

ROLLS CATALOGUE

CENTRIFUGAL CAST

DPIC Solid

Enhanced Carbide DPIC

High Chrome DPIC

Barrel Shafted

STATIC CAST

Adamite

SG Iron

SG Acicular

ICCI

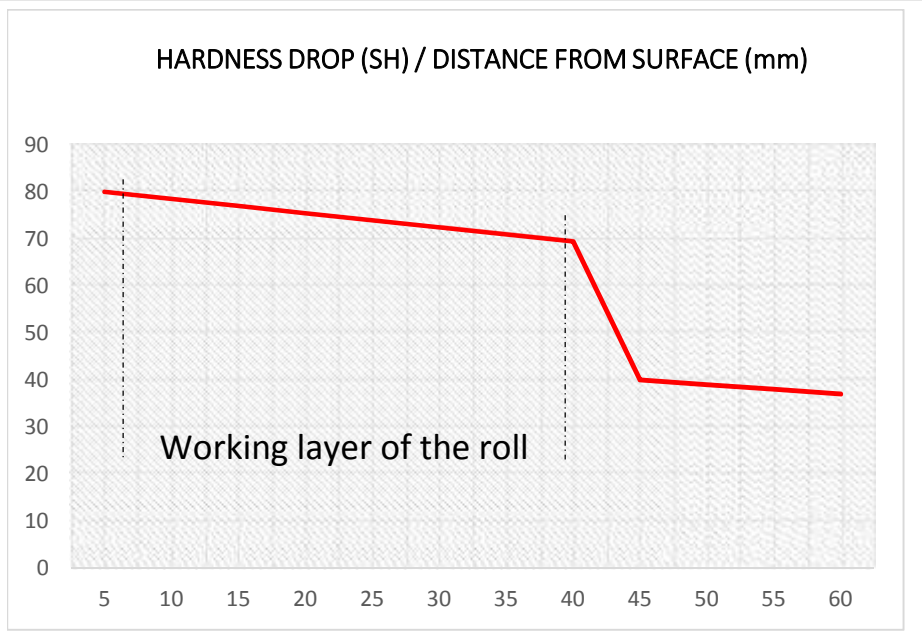
Send in an enquiry for the quotes & metallic composition for our products or to receive the product catalogue.

SARJIT INDUSTRIES

A-5, INDUSTRIAL ESTATE,
MALERKOTLA, PB – 148023
Email: sarjitind@gmail.com
Mob: +91-9814653145
www.sarjitrolls.com



SOLID DPIC ROLLS 'SPUN CAST'



OUR PRODUCTS

- Adamite Rolls
- Barrel Shafted Rolls
- DPIC Rolls (Spun cast)
- Enhanced Carbide DPIC
- Forged Iron Rolls
- ICCI Rolls
- SG Acicular Rolls
- SG Iron Rolls

OTHER PRODUCTS

- Bearing chokes
- Fly wheel
- Gear couplings
- Pinion gears
- Pulley
- Spindle
- Universal couplings
- Other mill accessories

What are Solid DPIC Rolls 'Spun cast'?

The Spun cast double poured indefinite chill rolls have a highly alloyed centrifugal shell as a working layer while the core is soft grey iron. The shell microstructure is high in hardness due to a mixture of carbides and graphite.

Composition of the Shell (working layer)

Carbon	Nickel	Chrome	Manganese	Moly
3.3 – 3.9	1.8 – 2.5%	0.8 – 1.2%	0.5 – 1.0%	0.2 – 0.5%
3.3 – 3.9	2.5 – 4.0%	0.8 – 1.2%	0.5 – 1.0%	0.2 – 0.5%

Properties

- A uniform shell thickness with high shore hardness
- Vibration damping capabilities to provide a good surface finish
- Good thermal conductivity to reduce fire cracking during use

Hardness: 72 – 82 sH

Applications: generally used in the last two to three stands (F4, F5 and F6 Stands) in the Finishing Stands of Hot Strip Mills as well as in Roughing & Finishing Stands of Four High Plate Mills and Finishing Stands of Rod & Narrow Strip Mills

OUR EDGE

- 50 + years of service
- CNC machining
- CNC grinding
- Consultancy services

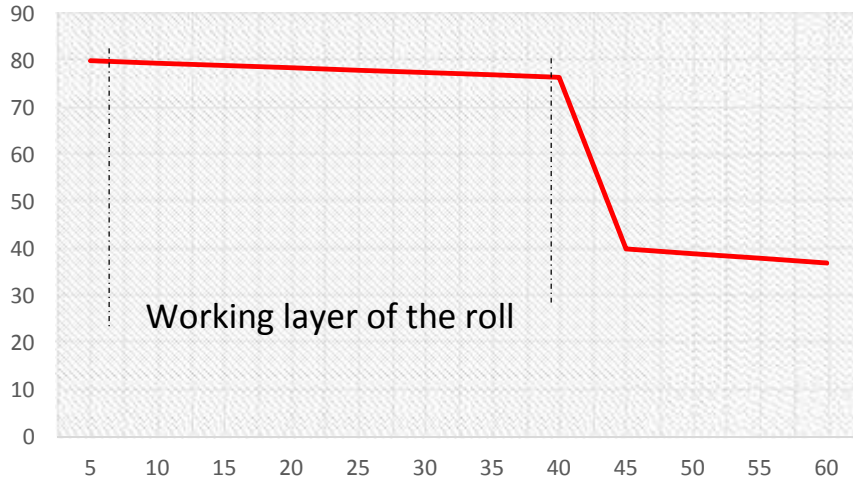
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ENHANCED CARBIDE DPIC ROLLS

HARDNESS DROP (SH) / DISTANCE FROM SURFACE (mm)



What are Enhanced carbide rolls?

The spun cast enhanced carbide rolls have a working layer with excess carbides which increase the wear resistance and overall hardness of the roll surface. The hardness drop is consistent with subsequent dressings and thus improves the tonnage per roll. The core material is lamellar grey iron which imparts strength to the journals.

Composition of the Shell (working layer)

Carbon	Nickel	Chrome	Moly	others
3.3 – 3.9	1.8 – 2.5%	0.8 – 1.2%	0.2 – 0.5%	0.2 – 0.5%
3.3 – 3.9	2.5 – 4.0%	0.8 – 1.2%	0.2 – 0.5%	0.2 – 0.5%

Properties

- A superior wear resistance and pass life
- Very high hardness to provide a good surface finish
- Soft journals are able to absorb any jerks and avoid mill incidents

Hardness: 75 – 85 sH

Applications: generally used in the last two to three stands (F4, F5 and F6 Stands) in the Finishing Stands of Hot Strip Mills, Wire Rod & Narrow Strip Mills

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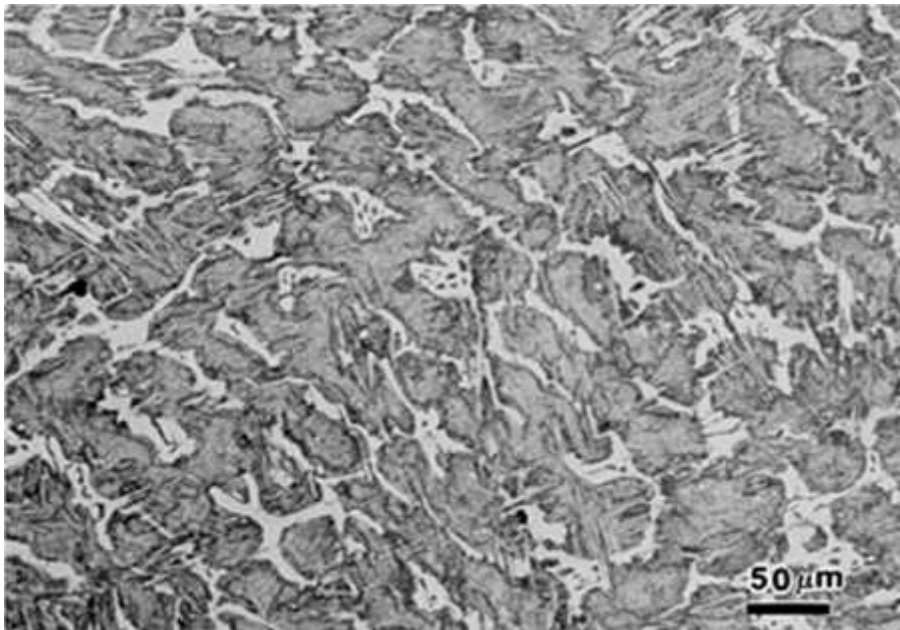
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Double Poured High Chrome Solid Rolls



What are DPIC High Chrome Solid Rolls?

The Spun cast double poured high chrome solid rolls have a highly alloyed centrifugal shell as a working layer while the core is soft grey iron. The shell microstructure contains martensite, bainite and carbides to provide a tough structure

Composition of the Shell (working layer)

Carbon	Nickel	Chrome	Manganese	Moly
3.3 – 3.9	0.8 – 1.5 %	5 – 7 %	0.7 max	0.2 – 0.5%

Properties

- A uniform shell thickness with high shore hardness
- Excellent wear resistance
- resistant to fractures and oxidation at high temperatures

Hardness: 70 – 80 sH

Applications: Suitable for Roughing and finishing stands of strip mills and plate mills

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CAST IRON BARREL MS SHAFT FITTED ROLLS



What are Barrel Shafted Rolls?

As shown in the above picture, similar barrel structure to the DPIC rolls with highly alloyed outer layer (black) and soft metal inner layer (white) of the barrel manufactured with Spin cast technique. The Shaft (red) is mild steel (MS) i.e. shrink fitted into the Barrel to provide the adequate grip.

Composition of the Shell (working layer)

Carbon	Nickel	Chrome	Manganese	Moly
3.4 – 3.9	0.7 – 1.2 %	1.0 – 1.5 %	0.7 % max	0.3 % max

Properties

- High strength and vibration damping to absorb temporary shocks
- Good wear resistance to ensure good productivity per campaign
- Higher biting quality to provide better surface finish

Hardness: 70 – 75 sH

Applications: Suitable for heavier passes and severe stress in the roughing and intermediate stands

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STEEL BASED ADAMITE ROLLS



What are Adamite Rolls?

The structure of the rolls is shown above, Adamite Rolls are Steel based i.e. formed by melting Mild Steel (MS) and other alloys. After casting the hardness of the roll is on the higher side due to added alloys so it is decreased by a process of annealing. The carbon content for these rolls is in between that of MS and cast iron close to 1.2 – 1.5

Composition

Carbon	Nickel	Chrome	Sulphur	Moly
1.5 – 1.8	0.8 – 1.2 %	0.9 – 1.3 %	0.03 % max	0.4 % max

Properties

- Withstand heavy impulse jerks
- High strength

Hardness: 40 – 50 HS

Applications: Roughing, intermediate and finishing sections of structural mills. Roughing for heavy passes of other mills

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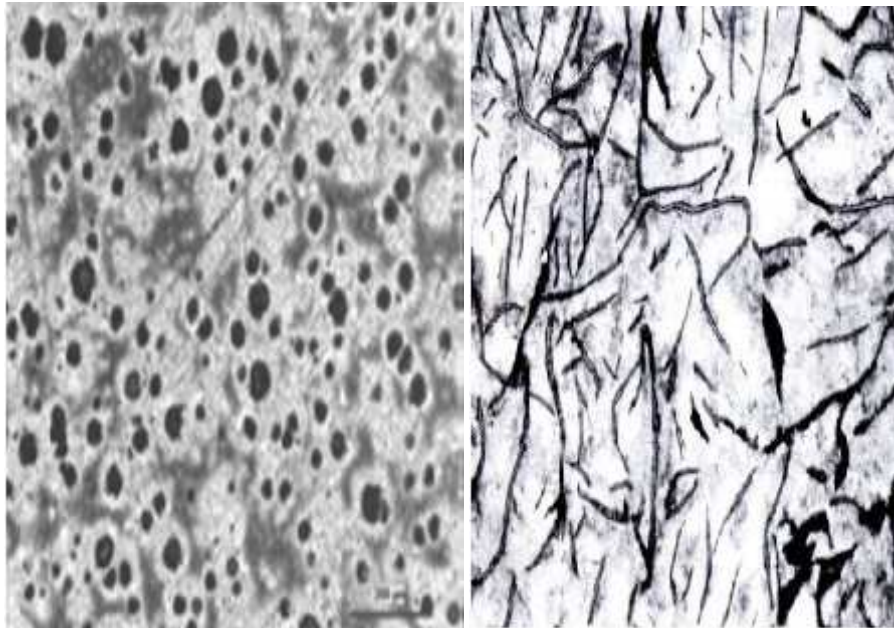
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SPHEROIDAL GRAPHITE (SG) IRON ROLLS



What are SG Iron Rolls?

As shown in the above picture, a form of cast iron formed by considerably varying the structure of the material to increase overall strength. Cast iron when treated with Magnesium mixture leads to a blast which in turn creates the spheroidal shape (left side of picture) of the nodules as compared to lamellar nodules (right side of the picture) in cast iron.

Composition of the Shell (working layer)

Carbon	Nickel	Chrome	Sulphur	Moly
3.3 – 3.6	1.6 – 2.0 %	0.4 – 0.8 %	0.025 max	0.4% max
Acicular rolls				
3.3 – 3.6	2.7 – 3.1%	0.4 – 0.8%	0.025 max	0.3 – 0.7%

Properties

- High strength and toughness
- High wear resistance
- Resistance to fire cracks

Hardness: 50 – 65 sH, 65- 75 sH

Applications: Suitable for heavier passes and severe stress in the roughing and intermediate stands of structural mills. Acicular for finishing stands of bar and rod mills

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