

SELECTION OF DIFFERENT MATERIALS TO IMPROVED PERFORMANCES OF PINCH ROLLERS

Pinch roller unit is used to keep rolling speed and tension to stabilize rolling speed



R-PR DHR

>rollers for
pinch roll
along mill<



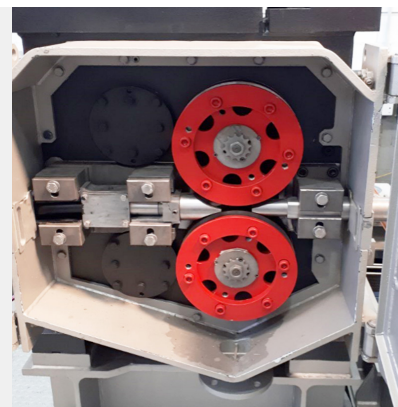
Best materials
can be proposed
to improve performance,
to reduce plant
shutdowns due to
replacement and
improve production
continuity.



BODY MATERIAL	PERFORMANCE / PRICE	POSITION ON THE MILL
Fe510 Base material, hard facing with cobalt alloy HRC 40-45	Standard material/base price and base performances	Standard low
CAST IRON	Standard	Standard application
DHR	Performances equivalent to high speed steel very competitive price	After roughing mill BEST SOLUTION
TUNGSTEN CARIBIDE	High performance material	After roughing mill high speed rolling HIGHEST SOLUTION

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DHR PINCH ROLLERS

Contains alloy components (Cr, Mo, W, Ni, Co, V, etc.) of more than 30% and minimizes the decrease of hardness at high temperature to maintain high wear resistance. The tough nature of this product minimizes the damage and contributes to productivity improvement. With DHR it is easier to obtain hardness according to customer needs (HRC 54 -61) and has proven superior performance compared to conventional materials. Especially, DHR has excellent performance in parts such as Kocks rolls, Pinch rolls, Guide rollers etc. of steel industry. DHR is equivalent to High Speed Steel.

**M
O
R
E**

Wear Resistance

Toughness

Heat Resistance

Increase Quality

Increase Productivity

DHR



COST

Excellent mechanical properties compared to ordinary high speed steel

Improve productivity by superior wear resistance



QUALITY

Increase life-time of the parts due to lower re-machining amount

Minimize the pick-up of the surface



PRODUCTIVITY

Reduce the parts change idle time by long life-time

**L
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Wear on Grooves

Breakage / Galling

Re-Grinding

Material Pick-up

Expenses in Maintenance

**Save Cost
&
Increase
Quality**

TUNGSTEN CARBIDE PINCH ROLLERS

Tungsten carbide is an hard and wear-resistant sintering composite material which is composed of hard metal compound and metal binder. The compounds used in Tungsten carbide are WC, TiC, TaC, NbC, Cr₃C₂, VC and so on, and the binders include Co, Ni. Main characteristics of Tungsten carbide are as following:

TUNGSTEN CARBIDE



COST

Highest mechanical properties compared to ordinary high speed steel

Highest Improve productivity by superior wear resistance



QUALITY

Highest life-time of the parts due to lower re-machining amount

Minimize the pick-up of the surface



PRODUCTIVITY

Reduce the parts change idle time by highest long life-time