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LAGGING SELECTION – ONE OF THE 4 PILLARS OF LAGGING PERFORMANCE

Lagging Selection

One of the 4 Pillars of Lagging Performance

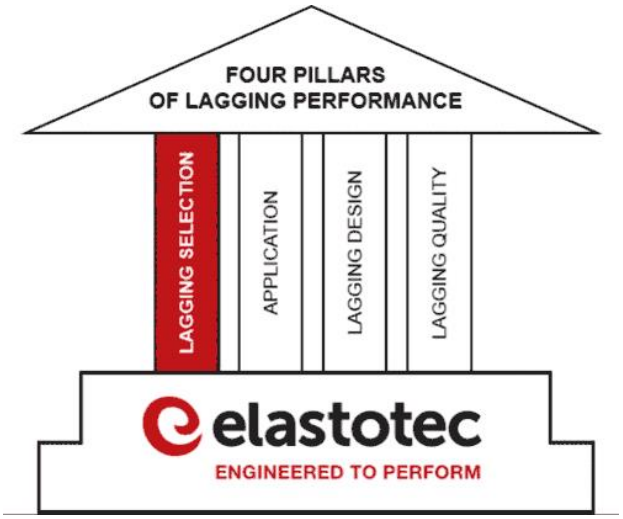
Lagging can be of good quality and application can be correct, but pulley lagging can still fail and does. Everything seems right but the lagging still doesn't perform to expectations.

SO WHY DOES THIS HAPPEN?

It's because the pulley lagging selection is not right for the application.

What contributes to poor lagging performance?

- Lack of understanding of pulley application requirements.
- Failure to understand conveyor system requirements I.E. Spare pulleys that can be used in multiple conveyor locations.
- Lack of understanding of lagging engineering and lagging types available.
- Failure to understand lagging application methods.
- Resistance from mine company staff to change lagging from existing specification/drawing requirements.



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Imagine the consequences of making the wrong lagging selection that results in the lagging not lasting as long as the bearings and locking elements.

Understanding the pulley operation takes time and specialist experience. It's important to dig deepper to fully understand the application requirements.

At Elastotec we do take the time with our customers to ensure the right lagging selection. We achieve this by factoring in the the conveyor system, past lagging performances, pulley operating conditions and the various locations in the conveyor that spare pulleys may have to operate in.

The best outcome is when your experience in the field and the understanding of the everyday conveyor operation is combined with our lagging engineering expertise.

Dig Deeper

Your conveyor operation/ maintenance expertise + **Elastotec Lagging expertise** = **Better lagging performance**

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The team at Elastotec would like to work with you to ensure you have the correct pulley lagging selection. We have developed a number of tools to assist in evaluating individual pulley requirements, and to help narrow the choice of the best lagging for each application.

THESE INCLUDE:

1. LAGGING OPERATION CHECKLIST

To check what conditions is the lagging operating at? Temperature, tension, belt cover condition, presence of carryback, wrap angle, type of belt, type of belt splices, build-up on the pulleys.

It also is important to understand what type of lagging has been used before and how did each lagging type perform.

elastotec
ENGINEERED TO PERFORM

LAGGING OPERATION CHECKLIST

COMPANY:	DATE:	JOB #:
CONTACT:	EMAIL:	PHONE:
PROJECT NAME:	LOCATION:	

TEMPERATURES	CHECK
NORMAL OPERATING TEMP ©	
MINIMUM OPERATING TEMP ©	
MAXIMUM OPERATING TEMP ©	

REQUIRED INPUT DATA FOR LAGGING ANALYST EVALUATION	CHECK
PULLEY#	
CONVEYOR LAYOUT DIAGRAM	
PULLEY DIAMETER	
WRAP ANGLE	
BELT TYPE (STEEL/FABRIC)	
BELT RATING	
LAGGING IN CONTACT WITH ☐ BOTTOM COVER ☐ TOP COVER (CARRY SIDE)	
BOTTOM COVER THICKNESS	
BOTTOM COVER HARDNESS	
BELT WIDTH (mm)	
BELT T1 - RUNNING	
BELT T2 - RUNNING	
BELT T1 - STARTING	
BELT T2 - STARTING	
BELT MODULUS	
BELT CONDITION ☐ NEW ☐ USED AGE AMOUNT OF WEAR EXPOSED REINFORCING	
PRESENCE OF CARRY BACK ☐ YES ☐ NO SIZE LUMPS FINES ☐ DRY ☐ WET	
IS BUILDUP A PROBLEM ON THE PULLEY ☐ YES ☐ NO ANY CHEMICALS PRESENT i.e ACID ☐ YES ☐ NO TYPE CONCENTRATION	

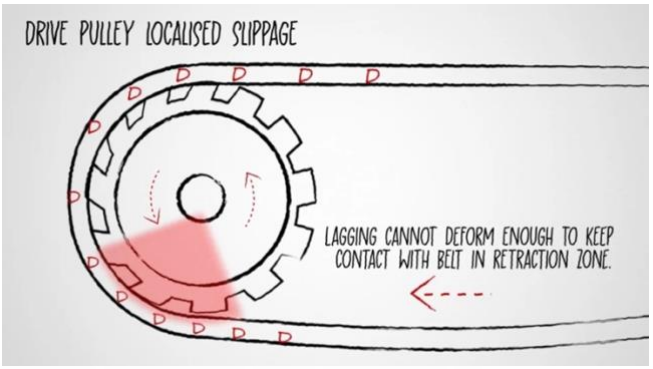
Continued over page

2. LAGGING ANALYST.

To calculate T1/T2 ratio and risk of localised slippage with belt retraction.

Lagging Analyst™

OVERLAND CONVEYOR COMPANY, INC



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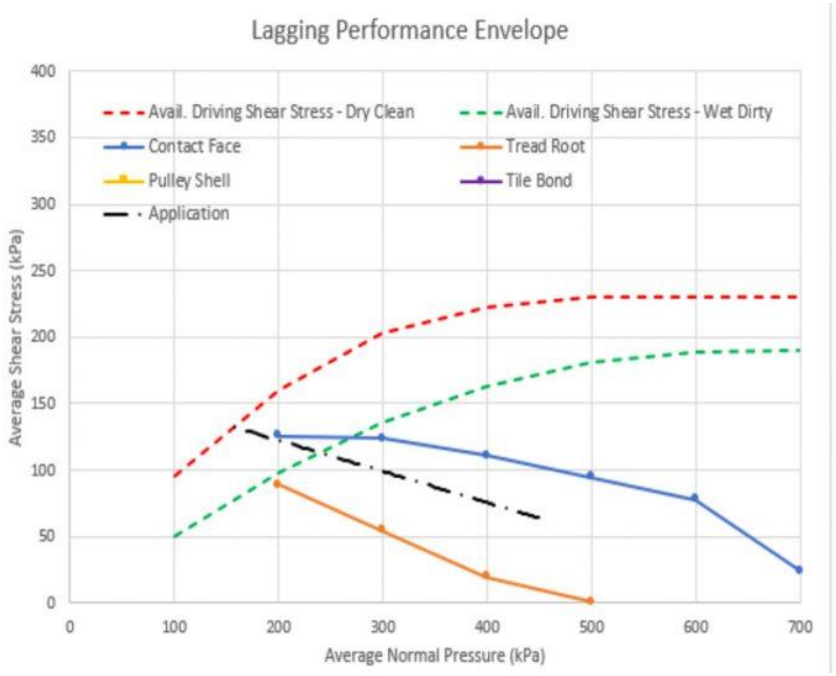
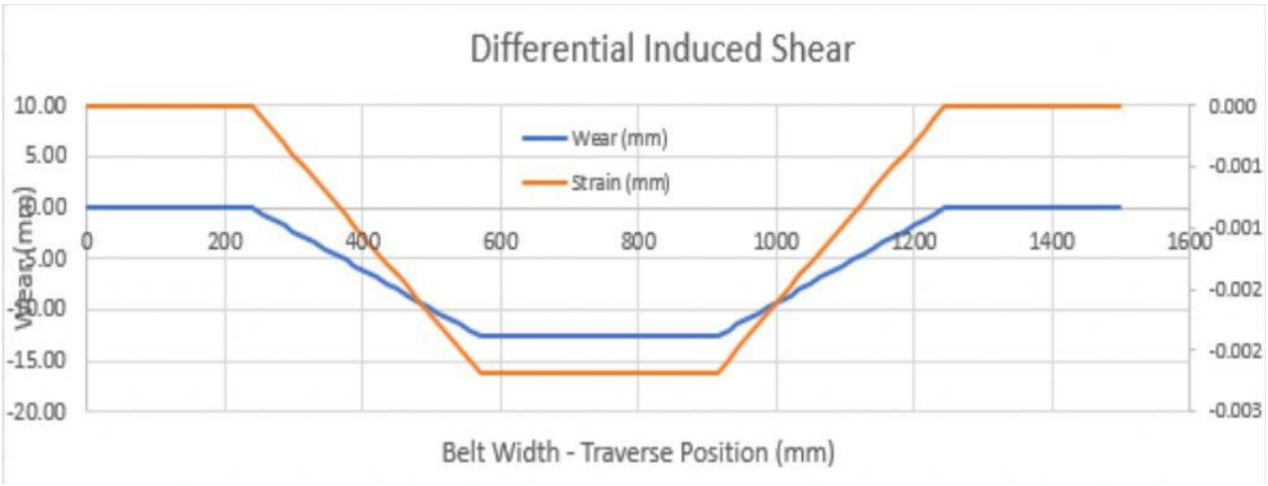
3. LAGGING PERFORMANCE ENVELOPES.

Lagging Performance Envelopes calculate if the shear and normal stresses that the conveyor performance will impart on the lagging, are higher than what the lagging is designed to operate with. This tool helps reduce the risk of catastrophic lagging failure by identifying when lagging operational limits are being reached.



Elastotec Pulley Lagging Analysis			
		Cadia CV3035	
Inputs			
Tension	T1	675	kN
Tension	T2	230	kN
Belt Carcass			
ST Rating	ST	5600	
Belt Elasticity	Eb	403,200	kN/m
Width	BW	1.500	m
Pulley Details			
Pulley Diameter	D	2.000	m
Wrap Angle	a	180	deg.
Belt Cover Details			
Overall Thickness	tbc	9.0	mm
Durometer (Shore A)		65	
Elastic Modulus	Ebc	4.4	Mpa
Poissons	ubc	0.45	
Shear Modulus	Gbc	1.526	Mpa
Lagging Details			
Lagging Product		Elastotec Diamond Rubber	Selection
Overall Thickness	tl	25	mm
Durometer (Shore A)		65	Duro
Shear Modulus	Gl	0.913	MPa
Differential Induced Shear			
Differential Depth	Dd	13	
Differential Width - Centre	Dw	333	mm
Differential Width - Extent	De	1000	mm
Conditions			
Conditions		Dry Clean	Selection
		UPDATE CALC	



At Elastotec we believe lagging solutions should cover each and every one of the Four Pillars of Lagging Performance.

Selecting the correct lagging for the application is one of the most important.

For additional information please contact one of our representatives at:
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