

湖南锐特超硬材料工具有限公司
HUNAN REAL TECH SUPERABRASIVE&TOOL CO.,LTD.
CBN inserts For Roller Turning Application

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Hunan Real Tech CBN inserts

- We successfully controlled the CBN inserts technology from design, manufacture to application, our CBN tools made innovative enhancement on anti-shock resistance.
- Our solid CBN insert and do rough and finish working for hardened steel, High Cr(Chrome) 、 High Ni and HSS , can work in interrupted cutting condition for hardened materials with high cutting efficiency; cut many cast iron materials with high cutting speed, take for example, to cut hardened steel gear at 100m/min, to cut grey cast iron surpass 2000m/min.
- Our solid CBN inserts and tipped CBN inserts work well on Metallurgy roller in domestic and foreign markets.

Rough turning high Ni &Cr casting roller with high efficiency



Workpiece: Casting High Ni&Cr; HSD80 (HRC60)

CBN : RNMN 120700 S02025

$V_c=25\text{m/min}$, $a_p=9\text{mm}$, $f=0.5\text{mm/r}$

Tool life: 120min

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**Our insert turning
efficiency is 3 times
than other carbide
insert.**

CBN inserts for Narrow Steel roller turning



Workpiece: chilled cast iron HSD67 (HRC50)
 $V_c=66\text{m/min}$, $a_p=2\text{mm}$, $f=0.5\text{mm/r}$

Our insert turning efficiency is 2 times than other carbide insert. Tool life is 3 times higher.

Turning high alloy roller-solid CBN inserts



Workpiece: 34CrNiMoA HRC62
CBN insert: RNUN200700
 $V_c=52\text{m/min}$, $a_p=3\text{mm}$, $f=0.6\text{mm/r}$

**Our insert turning
efficiency is 4 times
than other alloy insert.
Cost is only 50%**

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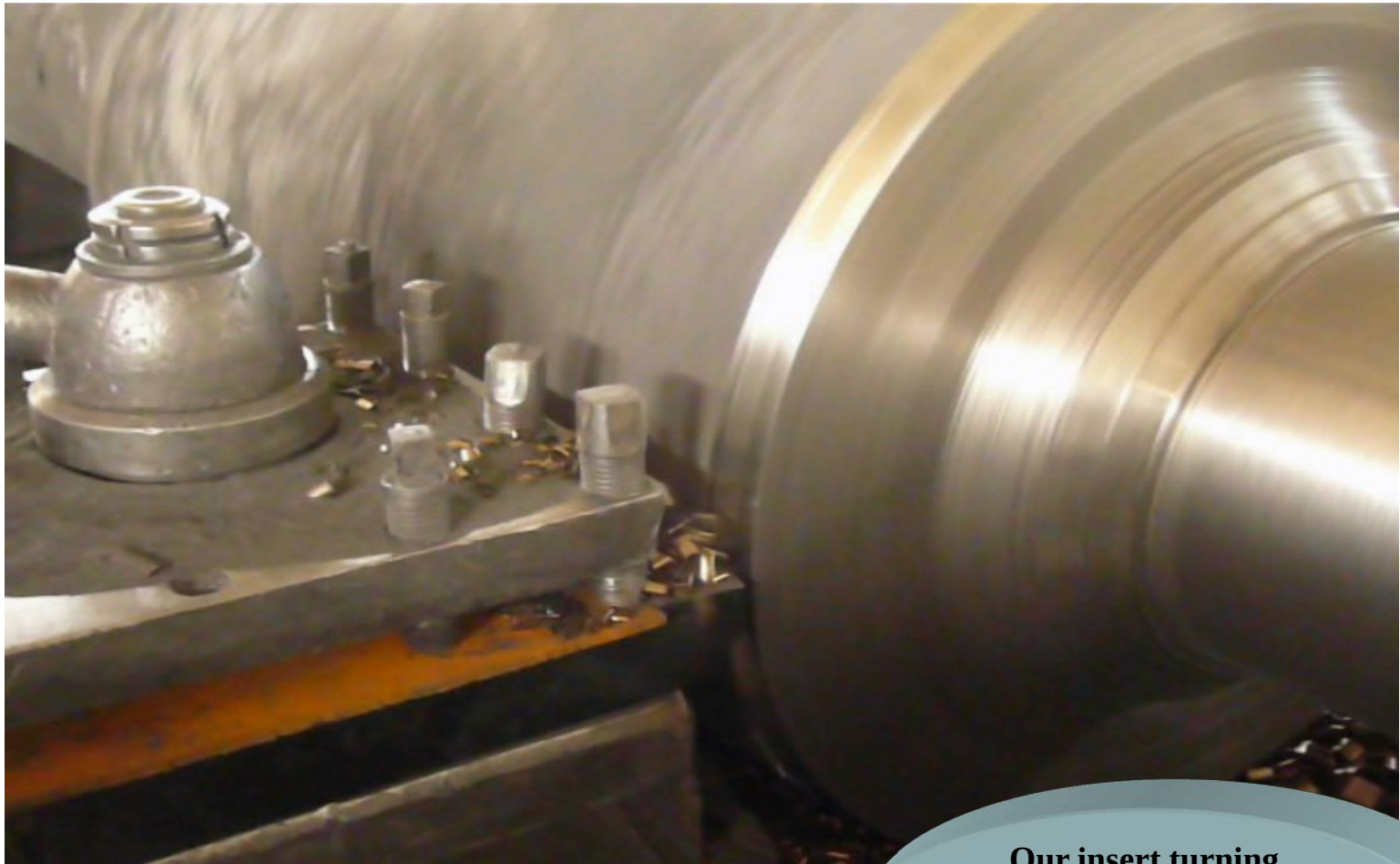
CBN inserts for fine turning roller



Workpiece: 70Cr3Mo HSD75 (HRC56)
 $V_c=56\text{m/min}$, $a_p=1\text{mm}$, $f=0.3\text{mm/r}$

Our insert turning efficiency is 2 times than other carbide insert with coating. Our insert life is doubled than others.

CBN inserts for rough turning semi-HSS Roller



Workpiece: Semi HSS; Hardness: HRC63
 $V_c=30\text{m/min}$, $a_p=2\text{mm}$, $f=0.5\text{mm/r}$

Our insert turning efficiency is 50% than other carbide insert. Our insert life is doubled than others.

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CBN inserts turning HSS Roller with slot turning



Workpiece: HSS roller
Hardness: HRC63
 $V_c=26\text{m/min}$,
 $a_p=2\text{mm}$, $f=0.5\text{mm/r}$
Tool life: 60min

Customer's
Feedback

Ever since we use CBN inserts from Hunan Real Tech Superabrasive & Tool Co., Ltd. We enhanced 3-5 times of turning efficiency. Operators in our workshop all think this brand insert life is very long, anti shock resistance, good thermal resistance.

****steel group roller department**

2008-11-5

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Hunan Real Tech CBN inserts for Tungsten Carbide Roller Turning



Workpiece : Carbide Roller Hardness: HRA88
Vc=15m/min, ap=1mm, f=0.3mm/r

50% higher turning efficiency while tool life is double than imported tool brand

Foreign customer turning hi-Ni Hi-Cr Alloy Cast Iron Roller



Workpiece: Hi-Ni&Hi-Cr alloy cast iron

Workpiece hardness: HSD63 (HRC47)

CBN insert: RNMN201000 S02020

Vc=100m/min, Ap=2mm, f=0.3mm/r

Insert life: 100min

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Hunan realtech CBN insert
cutting life is 20% higher
than a well-known
brand, life is 3 times than
their insert.

CBN inserts for re-shaping shaped Steel Roller



Workpiece: Hi-carbon semi-steel
Workpiece hardness :HSD67 (HRC50)
Vc=66m/min, ap=0.5mm, f=0.3mm/r

Hunan RealTech CBN
insert cutting life is 2times
than carbide inserts,life is
3 times than carbide insert.

CBN inserts for maintenance of alloy chilled Roller



Workpiece: alloy chilled cast iron;
Workpiece hardness:HSD68
 $V_c=80\text{m/min}$, $a_p=0.5\text{mm}$, $f=0.3\text{mm/r}$

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Hunan RealTech CBN insert
cutting life is 2times than
carbide inserts,life is 5 times
than carbide insert.

CBN inserts for twisted steel Roller Turning



Workpiece : Steel base carbide GW30

Hardness: HRC67

Vc=16m/min, ap=0.5mm, f=0.5mm/r

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Hunan RealTech CBN
insert cutting life is
2times than carbide
inserts, life is 4 times
than carbide insert.

CBN inserts for Grooved Roll turning



Workpiece: HSS; Hardness HRC64
 $V_c=40\text{m/min}$, $a_p=0.5\text{mm}$, $f=0.5\text{mm/r}$

Hunan RealTech CBN insert
cutting life is 50% higher
than ceramic inserts, life is 3
times than ceramic insert.

Carbide Roller Ring Turning



Workpiece: Tungsten Carbide

Hardness: HRA88

$V_c=20\text{m/min}$, $a_p=0.5\text{mm}$, $f=0.3\text{mm/r}$

Hunan RealTech CBN insert
cutting life is 50% higher
than a foreign well-known
brand inserts, life is 2 times

www.china-superabrasives.com than ceramic insert

Solid CBN inserts and Tipped CBN insert Roller turning parameters

	Roller Material	Roller Workpiece Hardness	Cutting Parameter Proposal	
1	Casting High Ni and High Cr roller	HSD72-82	Rough	Vc=15-30m/min ap=3-7mm f=1-2.5mm/r
			Semi-finish	Vc=20-40m/min ap=4mm f=1.5-2.5mm/r
2	Casting High Cr Ferrite roller	HSD72-78	Rough	Vc=10-20m/min ap=3-7mm f=0.50-1.2mm/r
			Semi-finish	Vc=15-30m/min ap=4mm f=1.5-2.5mm/r
3	Casting HSS (high speed steel) roller	HSD82-90	Vc=5-15m/min ap=3-8mm f=1-2.5mm/r	
4	Casting Semi steel roller	HSD55-65	Vc=30-60m/min ap=4mm f=1.5-.5mm/r	
5	Semi steel roller with high carbon	HSD65-72	Vc=25-50m/min ap=4mm f=1.5-2.5mm/r	
6	Chilled cast iron roller	HSD50-70	Vc=25-50m/min ap=4mm f=1.5-2.5mm/r	
7	Cast high Cr steel roller	HSD68-75	Vc=20-45m/min ap=4mm f=1.5-2.5mm/r	
8	Tungsten Carbide roller	HRA88	Vc=10-15m/min ap=1mm f=0.3-0.7 mm/r	
9	Casting 9Cr2Mo	HSD92-105	Vc=10-25m/min ap=1mm f=0.5-1.2 mm/r	

