Industrie

The innovative ceramic pulley lagging for most extreme conditions

REMAGRIP CK-X

REMA TIP TOP

Industrie

ONE BRAND – ONE SOURCE – ONE SYSTEM

REMA TIP TOP MATERIAL PROCESSING

A synonym for quality
For over 30 years, the name **REMA TIP TOP Material Processing** has become synonymous for outstanding quality. The brand, **REMA TIP TOP**, stands for innovative products in the field of wear and corrosion protection, as well as highest quality conveyor belt splice and repair materials.

REMA TIP TOP Material Processing drives the demand for outstanding quality and advanced systems development to maintain and protect conveyor belt systems, fully supported by a global service and sales network.

The Expertise in conveyor belt maintenance
The use of **REMA TIP TOP** pulley lagging reduces possible conveyor belt drive, traction, alignment and stability problems to an absolute minimum. The special lagging developed by **REMA TIP TOP Material Processing** minimizes component and excessive conveyor belt wear, system stresses, pulley build-up and corrosion. It increases system efficiency, system availability and reduces maintenance requirements of the conveying system.

The lagging has been designed by utilizing state-of-the-art technology and due to its bonding system in combination with the CN layer it is easy to apply. Due to its long service life, unmatched wear performance, durability, load carrying capabilities, advanced rubber compound and computer-aided design the **REMA TIP TOP** lagging drastically increases the efficiency, reliability and service life of the conveyor system and conveyor belt.

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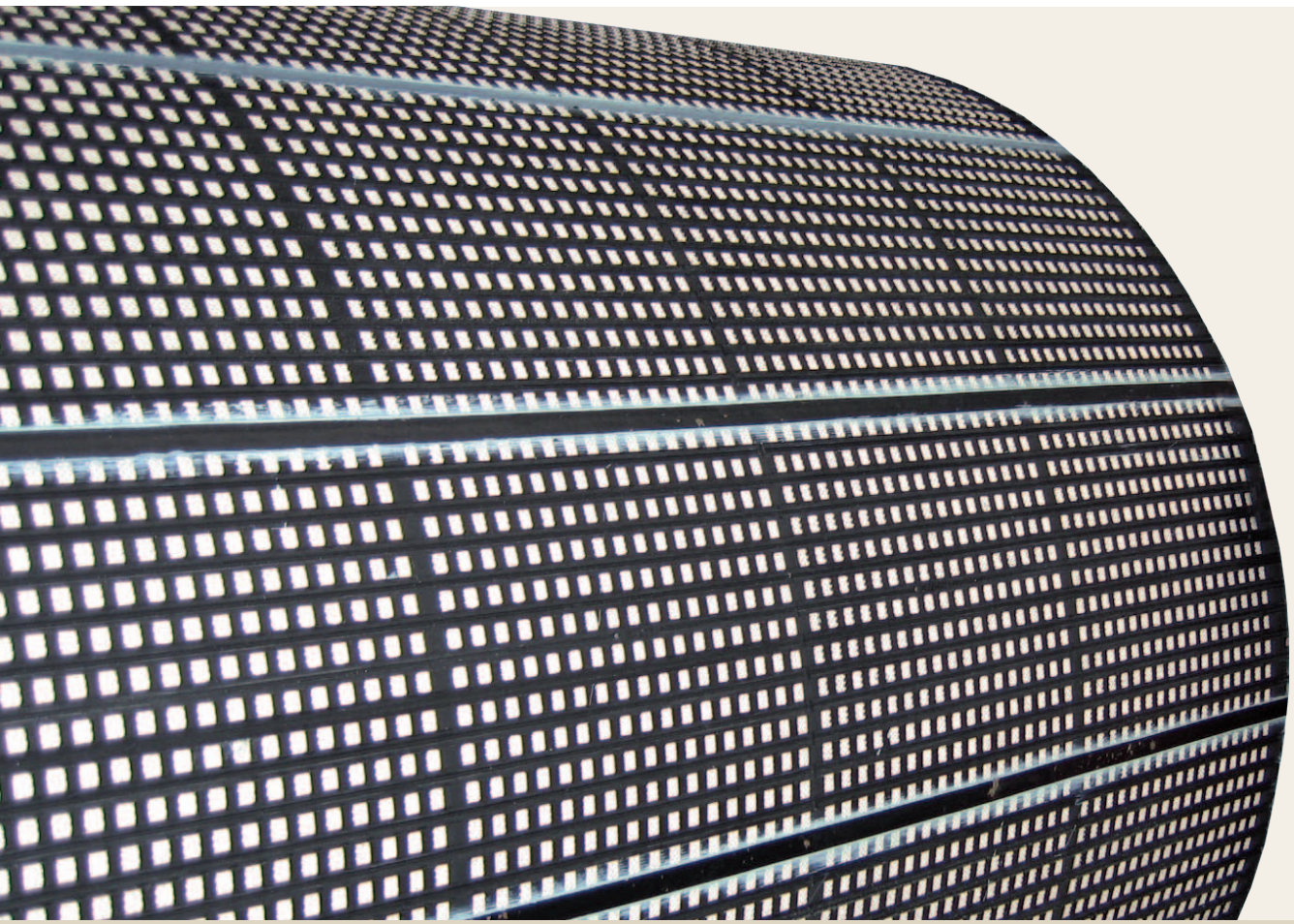


Maximum grip
REMAGRIP CK-X ensures maximum grip even under extremely wet operating conditions. It allows lower belt tensions, thereby reducing system wear, stress on belt splices and operating costs.

Extreme durability
REMAGRIP CK-X withstands the extreme stress brought about by continuous use as well as high feed rates and conveying speeds. Its unique design allows even large volumes of dirt and water to run off with ease.

Maximum flexibility
REMAGRIP CK-X offers highest flexibility combined with incredible durability. Due to the unique arrangement of the ceramic tiles, the lagging adapts perfectly to the surface of the conveyor belt, increasing the contact area and grip, eliminating slippage. The innovative lagging design in combination with the quality of the Rema Tip Top rubber compound makes REMAGRIP CK-X suitable for even the smallest diameter pulleys.

REMAGRIP CK-X – Your advantages
- Full embedment of ceramic tiles in the rubber matrix without tiles touching each other
- Expansion gap allows for compensation of stress peaks also in axial direction
- Profile geometry between ceramic rows sheds of water and dirt even in wet and muddy conditions
- Rough, nubby ceramic surface provides perfect grip

REMAGRIP CK-X

INNOVATIVE LAGGING DESIGN

CK-X Pulley lagging grows with its challenges

REMAGRIP CK-X HDX (Heavy Duty eXtra)

- Especially developed for high stress conveyor systems (up to ST 10000)
- Higher safety factor results in higher plant availability and longer service life

What is new?

New geometry:
- 25 mm (1“) total lagging thickness
- Thicker rubber matrix allows for better absorption of forces and increases the safety factor of the pulley lagging

New Profile:
- New grooving profile sheds water and dirt even more effeciently
- Better absorption of forces by optimized compression behavior

New Ceramic tiles:
- Optimized design of the ceramic tiles for high stress applications
- Deeper embedment of the ceramic tiles results in higher shear strength and maximizes the adhesion of the ceramic tiles to the rubber matrix

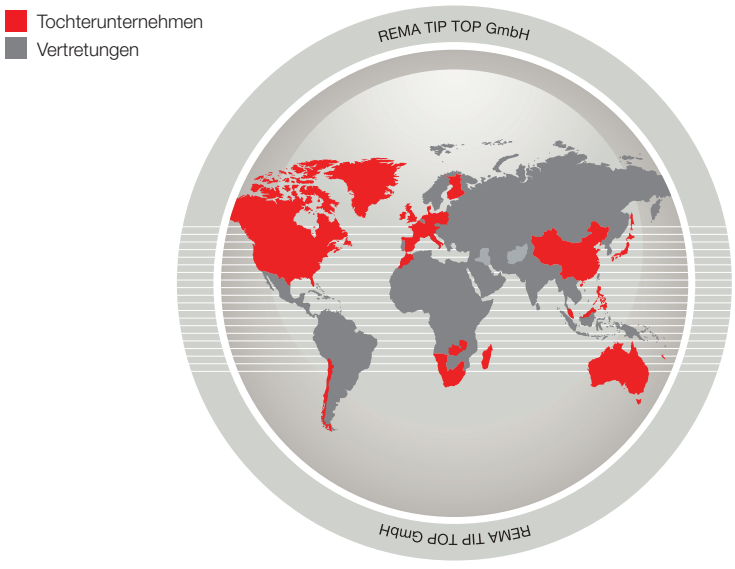
All other advantages of the longtime proven REMAGRIP CK-X pulley laggings

REMAGRIP CK-X HD (Heavy Duty)

Optimization of the established CK-X pulley lagging with a higher safety factor

New geometry:
- 20mm total thickness
- Thicker rubber matrix allows for better absorption of forces and increases the safety factor of the pulley lagging

All other advantages of the longtime proven REMAGRIP CK-X pulley laggings



ONE BRAND – ONE SOURCE – ONE SYSTEM

REMAGRIP CK-X

FIELDS OF APPLICATION

REMAGRIP CK-X – Maximum grip in any operation conditions
The unique, computer-aided design of the ceramic tiles and profile pattern, the extra wide aquachannels and the increased profile depth enables **REMAGRIP CK-X** to maintain optimum grip and hold even under extremely wet and muddy conveying conditions such as commonly found in copper-, gold-, iron ore- and coal mines, material handling ports, steel works, etc.

Resulting in the following benefits:
- Lower operating cost
- Lower belt tension
- Reduced component and belt wear
- Improved traction and stability
- Improved belt aligning capabilities

REMAGRIP CK-X – Maximum performance under extreme system stresses
In applications calling for high drive forces combined with extreme belt tension, **REMAGRIP CK-X** is the right choice, here it can prove its unmatched wear performance, durability and load carrying capabilities due to special wear resistant ceramic tiles, advanced rubber compound and stress eliminating design pattern.

REMAGRIP CK-X – Excellent adaptability and an optimum on flexibility
REMAGRIP CK-X, the most flexible and adaptable ceramic lagging of its kind. Due to its unique profile design pattern, spacing of ceramic tiles and advanced rubber compound, the stress points in the lagging have been reduced to a minimum and tile breakage has been eliminated.

Due to the lagging flexibility and the Rema Tip Top bonding system in combination with the CN layer, installing **REMAGRIP CK-X** is absolutely effortless and suitable for even the smallest pulley diameter.

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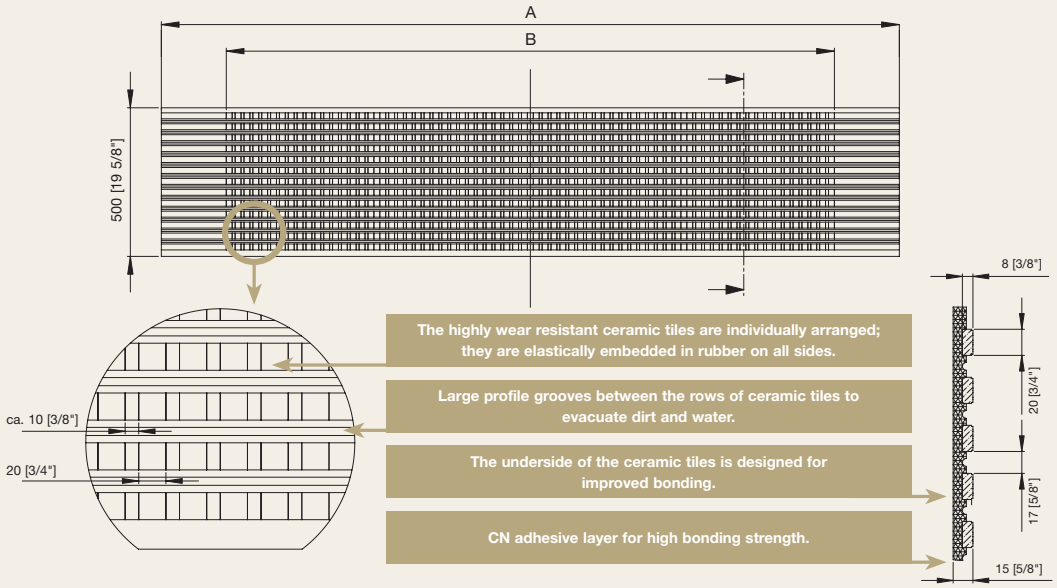
REMAGRIP CK-X

TECHNICAL DETAILS



REMAGRIP CK-X – Versatile applications, simple installation

The **REMAGRIP CK-X** design is suitable for a wide range of applications and pulley sizes. It can be individually adapted to basically any pulley width which makes installation considerably easier, and our proven bonding system in combination with the CN layer guarantees fast and easy application to the pulley.

Individual sizes tailored to suit numerous pulley sizes

Designation	belt width		Designation		
	[mm]	[inch]	thickness [mm]	width [mm]	length [mm]
REMAGRIP CK-X	800 - 2400	32-96	15	1250 - 2500	500
REMAGRIP CK-X HD	800 - 2400	32-96	20	1250 - 2500	500
REMAGRIP CK-X HDX	1600 - 2400	39-96	25	2100 - 2880	500

Certain pulley lagging dimensions are available in V quality to be used in ATEX plants.

REVOLUTIONARY DEVELOPMENT

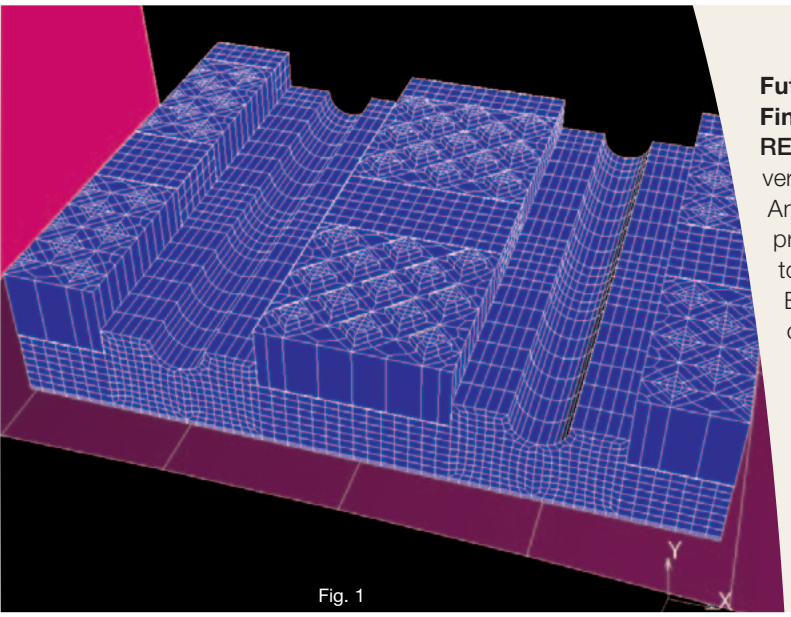


Fig. 1

Future-oriented innovation based on Finite Element Model (FEM)
REMA TIP TOP Material Processing uses the very best and latest technology Finite Element Analysis software systems and engineering processes to provide the best possible solutions to match customers requirements. The Finite Element Analysis is an advanced engineering computer based method simulating and analysing the behaviour of engineering design concepts under almost any operating conditions. It is based on the premise that an approximate solution to any complex engineering problem can be reached by subdividing the structure or component into smaller more manageable finite elements.

The Finite Element Model is analysed with an inherently greater precision than would otherwise be possible using conventional methods since the actual shape, dynamic and static loads, constraints as well as material property combinations can be specified with much greater accuracy.

The Finite Element calculation mesh for **REMAGRIP CK- X** (Fig. 1) shows the ceramic lagging on the pulley. Realistic friction loads are applied in the computer simulation. The lagging mesh structure changes shape and the corresponding material loads are generated. During the development of **REMAGRIP CK- X**, the loads were varied for a wide range of operating conditions under numerous test situations. In this way, it was possible to reduce the material load and in the case of **REMAGRIP CK- X** up to one 15th compared with conventional ceramic lagging (Fig. 2).

Demonstration of the Equivalent Cauchy Stress for friction load

REMAGRIP CK-X is superior to conventional ceramic laggings in terms of durability and load carrying capabilities. The diagram illustrates that the Equivalent Cauchy Stress in the peripheral area of the rubber/ceramic composite is reduced considerably with **REMAGRIP CK-X**.

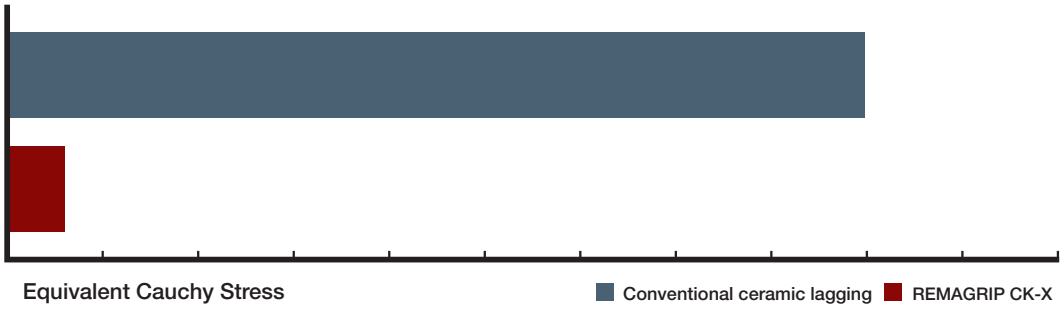


Fig. 2

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