

THE ENDURIDE[®] SOLUTION





ENDURIDE CANADA USA inc.

Canadian company, located in Quebec City has developed a new technology which creates a « niche » in the conveyor rollers market :

The ***ENDURIDE*** solution



What is the *ENDURIDE* solution ?



Maximum protection for outstanding performance

With their unique design the **ENDURIDE** rollers are like nothing else on the market.

They are based on a simple idea :
a design that provides superior **bearing protection** and is able to meet the most exacting standards in the industry.



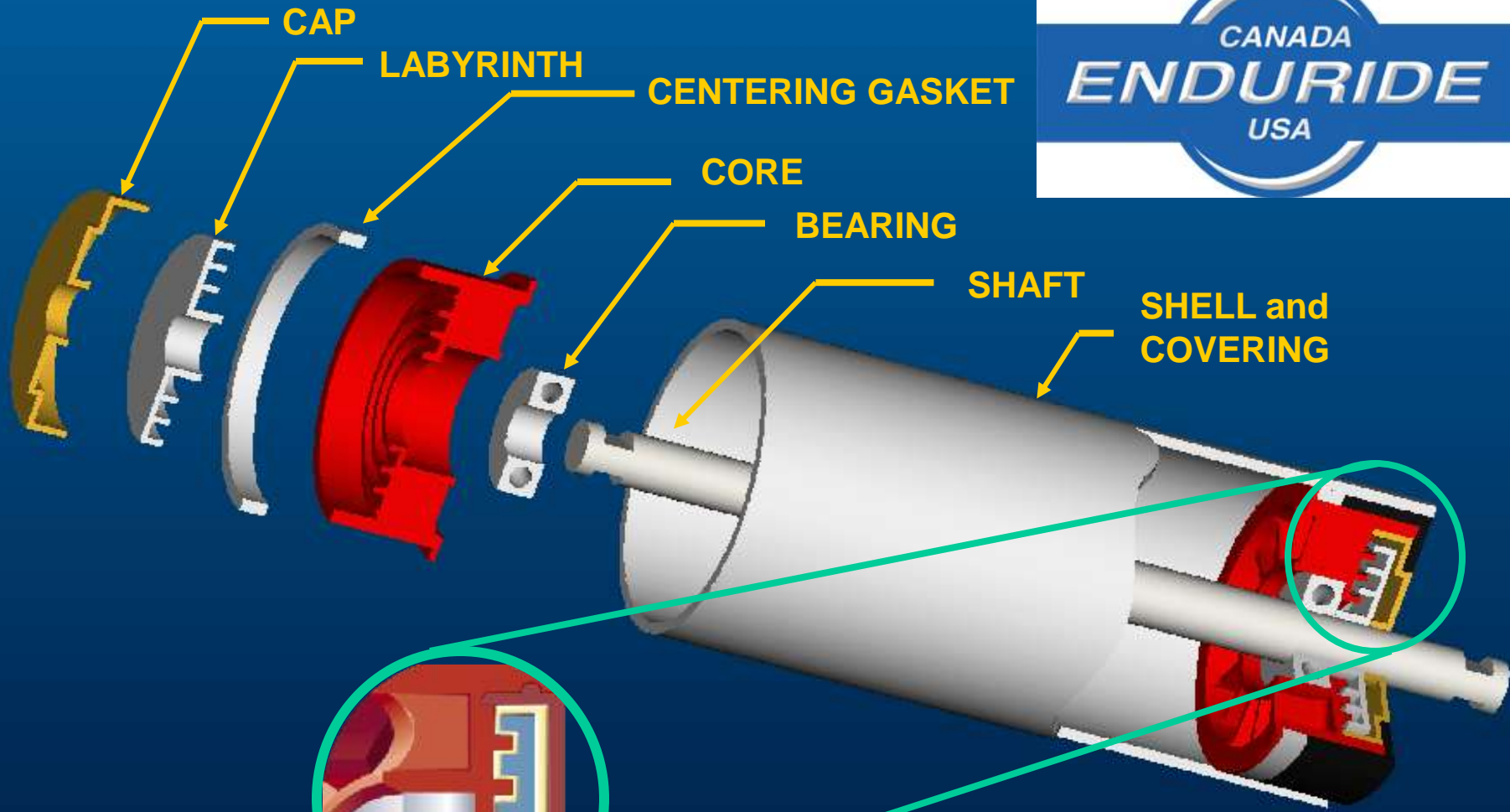
The result is :

a new generation of rollers with a
revolutionary and **patented**
“Encasement Protection System” (**EPS**),
as well as a wide range of options which will vary
in accordance with the problem to solve.

ENDURIDE redefines quality and
performance standards.



Patented **EPS** system features
EPS – Encasement Protection System



**PROTECTION BARRIER
AGAINST CONTAMINATION**

**POLYURETHANE SEALANT :
VIBRATION DAMPER
EPS SYSTEM**





Bearing

With the **EPS** system, the bearing remains in its original state, in other words just as it came out of the box.

The bearing retains all its initial properties, providing **ENDURIDE** rollers optimum service.





Bearing

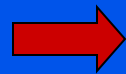
ENDURIDE has chosen a lifetime-lubricated ball bearing, with a high-quality double seal that requires no maintenance.

This guarantees reliable roller performance.

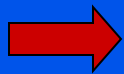


Bearing

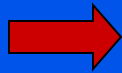
A ball bearing gives the best results because of :



Reduced friction,



Lower start-up torque,



No need for anti-lock systems.



Bearing

Since **ENDURIDE** complies with all the operating requirements of the bearing manufacturer,

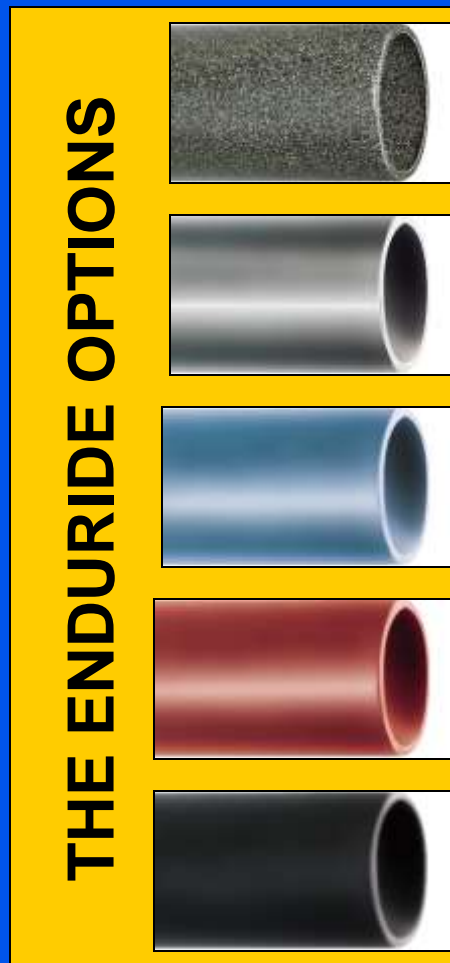
the useful life of the roller is the same as the useful life of the bearing.



The *ENDURIDE* options



The *ENDURIDE* covering options



Ceramic composite

Steel + alloys

Polyurethane, HDPE

Food approved plastic

Rubber, PVC and others



Covering options, example

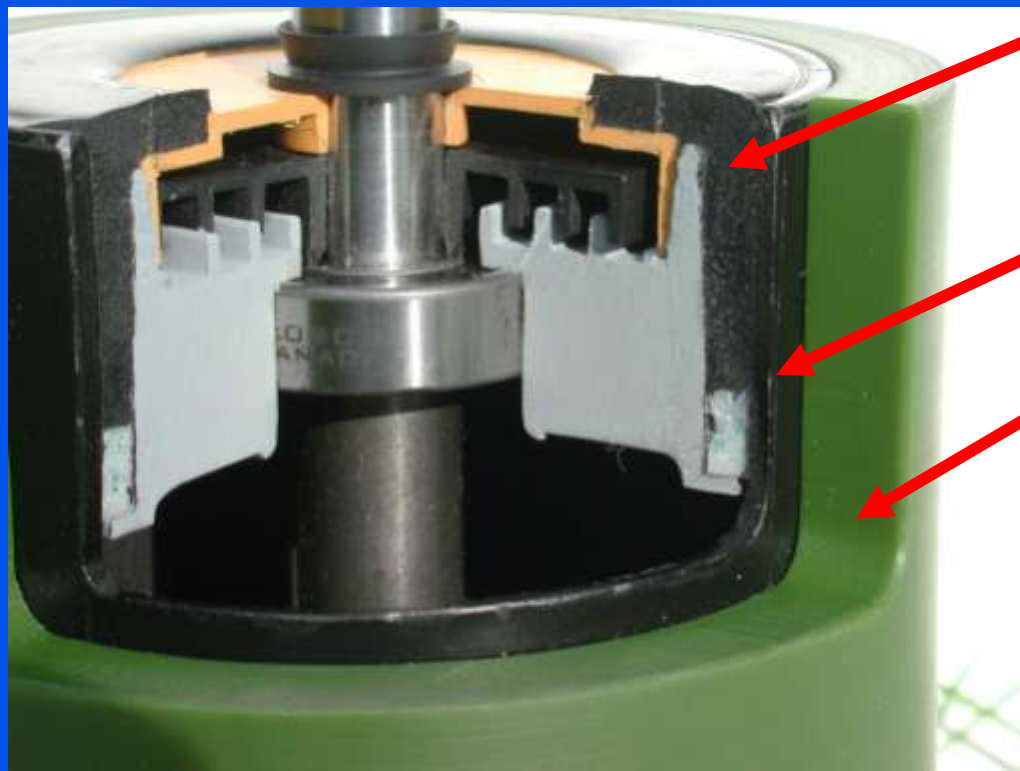
For rollers that will be used in highly corrosive environments, **ENDURIDE** offers HDPE covering made from high-density polyethylene.



The traditional shell is black



The HDPE covering



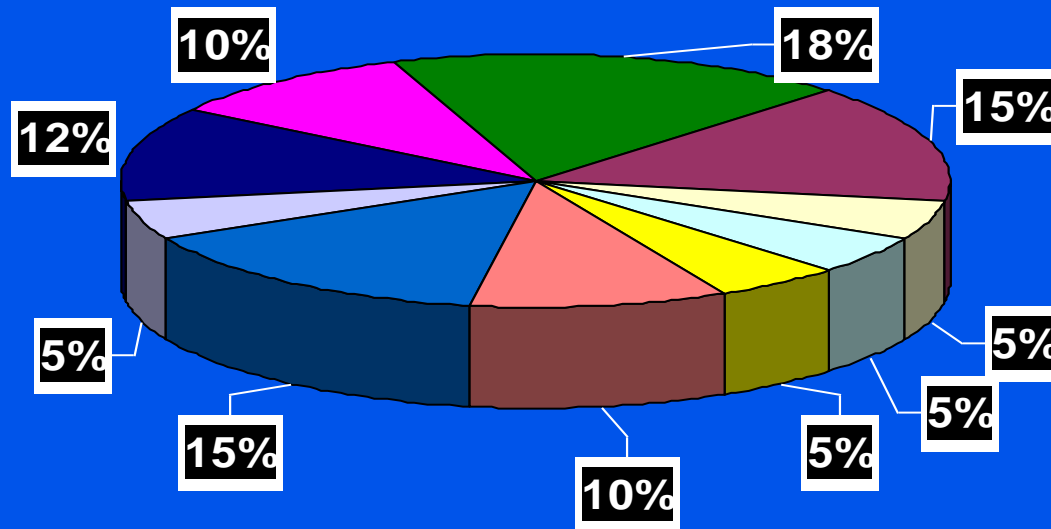
Polyuréthane
sealant

Steel shell

HDPE
covering

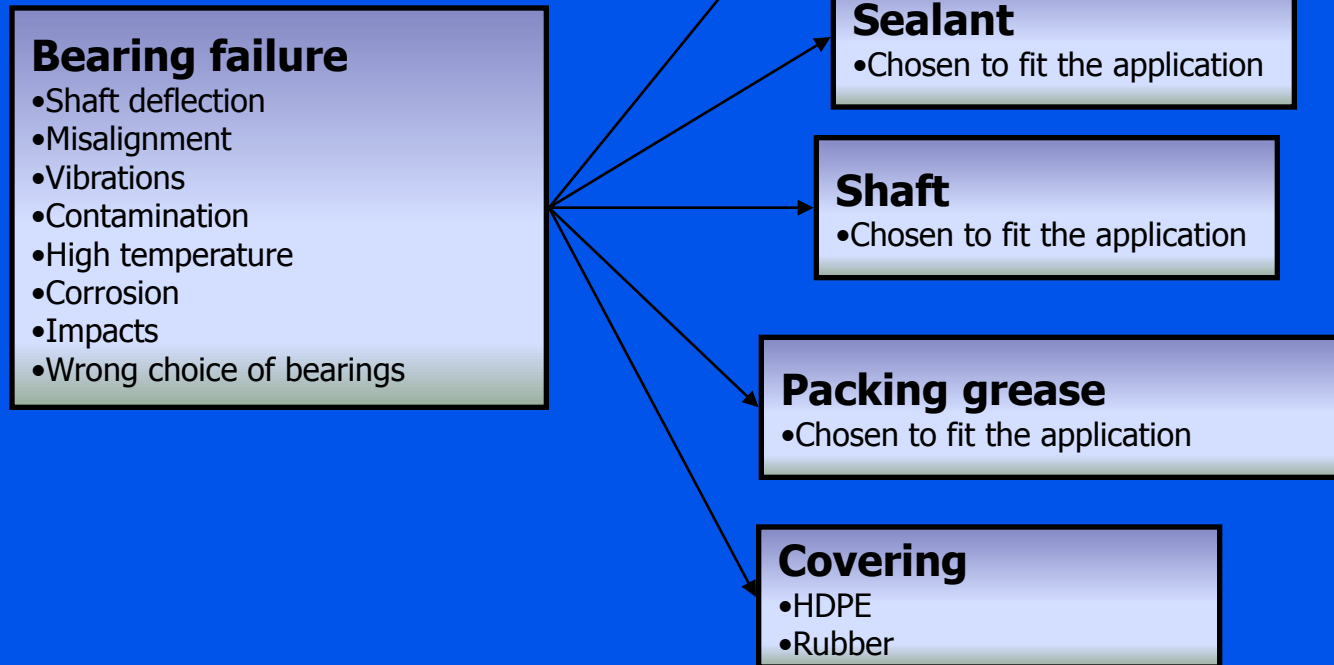


Main causes of failure for a conventional roller



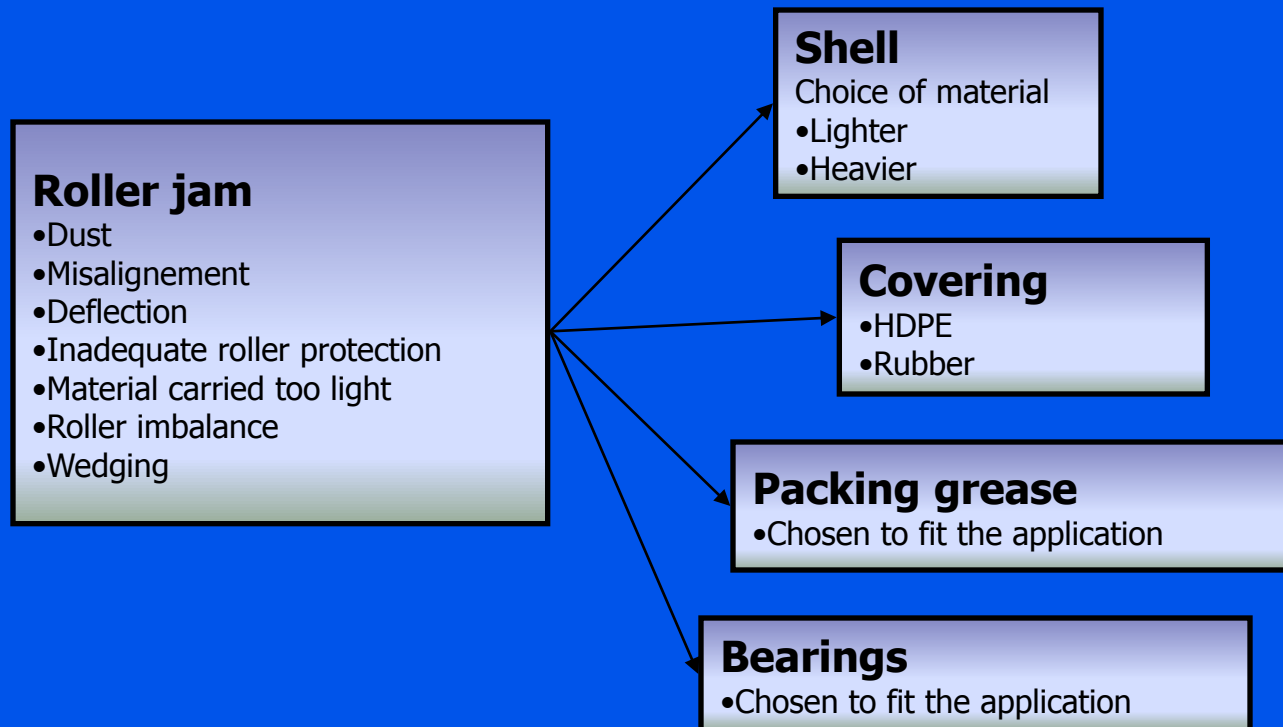


ENDURIDE solution :
patented EPS and ...



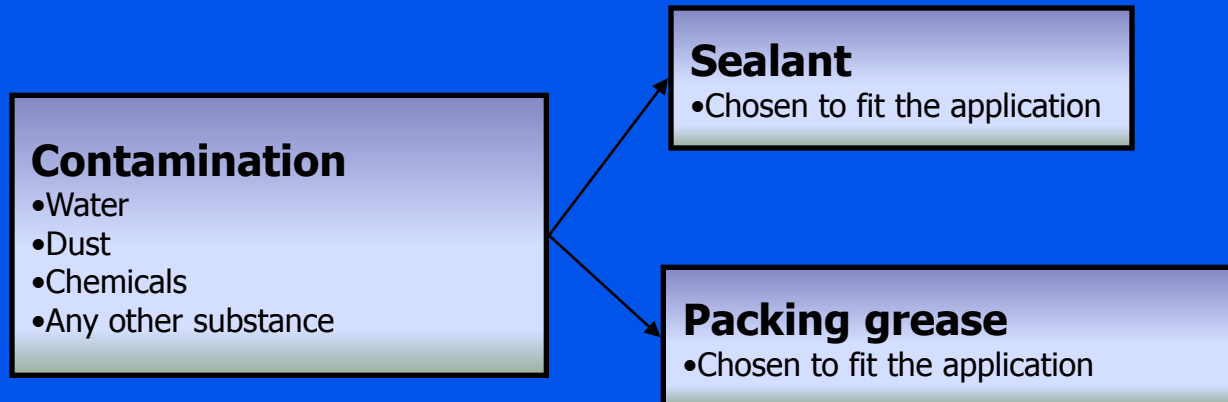


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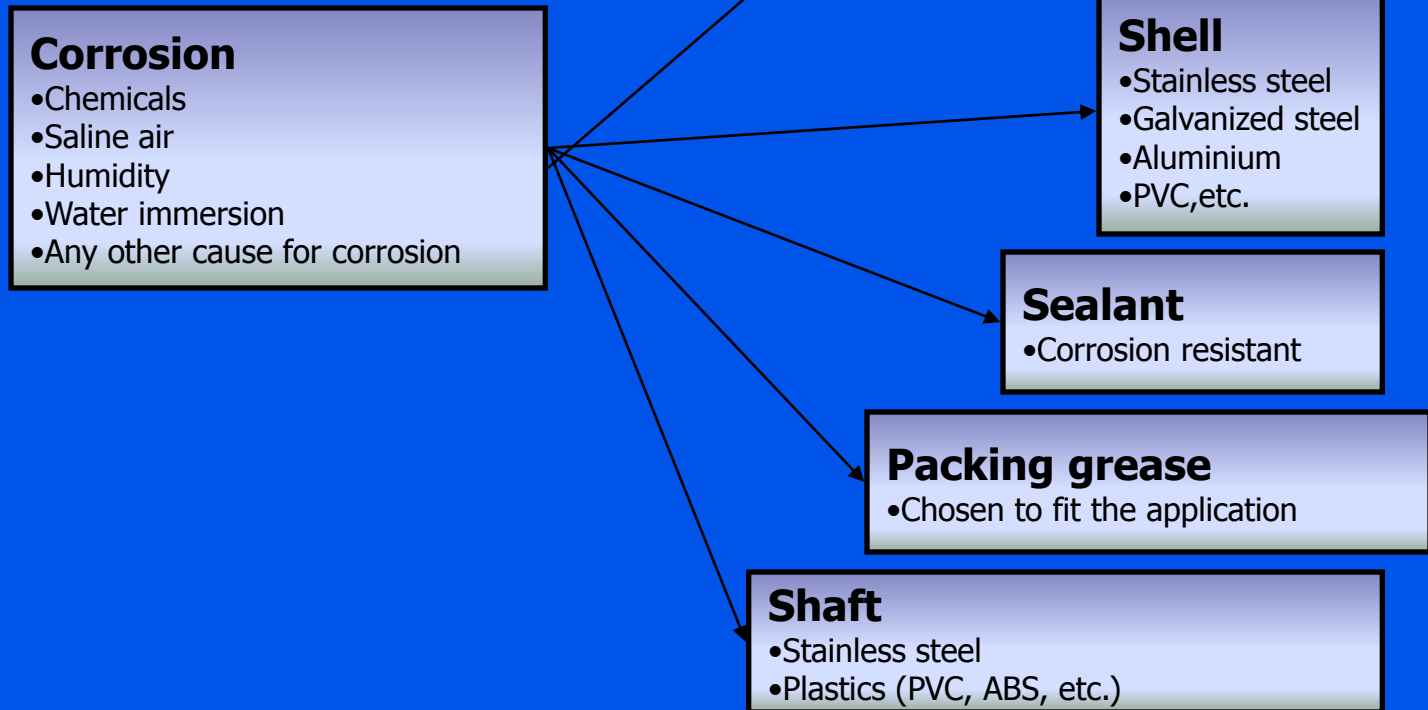


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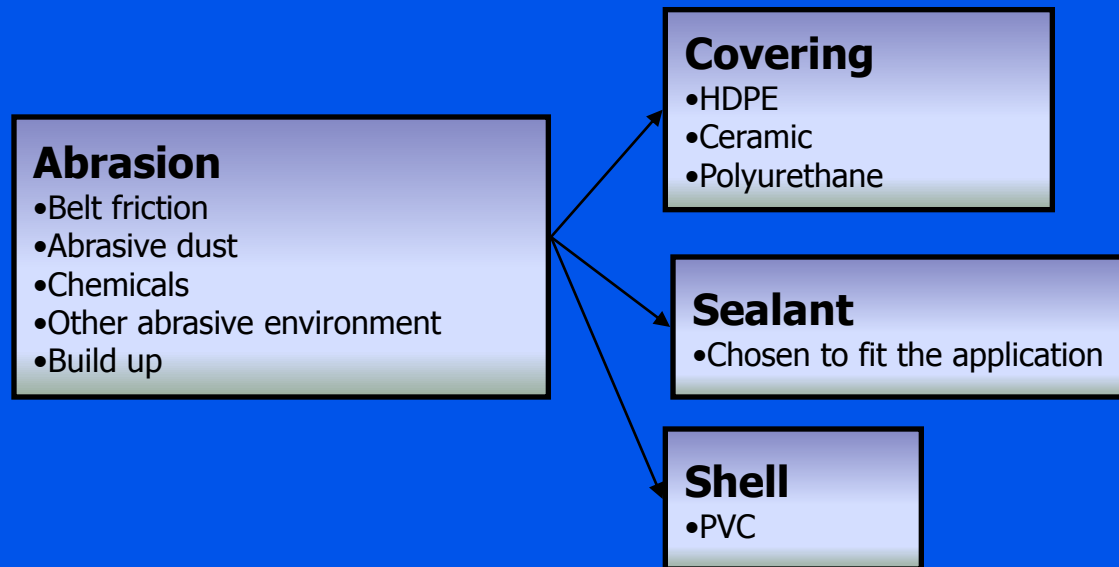


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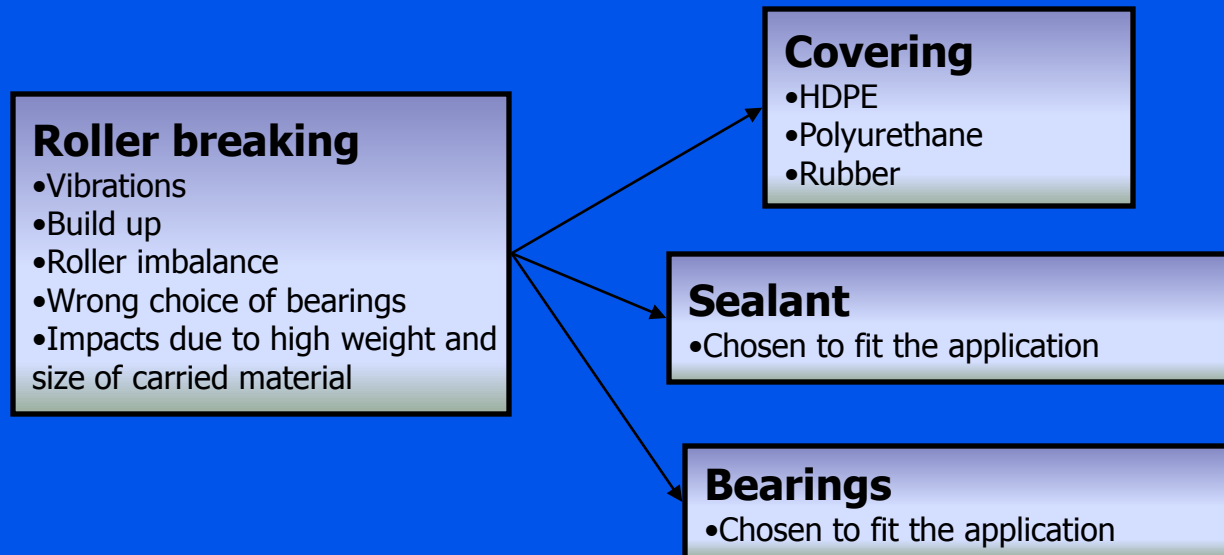


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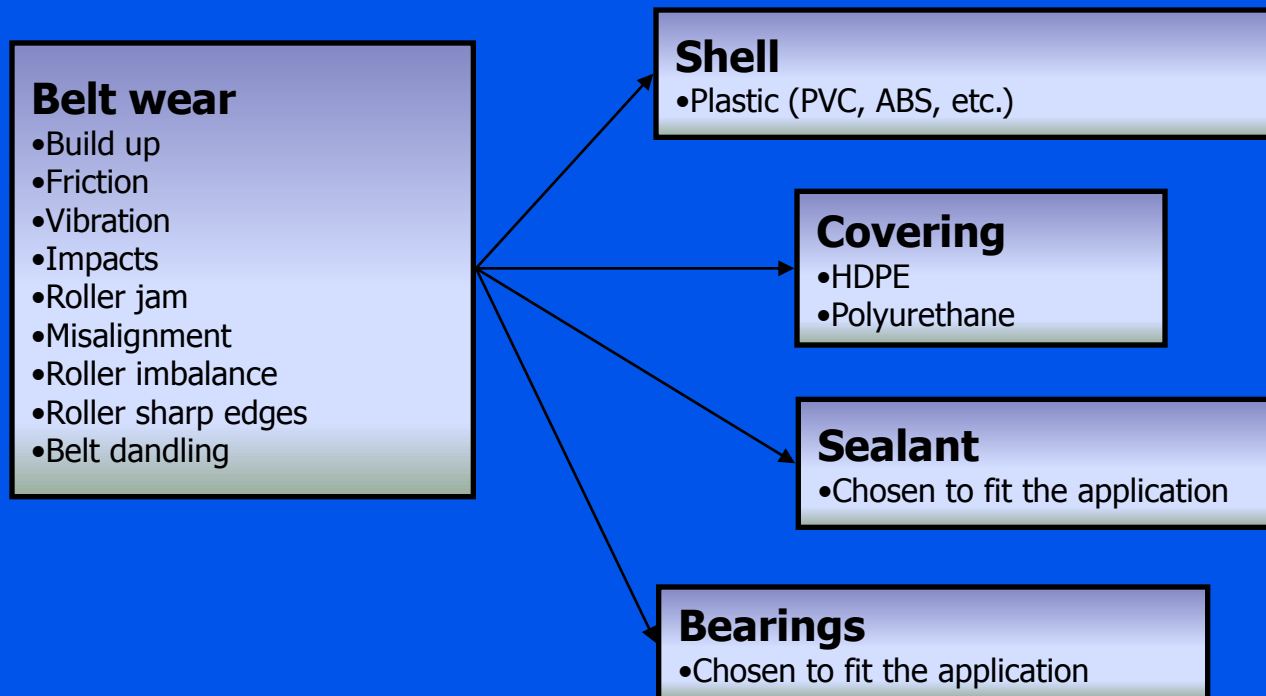


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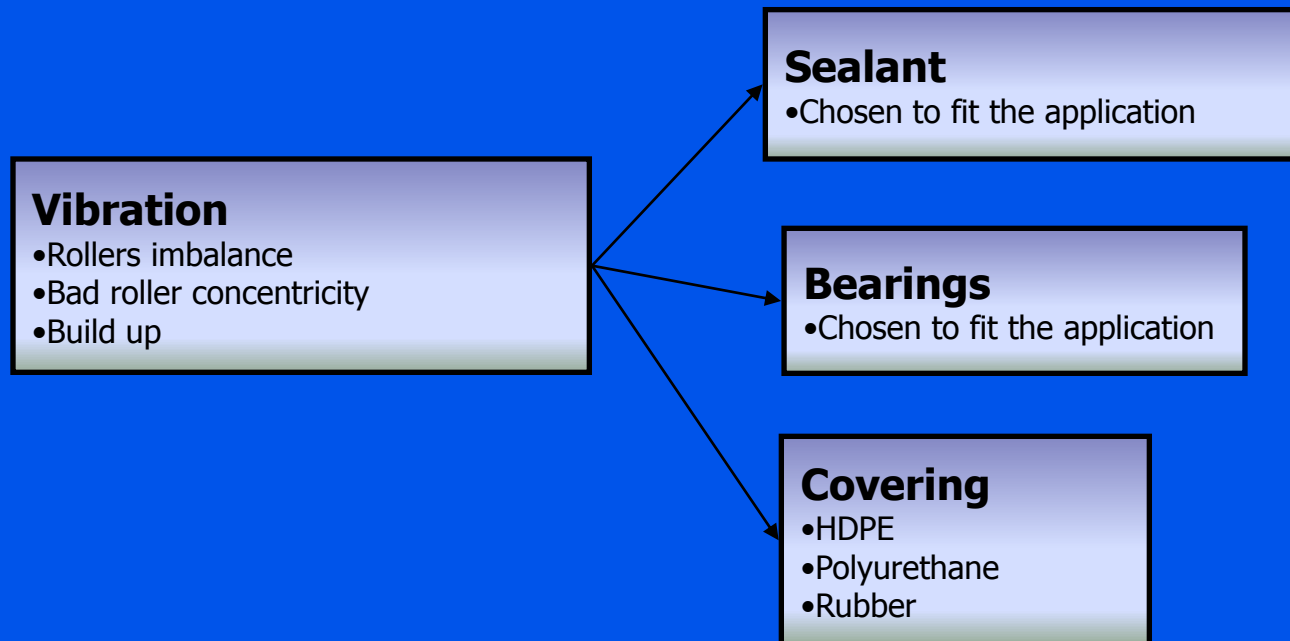


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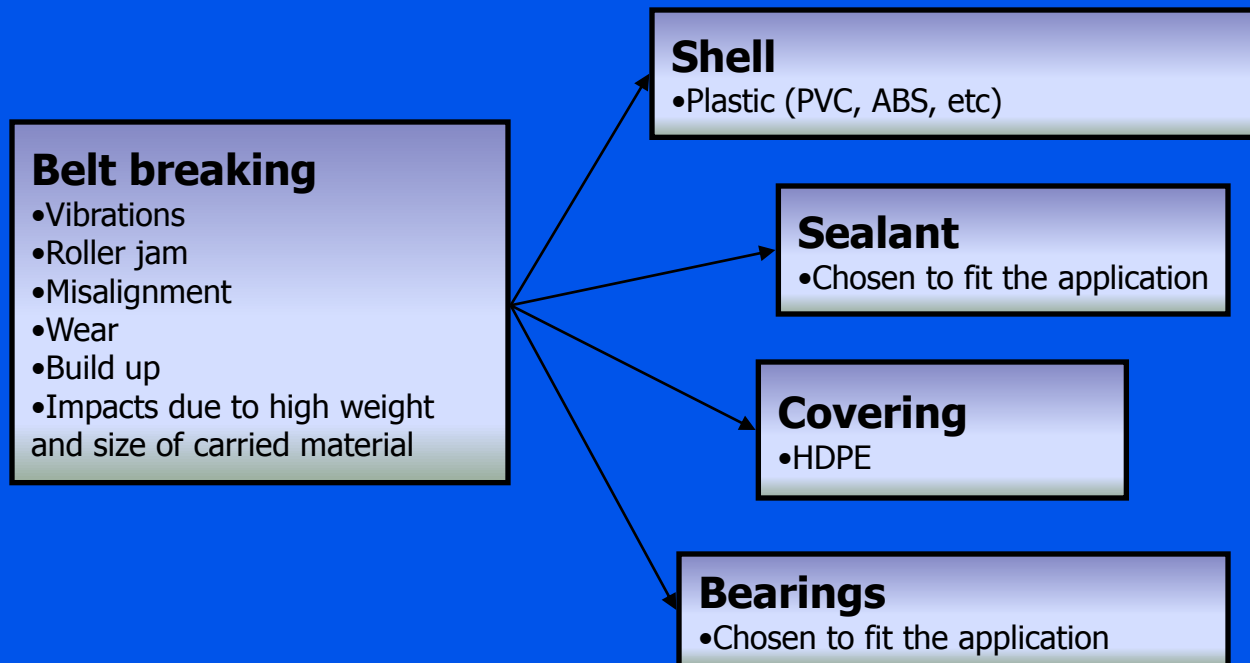


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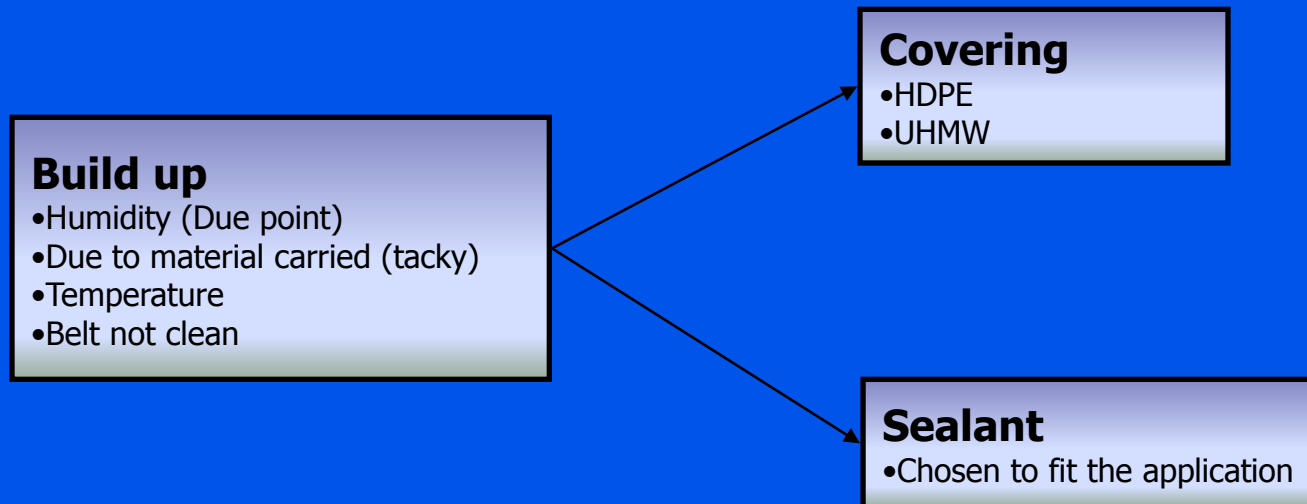


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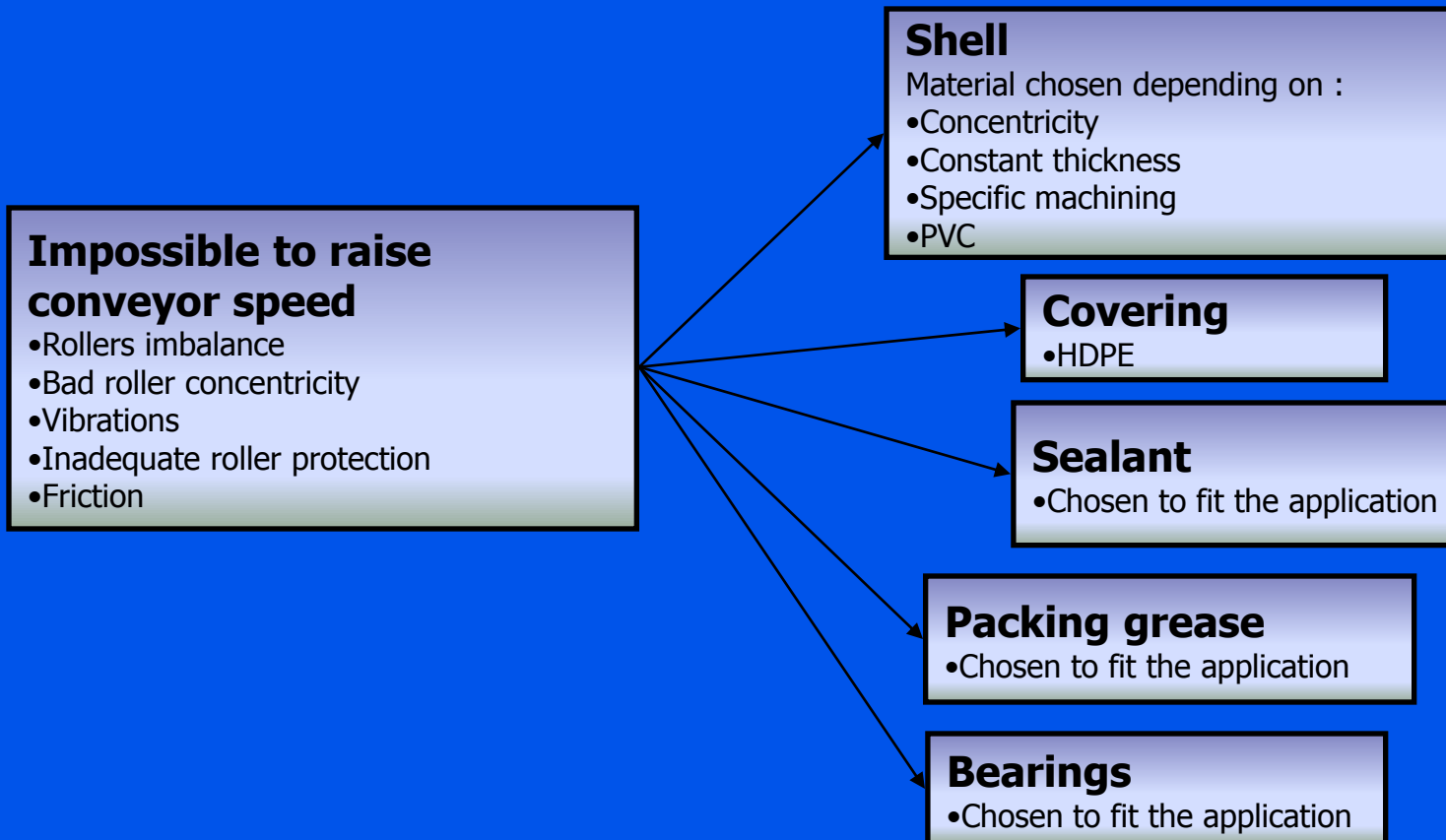


ENDURIDE solution :
patented **EPS** and ...



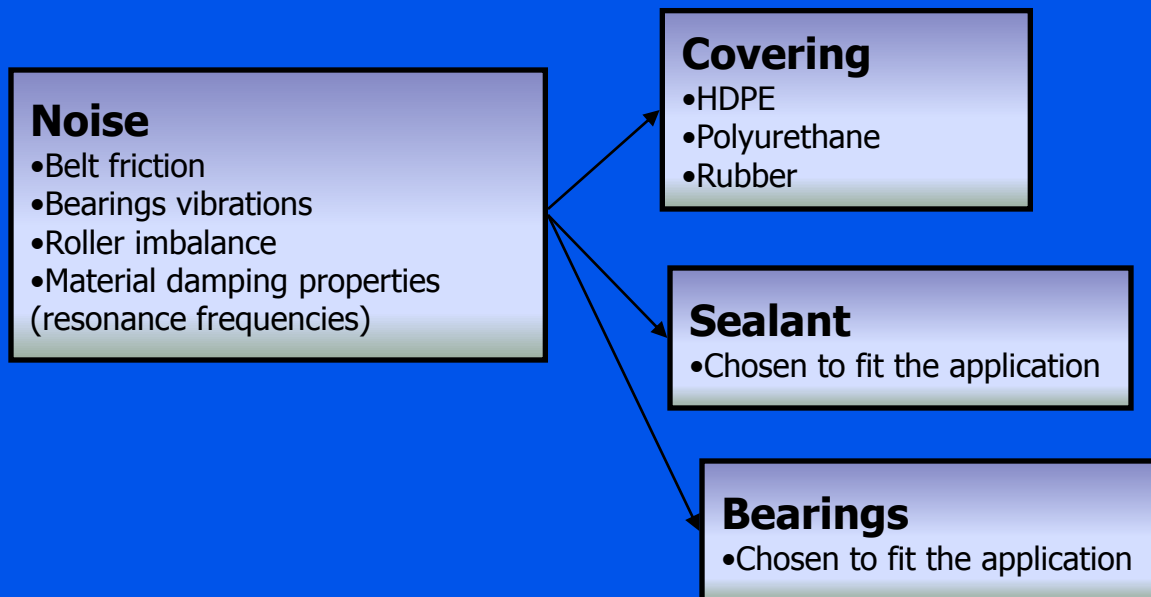


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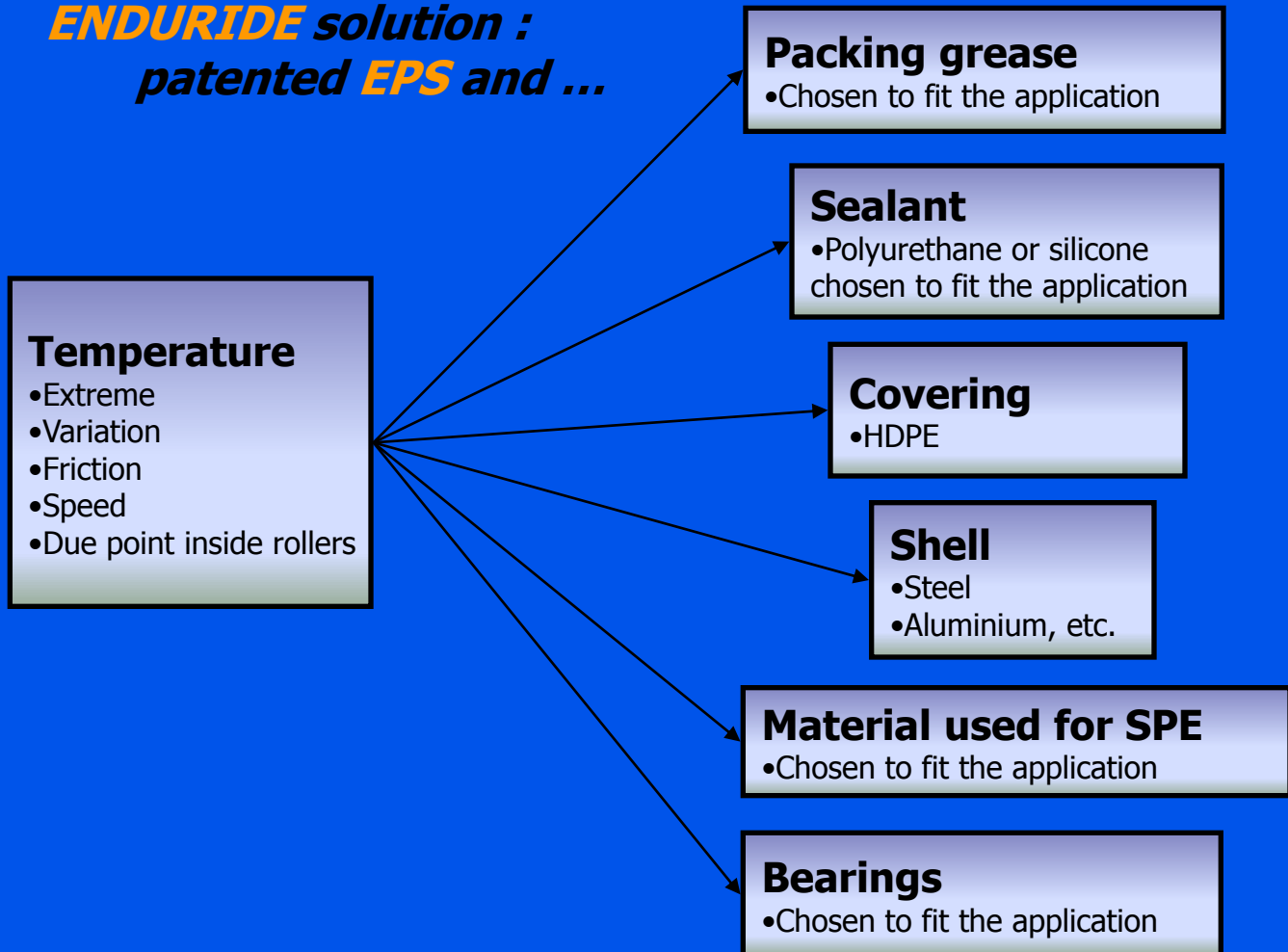


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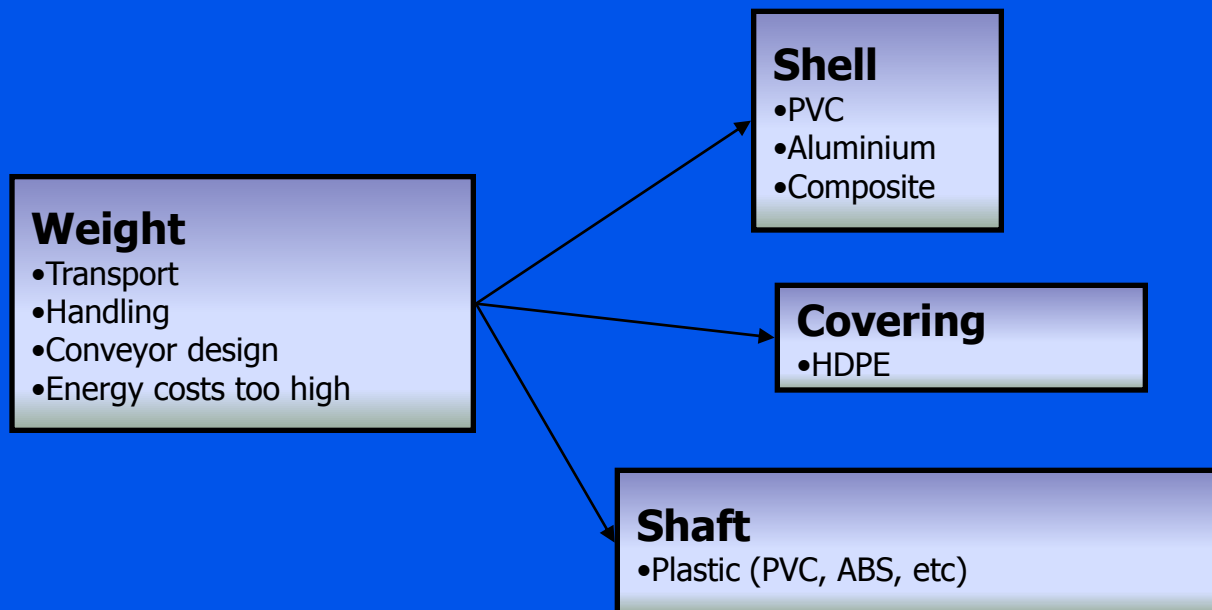


ENDURIDE solution :
patented **EPS** and ...



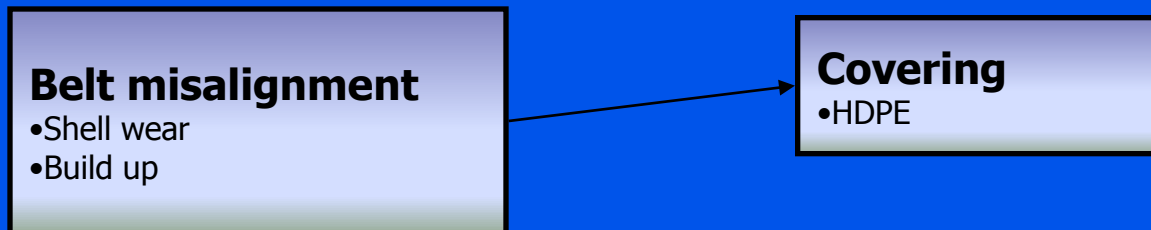


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patented EPS and ...



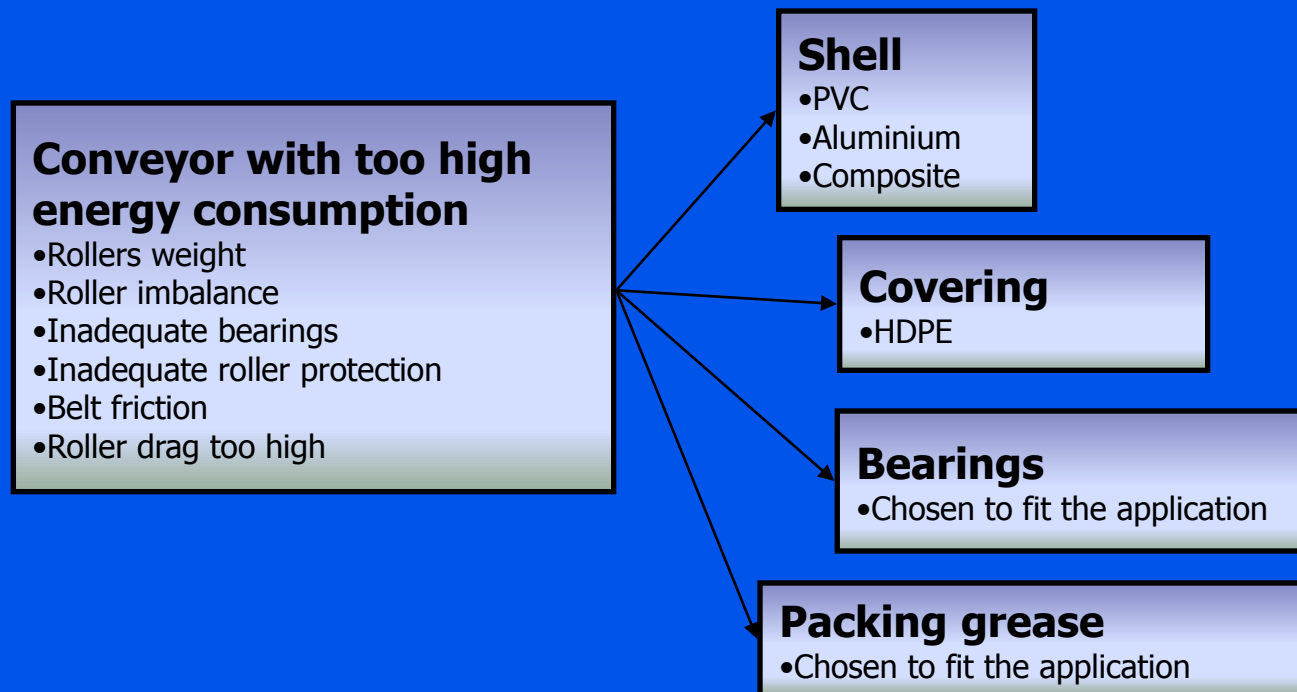


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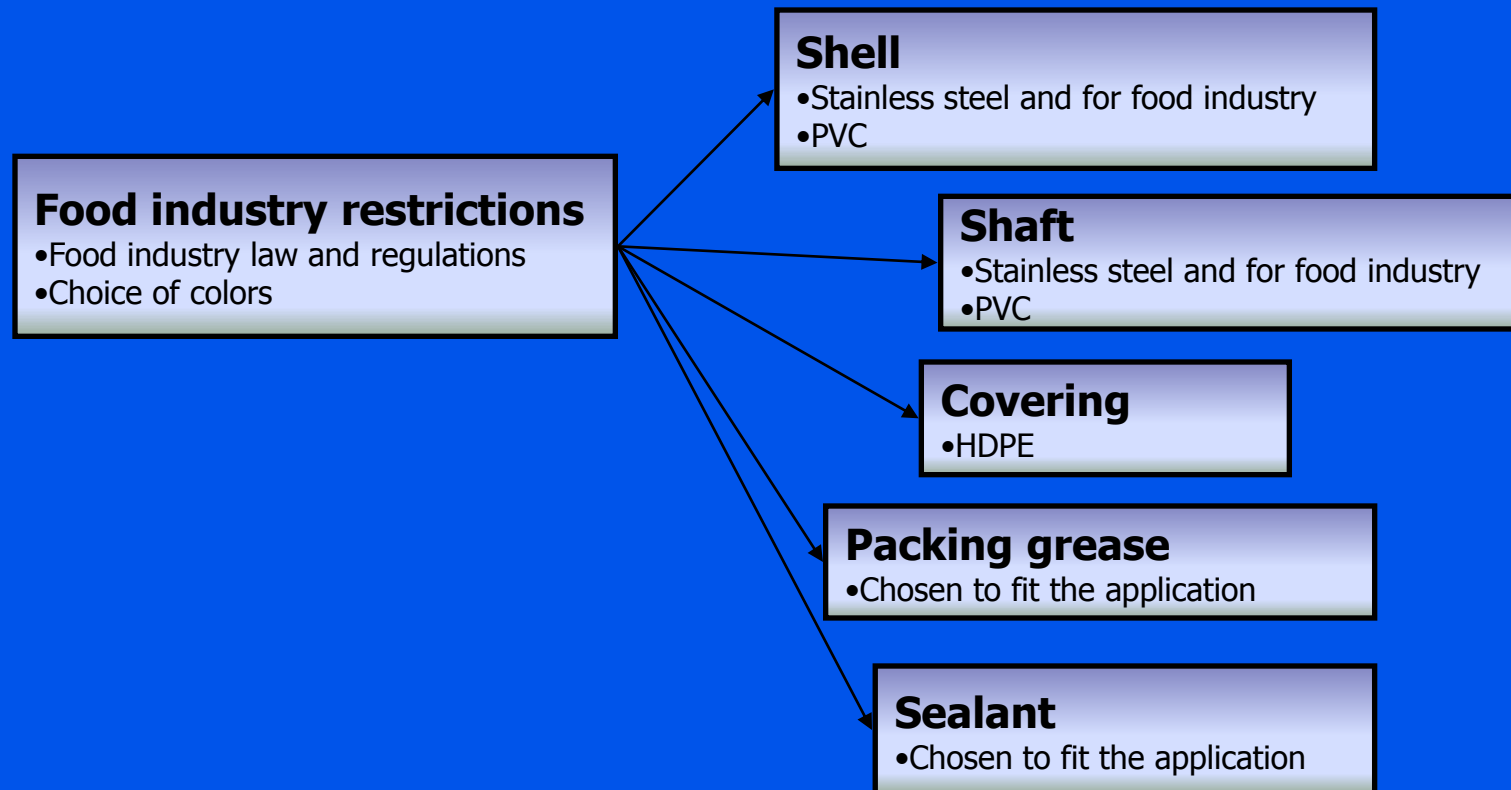


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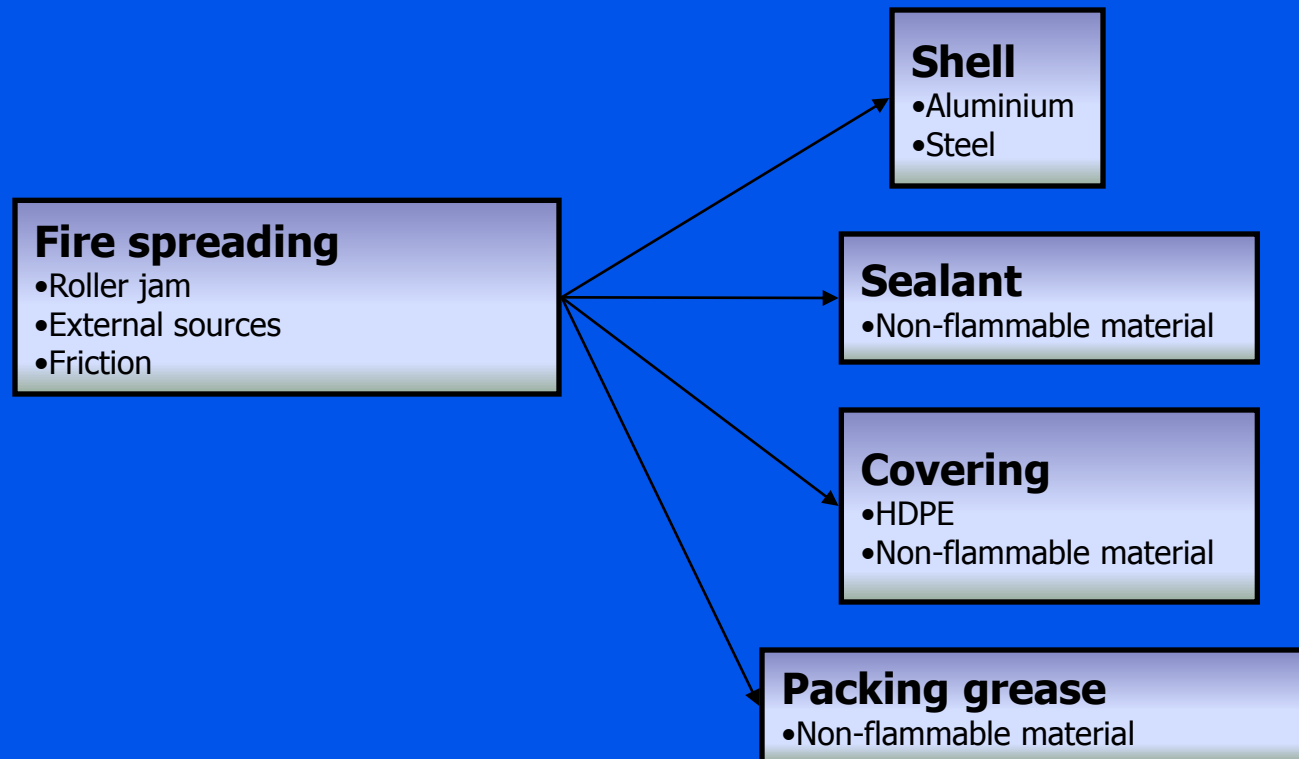


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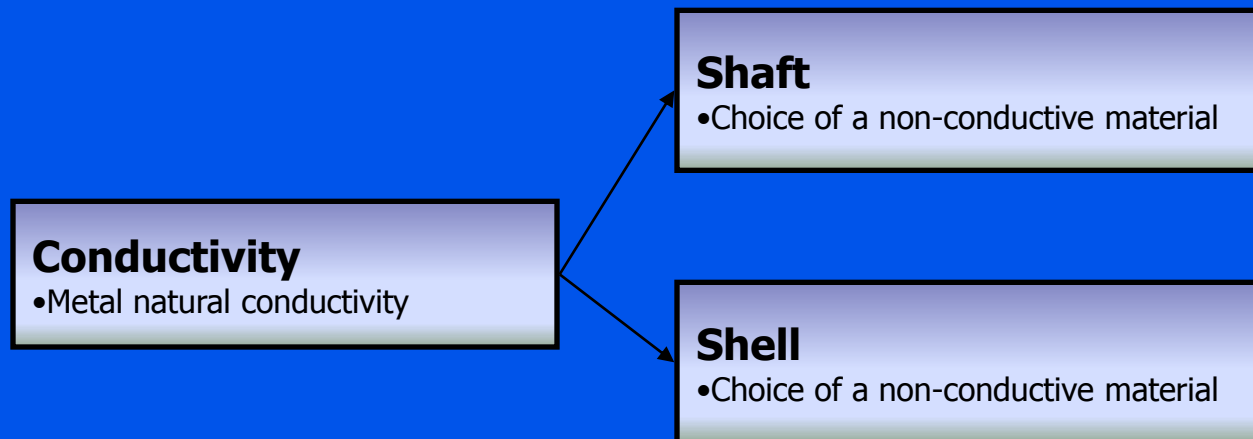


ENDURIDE solution :
patented EPS and ...





ENDURIDE solution :
patented **EPS** and ...





ENDURIDE solution :
patented EPS and ...





The **ENDURIDE** options

The **ENDURIDE** rollers are custom made to meet specific needs.

The **ENDURIDE** rollers are the solution to the various conveyor problems.

ENDURIDE Unique on the market!



The *ENDURIDE* advantages



A better quality roller

- ➔ 100% bearing protection (**EPS** – Encasement Protection System);
- ➔ Free rolling, even at low temperatures;
- ➔ Maintenance free;
- ➔ Chemical resistant.



Other advantages

- ➔ Corrosion resistant,
- ➔ Abrasion resistant,
- ➔ Low noise,
- ➔ Resistant to impact,
- ➔ No alignment problems,
- ➔ Low weight,
- ➔ No wedging,
- ➔ The answer to all your needs and problems.



Economic advantages

- ➔ Energy savings,
- ➔ Less down time,
- ➔ Lower operating costs,
- ➔ Belt protection,
- ➔ Durability.



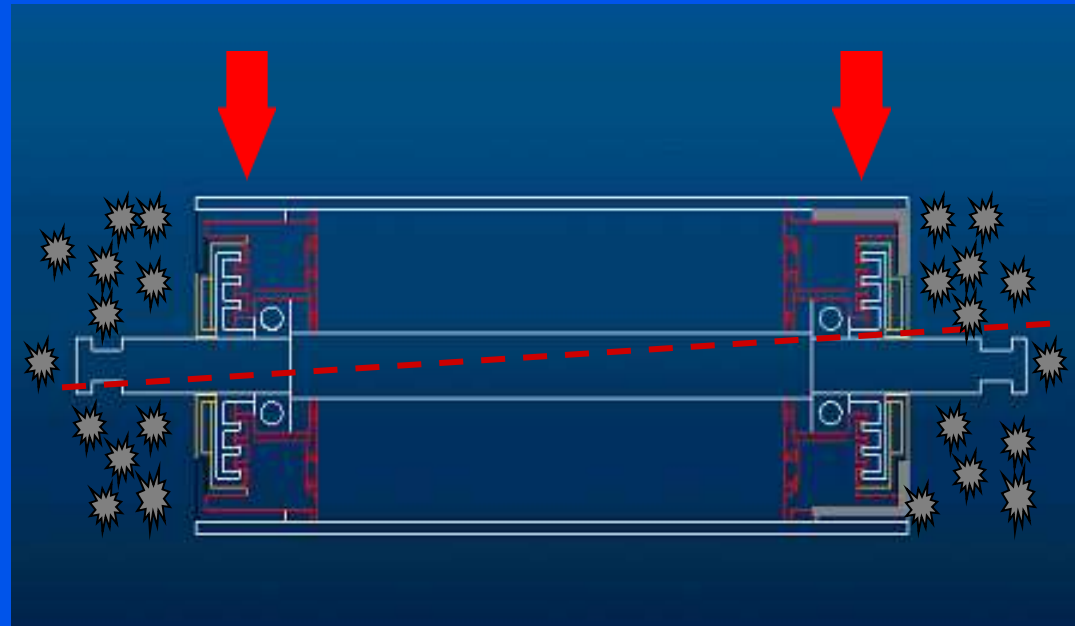
Versatile and adaptable to your needs

- ➔ Wide range of options adapted to your operating conditions,
- ➔ Easy to install,
- ➔ Easy to replace.



Polyurethane sealant advantages

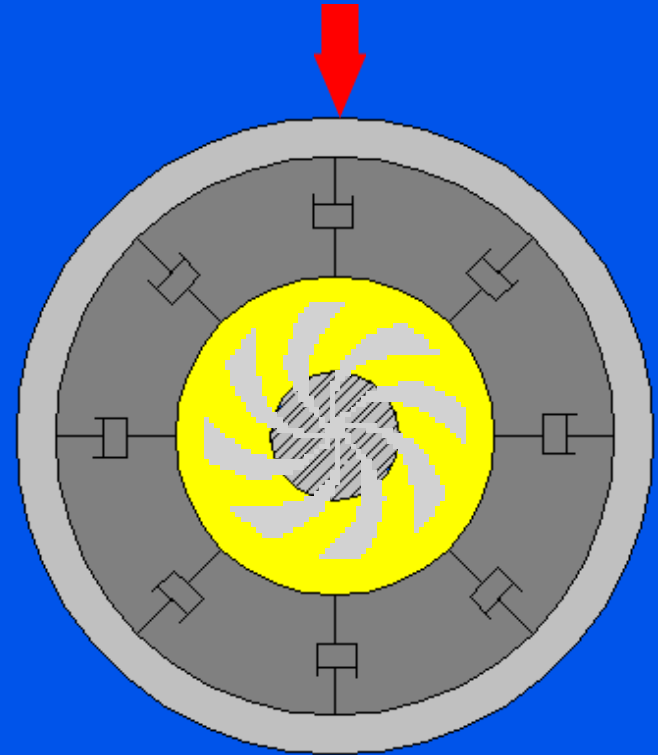
- Acts as an anti-vibration, shock-absorbing cushion;
- Eliminates alignment problems;
- Ensures correct operation in the harshest conditions (dust, earth, sawdust, chemicals, water, etc.);
- Provides 100% protection for the bearings, increasing the useful life of the roller.





Polyurethane sealant advantages

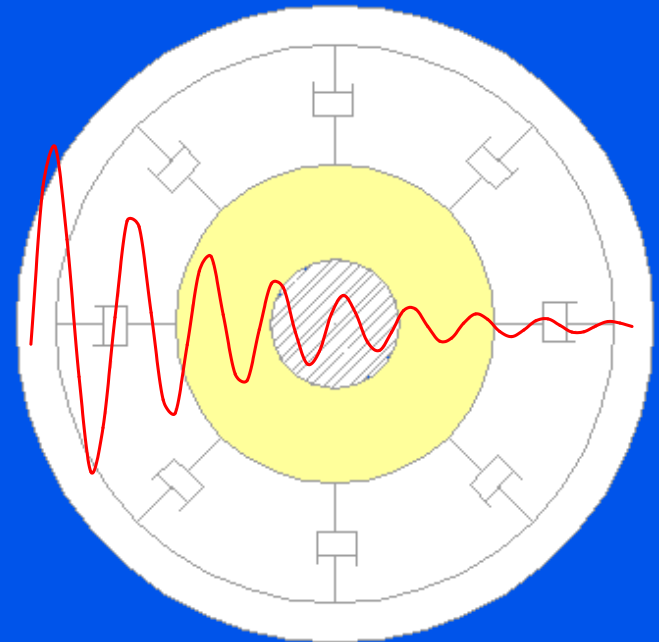
The polyurethane acts as a shock absorber, damping the resonance frequencies caused by roller rotation and impacts.





Polyurethane sealant advantages

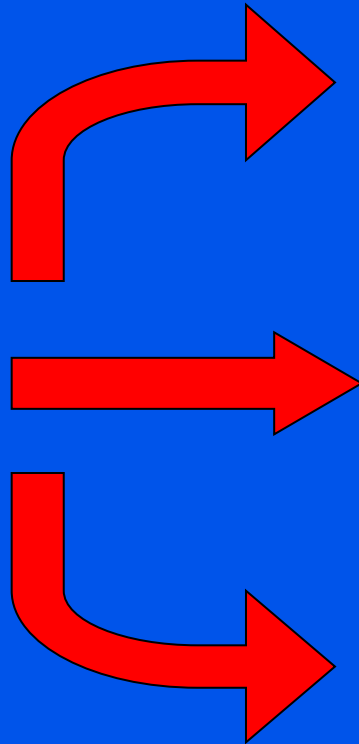
ENDURIDE rollers have a damping coefficient of 1.5 to 8.5 time higher than conventional rollers at frequencies between 0 and 1600 Hz.





Polyurethane sealant advantages

Advantages of
a high damping
coefficient



Generates less rotation noise than a conventional roller.

Extends bearing life by offering protection against vibration.

Transmits less vibration to the conveyor belt structure.



ENDURIDE – Unique impact roller !

Patented E.P.S. :

Protects the bearings
Against contamination.
Adaptable to all tube diameters.

Ball bearings :

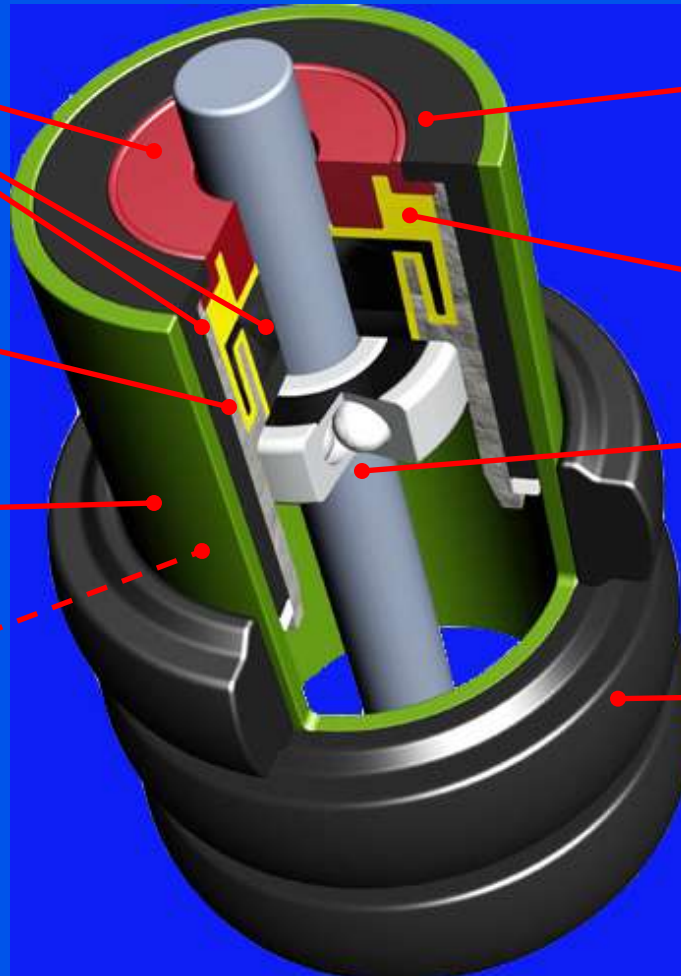
first quality, sealed for life,
chosen to fit the application.

Tube :

wide choice of
materials available :
steel, stainless steel,
aluminum, PVC.

HDPE covering :

protects the roller against
corrosion, abrasion,
accumulation. Also protects
the belt and offers less drag.



Urethane elastomere sealant :

chosen to fit the application, thickness and
hardness will vary for better impact and
vibration absorption. Protects bearings
Against contamination.

Packing compound :

chosen to fit the application to protect
against humidity, dust infiltration, etc.
The compound is also applied inside
the roller on the ball bearings to protect
them against "dew point« humidity
due to temperature variations.

Impact discs :

available in rubber or in special
Enduride polymere. This polymere
gives an extra protection for the
belt, for the bearings against impact
and vibration, and offers less drag.



ENDURIDE – Unique impact roller !

The **ENDURIDE** impact roller is the only one to provide a **triple protection**. Thanks to its patented **E.P.S.**, its urethane elastomere sealant, and to its special polymere impact discs.

This is what makes it unique!

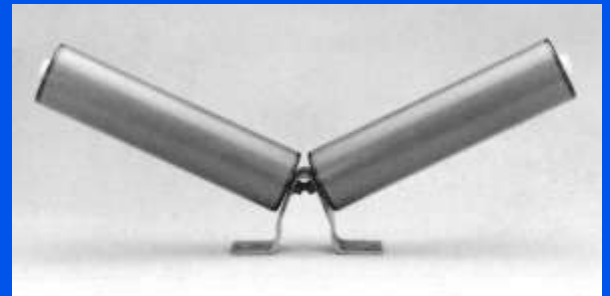




Adaptability



ENDURIDE fits all types of conveyors.





It is general practice in the industry for designers to specify rollers with a larger diameter than needed, to improve conveyor belt start-up (acceleration) and larger-diameter bearings to increase life expectancy.

The **ENDURIDE** design allows the use of the right dimension roller.

ENDURIDE the solution to oversized rollers !



Wide size range available

CEMA classification and metric classification



The roll cap is colour-coded using a CEMA equivalence. The table shows the meaning of the code.

Classification			<i>ENDURIDE</i>	
class	CEMA use	diameter	belt width	series
B	Light duty	4" (10 cm)	18 to 48"	400B
B	Light duty	5" (12,5 cm)	18 to 48"	500B
C	Heavy duty	4" (10 cm)	18 to 60"	400C
C	Heavy duty	5" (12,5 cm)	18 to 60"	500C
C	Heavy duty	6" (15 cm)	18 to 60"	600C
D	Heavy duty	5" (12,5 cm)	24 to 72"	500D
D	Heavy duty	6" (15 cm)	24 to 72"	600D
E	Extra heavy duty	6" (15 cm)	36 to 96"	600E
E	Extra heavy duty	7" (17,5 cm)	36 to 96"	700E



Tests



Tests

- “Rim Drag Test”,
- Water and dust contamination,
- Rotation,
- Vibration,
- Abrasion and corrosion,
- Noise emission,
- Conductivity,
- Deflection and alignment,
- Impact absorption,
- Friction factor,
- Any other required.



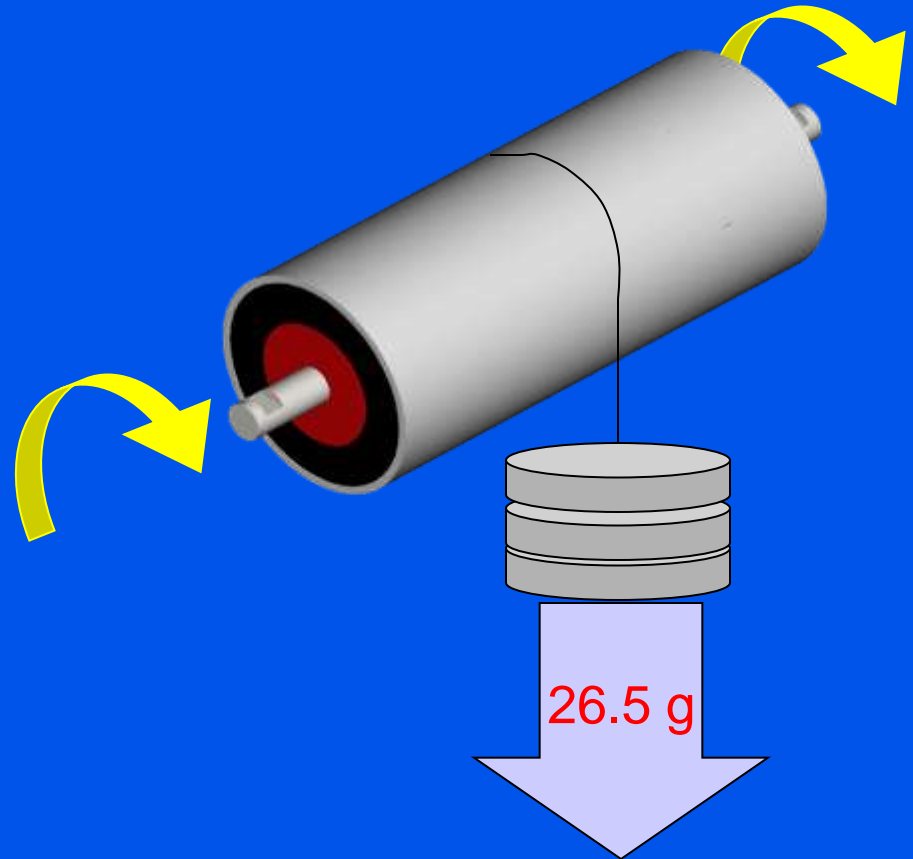
«Rim Drag Test»

Test used to measure the force required to set a roller in motion.

Comparative study of a CEMA class « C » **ENDURIDE** roller (5" in diameter by 11" in length) and two conventional rollers :

Manufacturer	New idlers First test	Second test*
A	353.0	265.5
B	293.5	261.0
ENDURIDE	62.0	26.5

* Tested after 20 minutes operating at 500 rpm





«Rim Drag Test»

ENDURIDE rollers have a lower rotational resistance, leading to an energy savings.

ENDURIDE rollers compared by load to conventional rollers for the choice of a conveyor motor.

Load	ENDURIDE	Conventional roller
	HP	HP
empty	1,71	6,82
quarter	1,73	6,92
half	1,75	7,01
three quarters	1,78	7,11
100%	1,80	7,21

Choice
of motor

2 HP

7.5 HP



«Rim Drag Test»

A conveyor belt system equipped
with **ENDURIDE** rollers...

...will have less friction!

Less friction = energy savings



Warranty



ENDURIDE extended warranty

The conventional roller manufacturers are often not able to offer warranties for their products.

Following a complete survey on the use of the rollers or in accordance with a specific quote provided by the client, with total quality control and the proper choice of the roller components materials, **ENDURIDE** can offer an **extended warranty** equivalent to the bearings useful life.



ENDURIDE guarantees that by selecting the right roller, your conveyor will start as well or better than with conventional rollers and that bearing life will match the Bu (useful bearing life) standard.

While using lighter, longer-lasting roller.



ENDURIDE guarantees the useful life of its rollers, stating that its product is superior to all competing products when properly used, because ***ENDURIDE*** roller protects the bearings from vibration, contamination, deflection and over-heating.



Applications



Applications

- Mining industry,
- Steel and metal industries,
- Quarries and cement factories,
- Pulp and paper industries,
- Saw mills,
- Chemical industry,
- Seaborne transportation,
- Bulk commodities,
- Food industries.



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