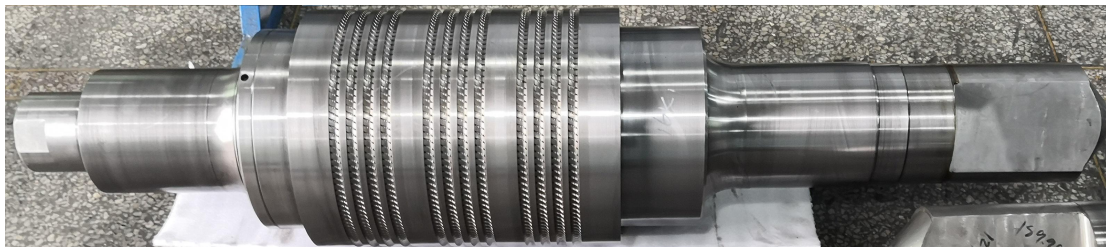


骏诚  
JUN CHENG

## Juncheng International Corporation Limited

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### Composite Roll Catalog



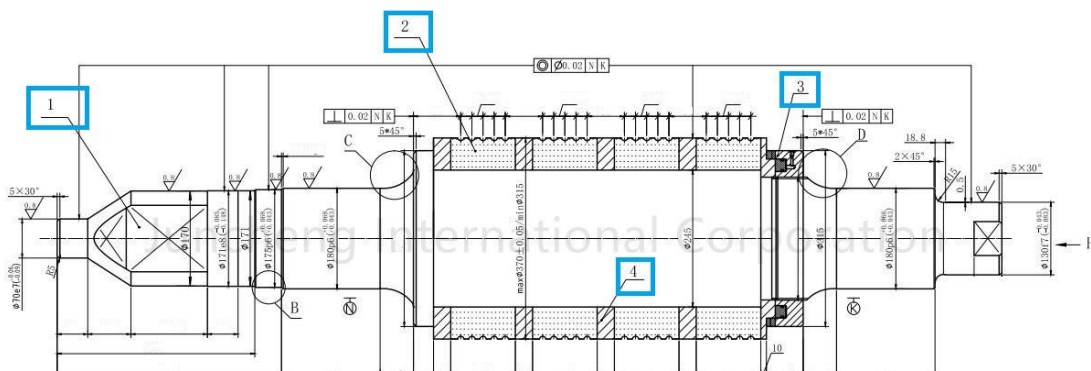
#### I. What is composite roll?

Composite roll are rollers which fix tungsten carbide rings on steel roll shaft by a certain way. The fixing ways include : mechanical combination, casting way(CIC) , metallurgy way and bond way.

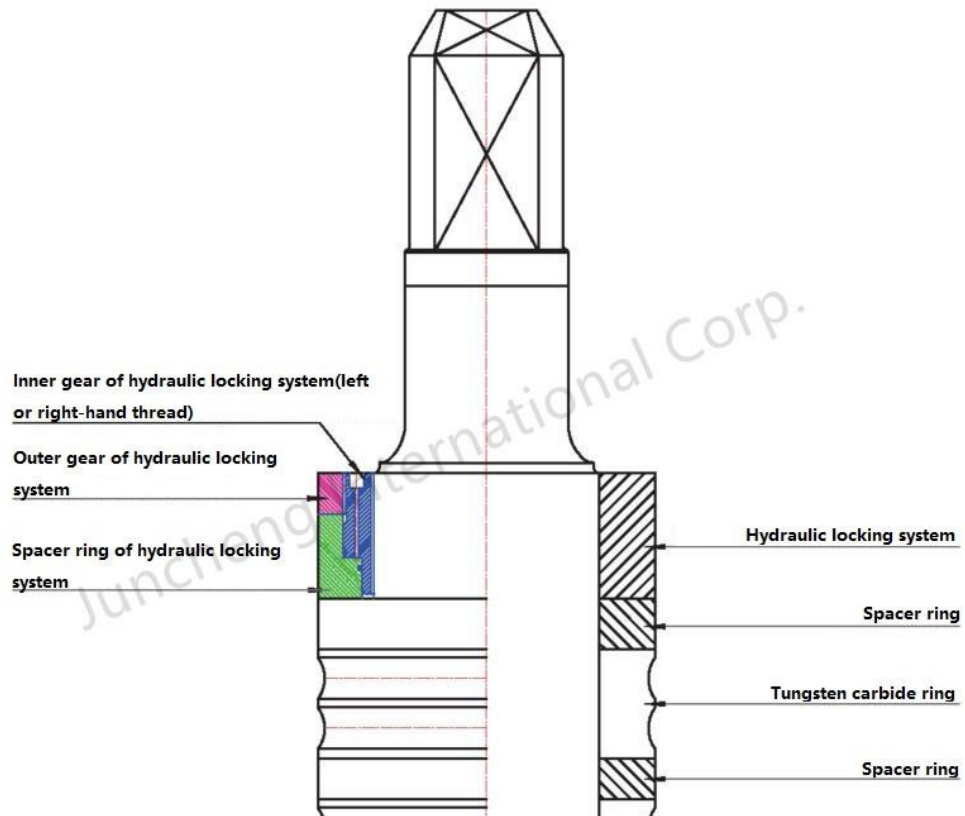
Now the mechanical combination way is mainstream, the representative companies are Juncheng Corp. China, Teatugec Korea, SinterMet America and Mitsubishi Japan. Juncheng composite rolls are fixed by hydraulic locking system.

#### II. Composite roll structure

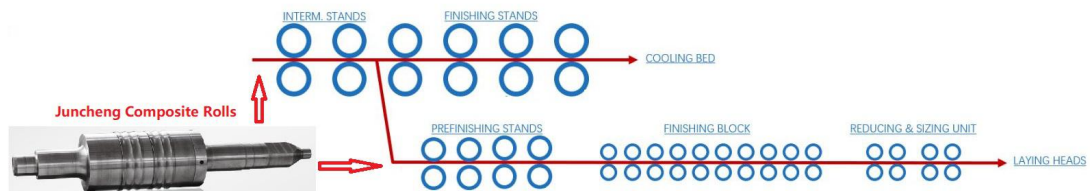
Components include : steel roll shaft ; tungsten carbide ring; hydraulic locking system; spacer ring



1. Steel roll shaft , 2. Tungsten carbide ring, 3. Hydraulic locking system , 4. Spacer ring



### III. Range of application



Suitable for intermediate stands, pre-finishing stands, finishing stands, finishing block, reducing & sizing stands.

Milling rod, rebar, wire, coil, angle steel of normal carbon steel, stainless steel, alloy steel for high speed rolling and normal different rolling speed.

## IV. Advantage of Juncheng composite roll

1. Increased single groove rolling capacity 10 to 20 times compared with nodular cast iron rolls. Because the TC rings hardness are much higher, they are more wearable, its usage reduces times of changing grooves and rolls obviously, then the mill roll efficiency improved much.

2. Reduce the rolls processing and repairing costs because TC rolls are more durable.

3. Increase yield and rate of finished products.

Usage of TC rolls can increase the size accuracy of products, then reduce scrap rate. Reduce the groove changing times, it means the entry and exist guide times reduced also, this decrease pilling-up of steel ( steel heaping) and scrap finally.

4. Reduce labor intensity by decreasing grooves changing times.

5. Enhance surface quality of rolled metal. The rolled round metal have very high surface smoothness, minus deviation controled precisely.

## V . Recommended TC ring grades

Grade	Co+Ni+Cr%	WC%	Density g/cm <sup>3</sup>	Hardness HRA	T.R.S. N/mm <sup>2</sup>	Compressive strength N/mm <sup>2</sup>
JC20	20	80	13.6	82	2580	3100
JC20X	20	80	13.4	82.5	2650	3000
JC25	25	75	13.1	80	2500	2900
JC27	27	73	12.9	78.5	2400	2700
JC28	28	72	12.8	78.5	2300	2600
JC30	30	70	12.6	77.5	2300	2600
JC30X	30	70	12.7	79.5	2550	2800

## VI. Pre-sales information collect of composite roll

For the cast iron and steel rolls changed into composite rolls, please supply follow datas:

- 1, the drawing of iron rolls,
- 2, the detailed drawing of the groove on iron roll
- 3, rolling materials, rolling speed
- 4, max and min working diameter of iron rolls

We need above information at least to design the composite rolls for you.

The composite rolls we have made and sold are more than 500sets, so we have good experiences to meet your requirements.

## VII. Cases

1. Shagang Steel rebar rolling mills use our composite rolls.

Shagang Steel is China largest private steel corporation, more than 40 million tons of different steel production each year, 6<sup>th</sup> largest steel group in the world. Their profit rate is always leading in all China steel industry, one main reason is that they would like to introduce and vigorously promote new technologies and production methods.

Its rebars have 4 separate factories, total yearly output is up to 5 million tons, rebars diameters are 6 - 40mm. Since 2017, Shagang began to use our composite rolls for producing rebars. Now we undertake their 3 factories new composite rolls making and repairing. Their engineer says, the total products profit rate by using composite rolls increase 15% compared with using nodular cast iron rolls. They are promoting our composite rolls to other steel items, like high speed wire and rods coil, stainless steel wire and rods, alloy steel.

For more case, inquiry, technical exchange, please contact email: [juncheng@junchengcorp.com](mailto:juncheng@junchengcorp.com)



**Composite rolls ready for shipment to Shagang Steel**





Composite roll making and repairing workshop.



Composite roll finished processing workshop



**Composite roll components--- steel roll shaft and spacer ring**

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