



Bangalore Chapter

ASM International Bengaluru Chapter

Cordially invite you to ASM Online Technical Talk

Titled

“Tungsten Carbide and Its Application in Metal Forming”

BY

Mr. Chandan Kumar,

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Infrastructure Business

Kennametal India Limited, Bangalore India

*Date & Time: 09.10.2021, Saturday at 5:00 pm IST
On-Line Tech Talk on: RingCentral Platform*

RING CENTRAL ONLINE MEETING LINK

<https://meetings.ringcentral.com/j/1490142803>

More Info about RingCentral Meeting Online Platform Contact: Nataraj J R @ 09901150505

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ABSTRACT

Tungsten Carbide and Its Application in Metal Forming

Tungsten carbide is often known as a hard metal owing to its high hardness compared to other ceramic powders. Tungsten carbide has a high melting point of 2870°C. Tungsten carbide is synthesized by chemical reaction between tungsten metal and carbon at 1850–2000°C. Doping of tungsten carbide with cobalt (Binder) further improves toughness and strength in such materials. Tungsten carbide (WC) is a highly desirable material due to its attractive mechanical, physical, and chemical properties such as high hardness, high melting point, good electrical and thermal conductivity, and high corrosion resistance.

Application: Tungsten Carbide – Influencing our daily life.

Tungsten – from lightening our nights to enhancing our life.

From the time we are born, we come across products made in some or the other ways touching Tungsten Carbide for in its manufacturing cycle. Our first contact with Carbide when we are Born – The surgical instruments are made with use of carbide tooling's, Radiation Shield, Sutures, Needles, Knives, Blade, the baby diapers cutting is through Carbide rotary dies. As we start growing up – the toys we play with (Dies & Mold), the writing we do with (lead making), the paper we use (Saw Tips/ Blades/ processing), when we use electronic gadgets (EDM Blocks for punch and dies), the power we get to run our appliances (Wire Drawing), the appliances which are used (Dies and Mold). and so on. Transportation – Auto/ Aero/ Ship/ Rail – All machined component and most of the forged components and powder metallurgy parts uses tungsten carbide in making parts used in transportation industry. (Engine Valve, Piston Rings, Transmission System, Steering System, Fasteners, Landing gear, Rail Wheel, Rail Maintenance, etc.) Defense – All ammunition & amours are made using carbide, Penetrator are made of tungsten alloy. General Engineering – Mineral Mining, Metro, Rail, Road Constructions, Processing of Metals like Iron, Aluminum, Copper. Food & Feed Processing, Oil & Gas Processing.

Biodata of the Speaker

Mr. Chandan Kumar is working with Kennametal for over 14 years of experience, serving various positions in infrastructure business (Product Management, Manufacturing, Sales and Application Engineering). He has proven track record of developing and executing strategies for business growth in all roles held so far. He has always been a team player with excellent working exposure in cross functional teams and with Good analytical capability in problem solving. His educational qualifications include: MTech in Production Engineering and Systems Technology (2004 – 2006) studied at The National Institute of Engineering, Mysuru with a First Rank, Gold Medal from Visveswaraya Technological University. His BE is from Industrial and Production Engineering from P.E.S. College of Engineering, Mandya with 1st Class with Distinction, University of Mysore during 1997 – 2001.

Time	Program Outline
4.40-4.45 pm	Login in Through RingCentral application
4.45-5.00 pm	Networking with participants and speaker
5.00-5.02 pm	Welcome Speech by Chairman
5.02-5.04 pm	Introduction of the Speaker by Secretary
5.04-6.10 pm	Talk by Speaker
6.10-6.20 pm	Q & A
6.20-6.25 pm	Vote of Thanks by Secretary and Log off