 years.

Maximized investment in research, unwavering promotion of technological innovation, conscientious attention to product and service quality, effective responses to the real needs of markets, extreme flexibility in taking advantage of technological synergies and carrying out operative integration in widely differing industries: These, in short, are the winning strategies that have allowed the "Avis Metal Industries Ltd" to become a major Tungsten Carbide manufacturer over the years.

Wind Power - a small step to renewable energy.

Wind energy is a source of renewable energy. It does not emit toxic substances or contaminants into the air, which can be very damaging to the environment and to human beings. Wind power is the most efficient technology to produce energy in a safe and environmentally sustainable manner: it is zero emissions, local, inexhaustible, competitive and it creates wealth and jobs.

Avis Metal Industries Ltd owns wind turbine on the west coast of Gujarat to meet 100% of its energy requirement as commitment to limiting environmental impact and reduction of carbon foot print.



OUR VALUES

QUALITY POLICY

We at "AVIS METAL INDUSTRIES LTD" are committed to manufacture and timely supply, QUALITY sintered tungsten carbide parts to our customers to win and sustain their satisfaction by complying International standards related to QMS - ISO 9001:2015.

We shall ensure continual improvement in the Quality Management System, Through up gradation in infrastructure, systems, processes and competence of our team.

PROCESS & PRODUCTION LINE

To provide products of global standards, Avis has redefined the process and production line with machinery and instruments that are state of the art and abreast of technological up gradation.



LABORATORY INSTRUMENTS

Our state of the art laboratory has latest instruments like Atomic absorption spectrophotometer, Fisher sub sieve sizer, H₂ loss determination, Density meter, Muffle furnace, Hardness tester, Microscope, analytical balance etc. helps to optimize product quality and productivity.



RESEARCH & DEVELOPMENT

Well developed laboratory, the nucleus of quality maintenance and innovation. It is here where the Avis products are analyzed to the exact specifications for critical requirements. It is the center of innovation and search for perfection.



ISO CERTIFICATION



AVIS METAL INDUSTRIES LIMITED



UNIT 1: SURVEY NO. 658, OPP. GANESHVAD, NAVSARI MAHUV ROAD,
VILLAGE SISODRA (GANESH), DIST.- NAVSARI - 396 463, GUJARAT, INDIA.

This is a multi-site certificate, additional site(s) are listed on the next page(s).

Bureau Veritas Certification Holding SAS – UK Branch certifies that the Management System of the above organization has been audited and found to be in accordance with the requirements of the Management System Standard detailed below.

Standard

ISO 9001:2015

Scope of certification

MANUFACTURE AND DESPATCH OF SINTERED TUNGSTEN CARBIDE PARTS & TUNGSTEN METAL POWDER AS PER CUSTOMER REQUIREMENTS

Original cycle start date: 13 January 2011
Recertification cycle start date: 10 January 2023
Subject to the continued satisfactory operation of the organization's Management System, this certificate continues on: 12 January 2025

Certificate No. IND.23.4010/QM/U Version: 1 Issue date: 10 January 2023

J-14-2-



Signed on behalf of BVCH SAS UK Branch
Jagdishch H. MAMAN
Director – CERTIFICATION, South Asia
Commodities, Industry & Facilities Division

Certification body address:
8th Floor, 64 Princes Street, London, E1 8HG, United Kingdom.

Local office:
Bureau Veritas India Private Limited (Certification Business)
72 B Edition, 7th Floor, 10th Main Road, MDC Cross Road, "C",
Anthem Plaza, Marathalli - 560 034, India.

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organization.
To check this certificate, visiting please call +91 22 6274 2000.

Bureau Veritas Certification

AVIS METAL INDUSTRIES LIMITED



Standard

ISO 9001:2015

Scope of certification

MANUFACTURE AND DESPATCH OF SINTERED TUNGSTEN CARBIDE PARTS & TUNGSTEN METAL POWDER AS PER CUSTOMER REQUIREMENTS

SITE	ADDRESS	SCOPE
AVIS METAL INDUSTRIES LIMITED (UNIT 1) - NAVSARI	SURVEY NO.658, OPP. GANESHVAD, NAVSHAR MAHUV ROAD, VILLAGE SISODRA (GANESH), DIST - NAVSARI - 396 463, GUJARAT, INDIA.	MANUFACTURE & DESPATCH OF SINTERED TUNGSTEN CARBIDE PARTS AS PER CUSTOMER REQUIREMENTS
AVIS METAL INDUSTRIES LIMITED (UNIT 2) - SACHIN	PLOT NO.P-5, ROAD NO.3, OPP. MANOHAR DYING MILL, GIDC, SACHIN, DIST - SURAT - 394 230, GUJARAT, INDIA.	MANUFACTURE & DESPATCH OF TUNGSTEN METAL POWDERS

Certificate No. IND.23.4010/QM/U Version: 1 Issue date: 10 January 2023

J-14-2-



Signed on behalf of BVCH SAS UK Branch
Jagdishch H. MAMAN
Director – CERTIFICATION, South Asia
Commodities, Industry & Facilities Division

CERTIFICATION BODY
CERTIFICATE NO:
DATE ISSUED:

Bureau Veritas India Private Limited (Certification Business)
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Anthem Plaza, Marathalli - 560 034, India.

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Avis Metal Industries Limited is an ISO 9001:2015 certified company since 2011, an achievement for which we always dreamed to serve the customers in more efficient way with recognised quality standard & productivity.

METAL POWDERS

TUNGSTEN METAL POWDER (W)



Physical Properties

Avg. particle size	1.5	5.0	10.0	15.0
F.S.S.S. (μ)				
Apparent density g/cc.	2.5	3.4	5.0	6.2

Chemical Composition - Typical

W, % Min.	99.85	99.85	99.85	99.85
O ₂ , % Max.	0.06	0.04	0.03	0.025
Fe, % Max.	0.008	0.008	0.008	0.008
Mo, % Max.	0.001	0.001	0.001	0.001
Cu, % Max.	0.001	0.001	0.001	0.001
Na, % Max.	0.003	0.003	0.003	0.003
Co, % Max.	0.002	0.001	0.001	0.001
Ca, % Max.	0.001	0.001	0.001	0.001
Mg, %Max.	0.001	0.001	0.001	0.001
Mn, %Max.	0.001	0.001	0.001	0.001
Zn, %Max.	0.001	0.001	0.001	0.001

Other grain sizes are available upon request.

Principal Applications

These powder are mostly used in the manufacturing of diamond segments by hot pressing as additives in the metal matrix to improve the diamond retention and cutting ability. Also, these powders are used to manufacture electrical contacts, copper tungsten electrodes, weight fillers, induction accelerators, radiation shielding fillers and counter balance. Higher density Tungsten powder used for plastic densifier.

TUNGSTEN CARBIDE POWDER (WC)



Physical Properties

Avg. particle size	2.5	5.0	10.0	15.0
F.S.S.S. (μ)				
Apparent density g/cc.	2.4	3.2	4.8	6.0

Chemical composition - Typical

C _{BONDED} , % Min.	6.11	6.11	6.11	6.11
C _{FREE} , % Max.	0.03	0.03	0.03	0.03
Fe, % Max.	0.006	0.006	0.006	0.006
Mo, % Max.	0.001	0.001	0.001	0.001
Cu, % Max.	0.002	0.002	0.002	0.002
Na, % Max.	0.004	0.004	0.004	0.004
Co, % Max.	0.001	0.001	0.001	0.001
Ca, % Max.	0.001	0.001	0.001	0.001
Mg, %Max.	0.001	0.001	0.001	0.001
Mn, %Max.	0.001	0.001	0.001	0.001
Zn,%Max.	0.001	0.001	0.001	0.001

Other grain sizes and READY TO PRESS POWDER (WC-Co) are available upon request.

Principal Applications

Tungsten carbide powders are used to manufacture various graded powder for cemented tungsten carbide products and manufacturing of diamond segments to increase the hardness and abrasion resistance of the tools.

PACKING

All Powders are available in various packing size of 1 kg. & 5 kg in cardboard box with inner LDPE bags sealed in vacuum. 25 kg. & 50kg. Packing in metal drum with inner LDPE bags sealed in inert atmosphere.

FUSED TUNGSTEN CARBIDE POWDER (W₂C)



Physical Properties

- Mesh size - ASTM/BSS standard, -40 to +600 as per requirement of the customer.
- Appearance - Blackish Grey Powder
- Apparent density - 5.9 g/cc.
- Melting Point - 3000 °C Approx

Chemical Composition :

C _{TOT} , %	3.5 - 4.1
C _{FREE} , %	0.003 Max.
Fe, %	0.2 Max.
Cu, %	0.001 Max.
Co, %	0.002 Max.
Mg, %	0.001 Max.
Ni, %	0.002%
W, %	Balance

Principal Applications

These powders have very high hardness and outstanding abrasion resistance. These are used to manufacture diamond core drill bits, electrodes for hard surfacing and diamond tools to cut very abrasive materials.

COBALT METAL POWDER (Co)



Physical Properties

1. Fisher grain size 1.1 to 1.5 micron (Extra fine)
2. Fisher grain size 0.9 to 1.1 micron (Ultra fine)

Apparent Density - 1.2 g/cc

Chemical composition - Typical

Co	99.8 %	Min.
Fe	0.010 %	Max.
Mn	0.001 %	Max.
Zn	0.002 %	Max.
Na	0.002 %	Max.
Ni	0.006%	Max.
Cu	0.001%	Max.
Mg	0.001%	Max.
O ₂	0.34 %	Max.

Principal Applications

Diamond tools, cemented carbide tools, hard metals, diamonds polishing scaife.

COBALT OXIDE POWDER



Typical application : Used in manufacturing ceramic pigments, glass tint, catalysts, inks, rubber, oil, greases, cosmetics food additives, paint dryer etc.

Physical Properties

Appearance - Black Fine Powder
Sieve Analysis : 300 Mesh

Chemical Analysis

Assay (As Co)	:	73 % Min
Fe	:	0.008 % Max.
Mg	:	0.003 % Max.
Ni	:	0.009 % Max.
Na	:	0.007 % Max.
Zn	:	0.001 % Max.
Mn	:	0.001 % Max.
Cu	:	0.001 % Max.

TUNGSTEN CARBIDE PRODUCTS

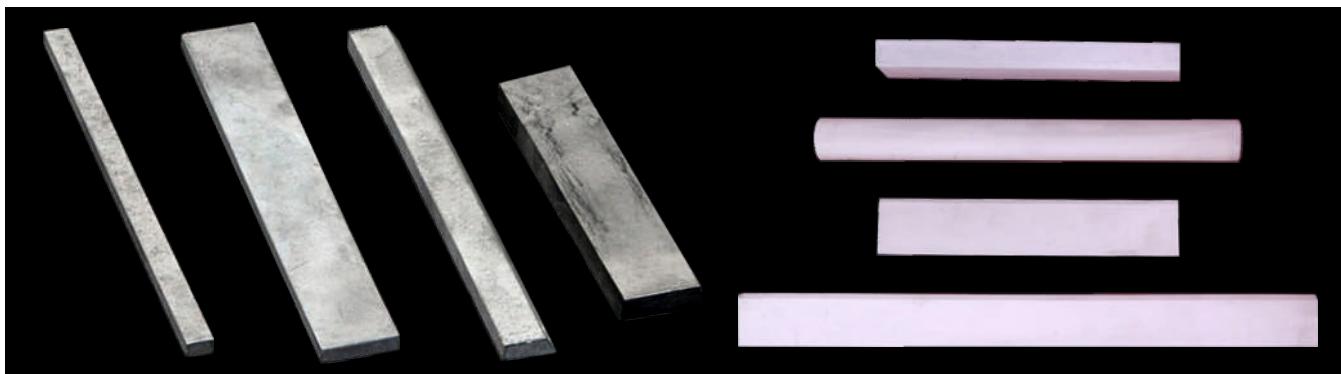
At AVIS, we craft "TUNGSTEN CARBIDE PRODUCTS" have been manufactured from excellent and consistent quality of raw material under stringent manufacturing parameters with the latest technology under the continual observation of the experts.

Our team of quality inspectors thoroughly tests at every stage of production helps us to achieve extreme strength, acute stiffness, eliminates cross-contamination in the tungsten carbide graded powders and the components are made, maintain uniform quality at every stage and each component we make.

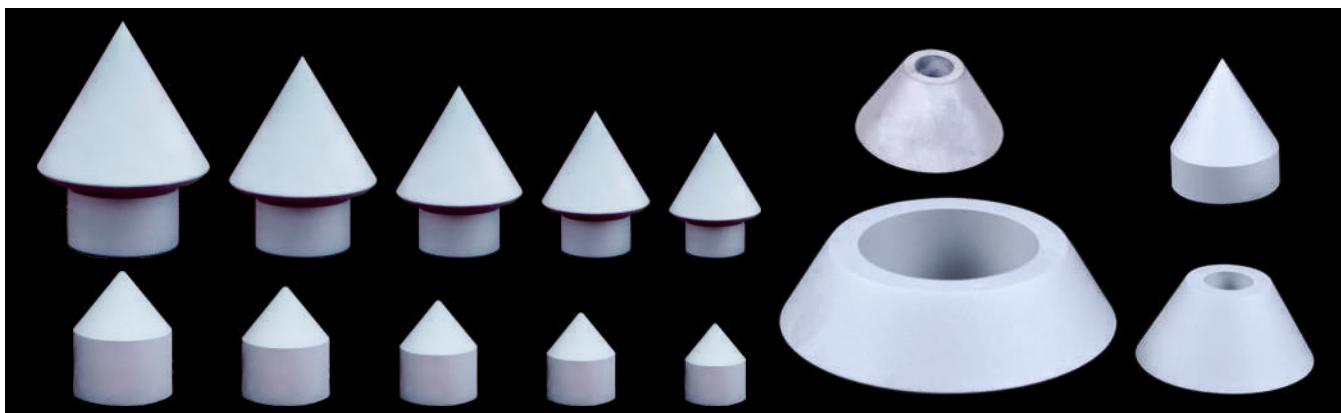
WEAR PARTS SOLUTION

We are the renowned company, offering Tungsten Carbide Wear Parts. We are keen and dynamic in development and testing of new tungsten carbide grades that are tailored made to customer specific requirements, while offering customized products in simple and complex design aspects. We ensure making faster deliveries for our range within a stipulated frame of time at the client's destination.

TC FLATS / STRIPS - CUSTOMISED APPLICATION



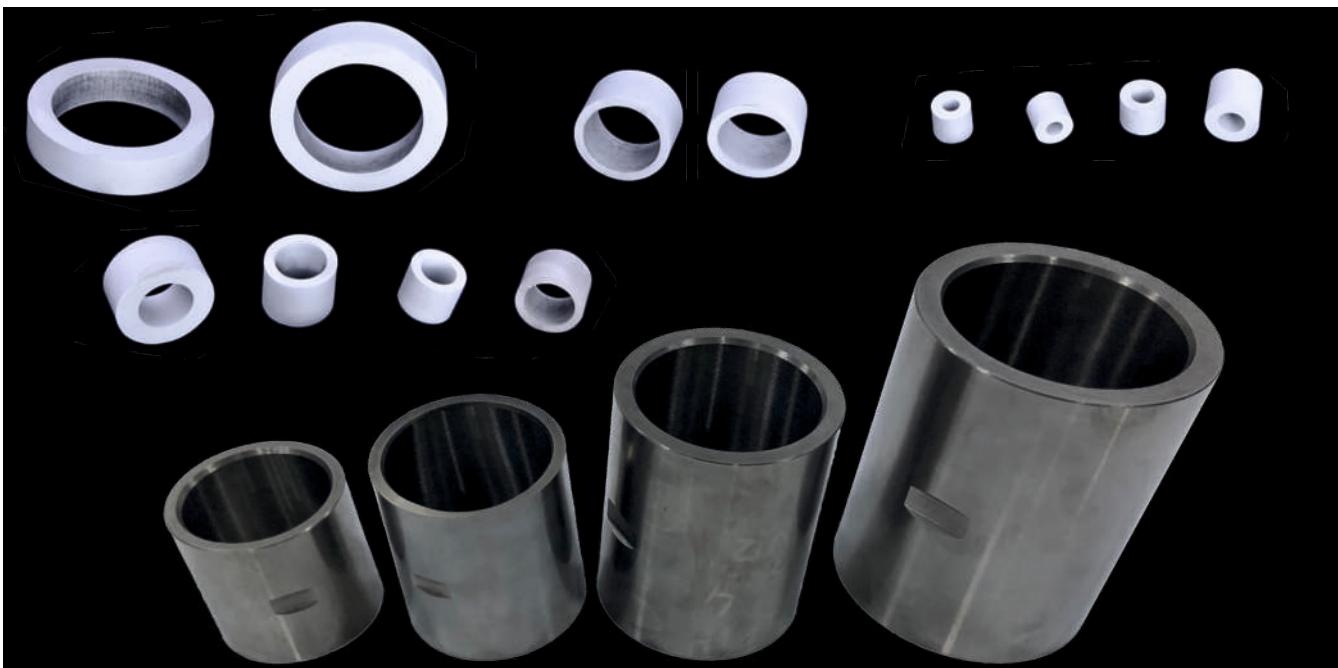
TC DEAD, PIPE, RELIVED, REVOLVING CENTRE



TC MECHANICAL SEAL RINGS



TC SLEEVES FOR PUMP & MOTOR INDUSTRIES



TC BOWL SET FOR PULVERIZER, RO, VIBRATORY & HAMMER MILL



TC BUSHES



TC RODS



TC WEAR PAD FOR CRANKSHAFT INDUCTORS



TC FLUX COATING PELLETS FOR WELDING RODS



WEAR PARTS SOLUTION

TC THERMOWELL TUBE FOR THERMOCOUPLES



TC DECANTER MACHINES PARTS



TC WORK REST BLADES



TC GAUGES



TC HOMOGENIZER WEAR COMPONENTS



TC BROACH CUTTERS



INDUSTRIAL DIES

We are an eminent organization engaged in manufacturing, supplying and exporting quality industrial dies including wire, bar, and tube drawing dies, customized Pellets, Compacting Dies, metal Forming Dies, Stamping Dies, Container can drawing Tools, Slitting Knives.

The professionals we have hired manufacture these products using best quality the industrial die material features with dimensional stability, fine finish, high material strength, precise grade, with good wear resistance property. Our range consist of outer Diameter \varnothing 6 mm to \varnothing 250 mm and more with suitable length.

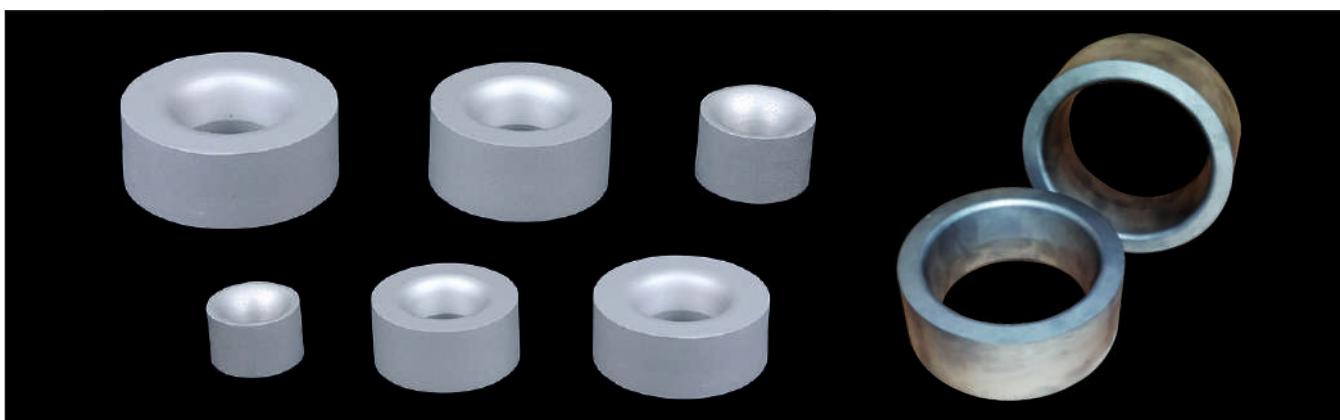
TC WIRE DRAWING PELLETS (NIBS): \varnothing 6 MM TO \varnothing 30 MM



TC BAR DRAWING PELLETS : Ø 25 MM TO Ø 250 MM AND MORE



TC TUBE DRAWING PELLETS: Ø 25 MM TO Ø 250 MM AND MORE



TC PLUGS & MANDRELS FOR TUBE DRAWING



TC PELLETS FOR COLD HEADING DIES FOR FASTENERS INDUSTRIES



TC PALLETS FOR DEFENSE INDUSTRY - BULLET FORMING DIES & PUNCHES



TC WIRE GUIDE BUSHES (EYELET)



NOZZLES

We manufacture tungsten carbide nozzles as per customers drawing with extreme hardness for shot & sand blasting applications. Are available with a choice of liners and in a wide range of styles, sizes and lengths to suit all applications. Customers can also specify the size and drawing, which provides easier. To ensure optimum life, all blast line nozzles should always be used with the appropriate nozzle gasket.

TC SAND BLASTING NOZZLES



TC SHOT BLASTING NOZZLES



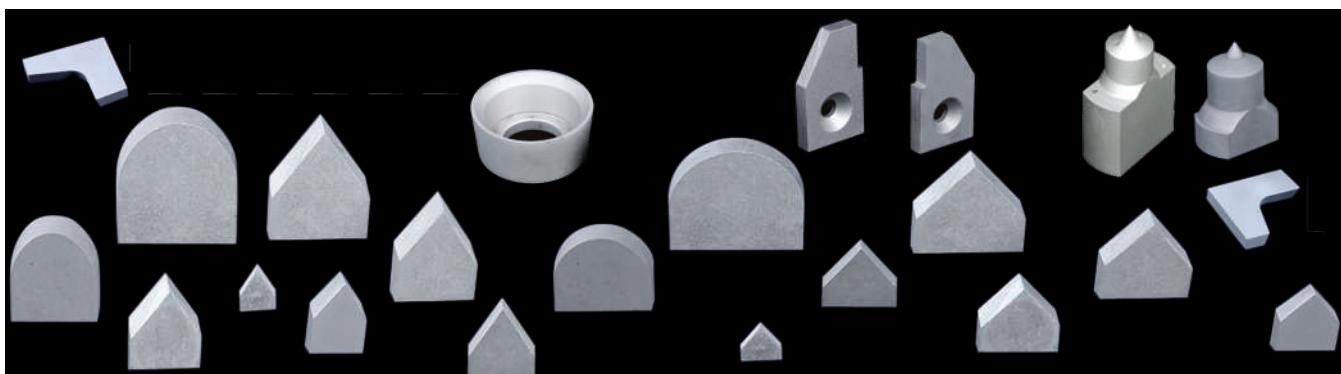
TC SWIRLS AND ORIFICE FOR CERAMIC INDUSTRIES



BRAZED TIPS AND CUTTERS

We hold expertise in manufacturing, supplying and exporting a superior quality range of tungsten carbide brazed tips. For manufacturing these tips, we make sure that quality approved material is utilized. The quality controllers we have employed inspect these on certain well-defined parameters of quality. We are manufacturing different size and different type of carbide customized brazed tips.

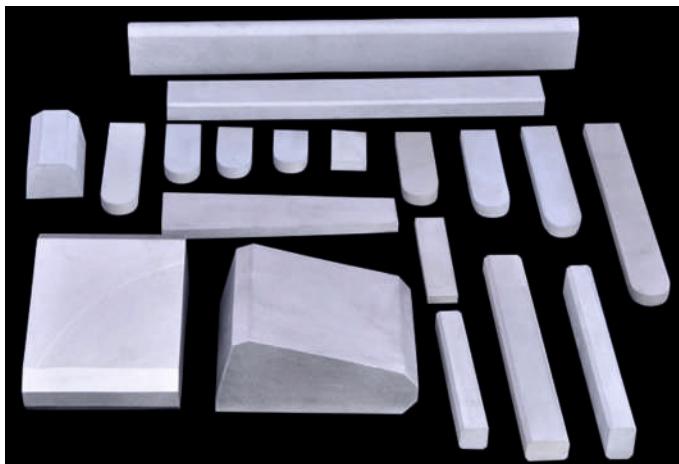
- ◆ TC TIPS ISO (INTERNATIONAL STANDARD)
- ◆ TC TIPS BSS (BRITISH STANDARD)
- ◆ TC TIPS SMS (SWEDISH STANDARD)
- ◆ TC TIPS DIN (GERMAN STANDARD)
- ◆ TC TIPS FOR SUGAR ROLLER ENGRAVING
- ◆ TC blanks for rotary burrs
- ◆ TC SHREDDING TIPS FOR SHREDDER MACHINES
- ◆ TC CHISELS



MINING

We are one of the accredited manufacturers, suppliers and exporters of a premium range of tungsten carbide products. These products are highly appreciated by customers owing to their superior quality. High tech machines and equipment are employed in the manufacturing process. Avis has introduced different mining grades to suit Indian geological conditions. Our mining grades are designed to work efficiently in various formations like granite, basalt, sandstone, and quartzite even in soft formation like lime and coal.

TC FLAT FOR STONE CRUSHING APPLICATION : UPTO 330 MM



TC BUTTONS FOR DTH BORING BITS



TC CROSS BIT INSERT FOR ROCK DRILLING



TC DRILL STEEL INSERTS



TC TIPS FOR COAL PICKS



TC ROLLERS FOR HOT & COLD ROLLING MILLS

We are Tungsten Carbide Rollers Manufacturer. Customized to client's requirement assuring the best quality used in Wire Flattening Roll, Wire Guiding Rolls, High-Speed Rolling Mills, Wire Rod Rolling Mill.

Tungsten Carbide rolls are used for extended life in applications where long rolling campaigns are required. Their extreme hardness makes them suitable for wire rods finishing blocks and some shaping applications.

The cemented carbides rolls are divided into the conventional WC-TiC and the corrosion-resistant alloys with a mixed binder Co-Ni-Cr. The binder contents vary according to the specific requirements of the application. We also offer composite roll rings that are a combination of cemented carbide and steel. Unlike the relatively brittle cemented carbide rings, these composite rings open a wide range of applications.

TC WIRE FLATTENING ROLLERS



TC MILL ROLLERS



TC PROFILE ROLLERS



TC GROOVE ROLLERS



OILFIELD AND PETROCHEMICAL INDUSTRIES

Tungsten carbide parts are used in petroleum industry for fluid handling, flow control cage & valve, valve seat etc. Because of its properties like abrasion, corrosion, erosion, high wear resistance, good toughness with long life. All the components are manufactured in cold isostatic press machine.

TC CHOKE BEANS



TC FLOW CAGE, FLOW BEANS AND STABILISER DISC



TC VALVE STEM AND SLEEVE

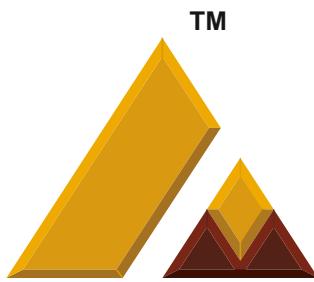


TC VALVE SEATS



TC FLOW TRIMS





AVISTM METAL INDUSTRIES LTD

(AN ISO 9001 : 2015 CERTIFIED COMPANY)

(MFRS. OF METAL POWDERS & SINTERED TUNGSTEN CARBIDE PRODUCTS)

REGISTERED OFFICE :

Opp. T. B. Hospital, Ashwanikumar Road, Surat - 395 008 (India)
Ph.: +91-261-2551545 | E-mail : info@avismetal.in

UNIT-1 :

Survey No. 658, Opp. Ganeshvad, Navsari - Mahuva Road,
Village - Sisodra(Ganesh) - 396463, Dist. Navsari, Gujarat (INDIA)
Ph.: +91 9737722275

UNIT-2 :

Plot No.: P-5, Road No.3, Opp. Manila Dyeing Mill,
G.I.D.C., Sachin - 394230, Dis. Surat. Gujarat (INDIA)
Ph.: +91 9737722272

visit us at www.avismetal.in