







PROJECT: Lifters bar trial with Trelleborg Special Rubber Compound.

SITE:

OBJECTIVE: TRELLEBORG Lifter Bars in Special Rubber Compound **Vs** Composite Steel Lifter Bars.

INSTALLED DATE: 12th Dec'13

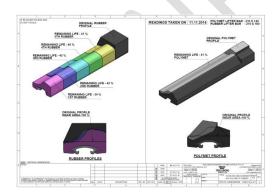
DATE MEASURED: 11th November'14

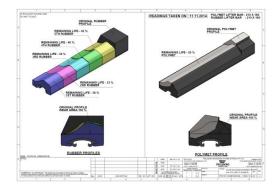
TONS/HOURS HANDLED TILL DATE: 4067465T / 6925 HRS

PERFORMANCE AS ON DATE-11.11.14:

Difference at Feed End (Shell) Lifter 210-160 Polymet Vs Rubber – 19.00 % only.

Difference at Disch End (Shell) Lifter 210-140 Polymet Vs Rubber 210-160 SAME%









www.trelleborg.com.au



Wear Management Advisory Services

Inspection Form

DATE		17 th No	ovember, 2014	TIME	5.30pm		
Trelleborg Perso	nnel		Duane Smith / Zane T	homas			
Composi	te Ce	ramic	cs Rubb	er Lining	Mill/Scrubber Liner		
CLIENT DETAILS							
Client:				Site:			
Contact Name:				Phone:			
Title:	Shutd	lown (Co-ordinator	Email:			
EQUIPMENT DET							
Asset Description:			BALL MILL NO. 1				
Asset ID:							
Date of Last Inspection:		n:	11/11/14				
Date of Liner Install:			12/12/13				
Shut Frequency:			8-11 weeks				
Throughput (TPF	l):						
PREVIOUS LINER	DET	AILS					
Previous Liners:			N/A				
MTBF:							
Mode of Failure:							
Liner Weight:		, and the same of					
Liner Size:							
Liner Thickness:							
NEW LINER DETA	AILS						
Current Liners:			SHELL LIFTERS				
Liner Weight:							
Liner Size:			LIFTER 210-140/160 (Composite) & 210-160(Rubber)				
Liner Thickness:			90/70				







PRODUCT DETAILS			
Product:	Gold Ore	Fines (%):	
Max. Lump Size (mm):		Angle of Impact:	N/A
Wet/Dry/Sticky:	Wet/Sticky	Belt Speed (m/p/s)	N/A
Drop Height	N/A		
Comments Relevant to	this Installation:		
Are there any Access a	nd Change out Issues?		
		,	
Current Management a	and Inspection Process?		
INSPECTION REPORT –	Details and Photos		

WEAR MEASUREMENTS FOR LIFTER BAR TRIAL RUBBER(TRELLEBORG) Vs COMPOSITE STEEL.

BALL MILL DIA DIA 5490M x 7625M- LIFTER TRIAL BM-1					
LIFTER TRIAL ON SHELL	LIFTER BAR	LIFTER BAR	INSTALLATION	PLATE (Actual) REMAINING	
	% REMAINING	EST.CHANGE	DATE	THICKNESS	
SHELL – FEED (COMPOSITE)	52.00%	**FEB'15	12.12.13	34	
RUBBER LIFTER_FE (1st ROW)	36.00%	**FEB'15	12.12.13	34	
RUBBER LIFTER_FE (2nd ROW)	33.00%	**FEB'15	12.12.13	33	
RUBBER LIFTER_FE (3rd ROW)	34.00%	**FEB'15	12.12.13	33	
RUBBER LIFTER_FE 4th ROW)	40.00%	**FEB'15	12.12.13	43	
RUBBER LIFTER_FE (5th ROW)	42.00%	**FEB'15	12.12.13	40	
SHELL -DISCH (COMPOSITE)	41.00%	**FEB'15	12.12.13	25	
RUBBER LIFTER_DE (1st ROW)	34.00%	**FEB'15	12.12.13	42	
RUBBER LIFTER_DE (2nd ROW)	42.00%	**FEB'15	12.12.13	40	
RUBBER LIFTER_DE (3rd ROW)	42.00%	**FEB'15	12.12.13	35	
RUBBER LIFTER_DE (4th ROW)	40.00%	**FEB'15	12.12.13	32	
RUBBER LIFTER_DE (5th ROW)	41.00%	**FEB'15	12.12.13	40	

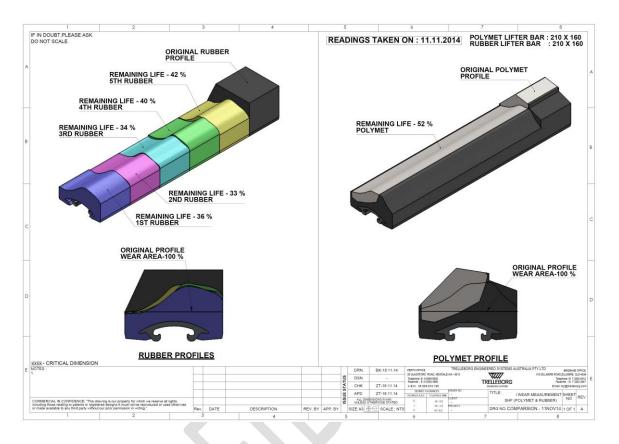
^{**}Predictions are based on Mill Operating Conditions and Ore characteristics remaining same.







SHELL LINERS - AT FEED END: LIFTER 210-160



The difference in Rubber Lifter bars Vs Composite Steel lifter bars is only nineteen percent (19%) when compared with the 5th row of Rubber Lifter bar.

This once again goes to prove that the rubber will perform better if installed on its own, as one full ring.

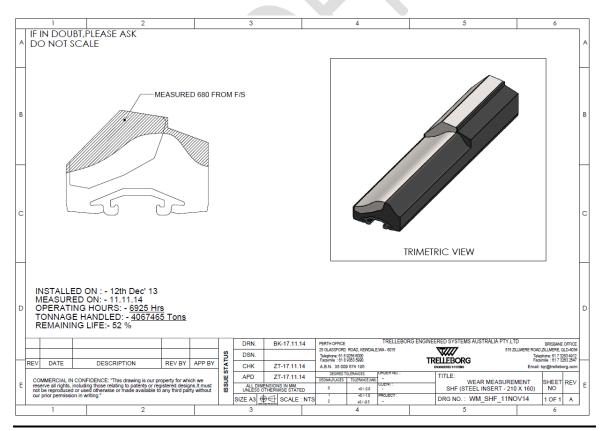






COMPOSITE LIFTER SHELL FEED END- 210-160





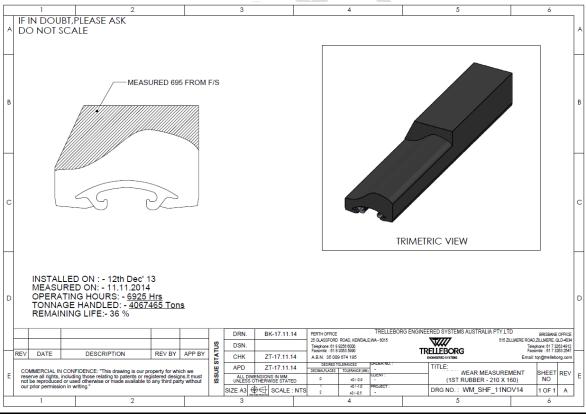






RUBBER LIFTER_SHELL_FEED END – 1st ROW





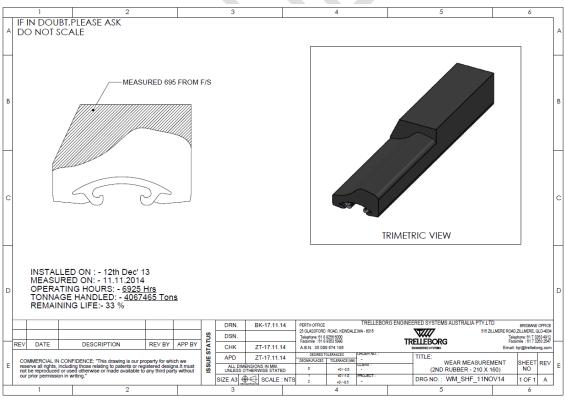






RUBBER LIFTER_SHELL FEED END - 2nd ROW



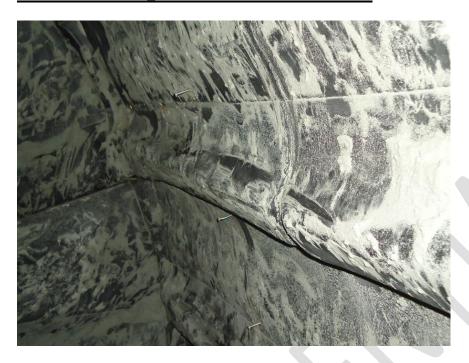


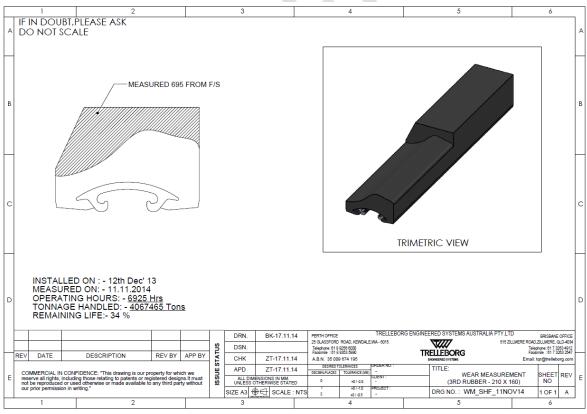






RUBBER LIFTER_SHELL FEED END – 3rd ROW



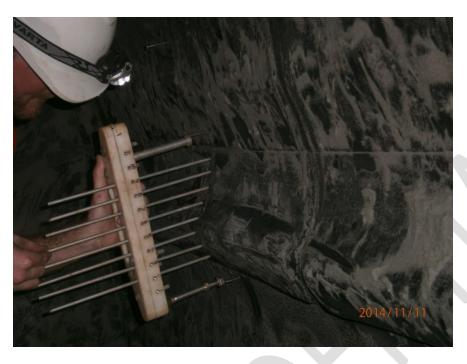


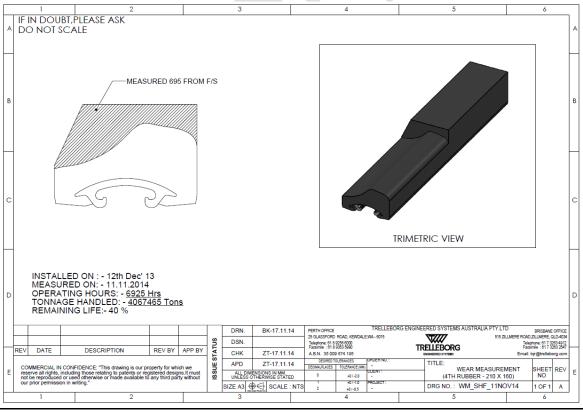






RUBBER LIFTER_SHELL FEED END – 4th ROW





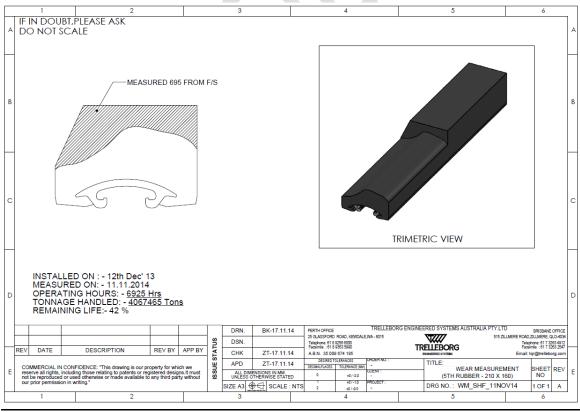






RUBBER LIFTER SHELL FEED END – 5th ROW







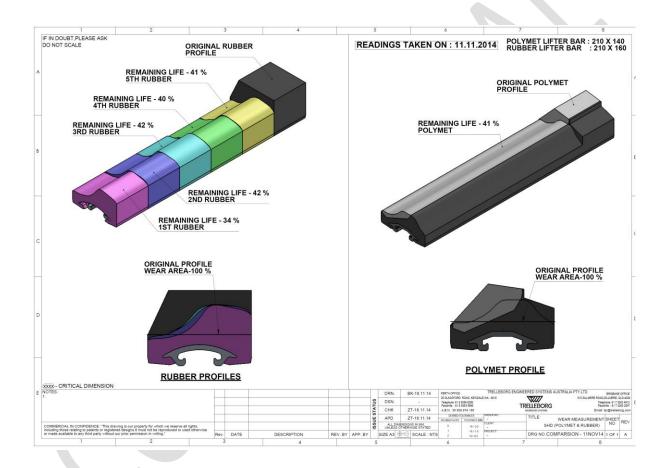




SHELL LINERS - AT DISCH END: LIFTER 210-140(COMPOSITE) 210-160(RUBBER)

No abnormal wear noted in Rubber lifter bars at this stage. Rubber lifters are on par (in terms of wear percentage remaining) in comparison to the Composite Steel lifter bars, which again is very encouraging, after **12 months** of operation.

It may be noted that the rubber lifter bars further away from the Composite Steel lifters are wearing better, this goes to prove that the rubber will perform even better if installed in one complete ring.



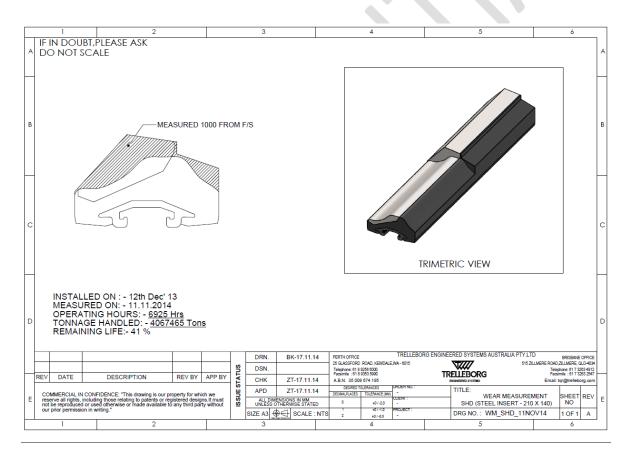






COMPOSITE LIFTER_SHELL-DISCH END





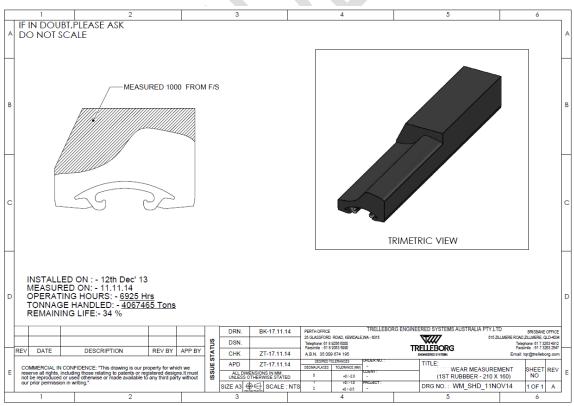






$\underline{RUBBER\;LIFTER}_\underline{SHELL\;DISCH\;END-1^{st}\;ROW}$





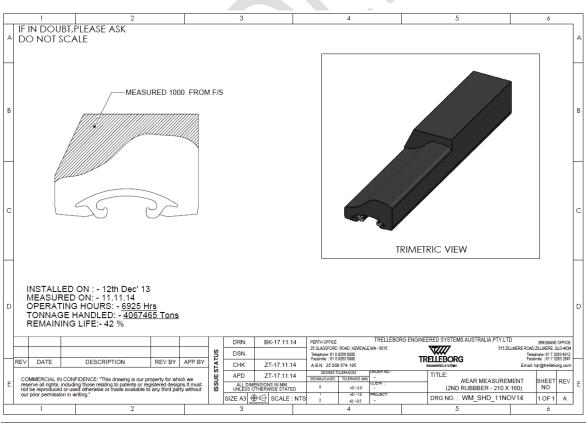






RUBBER LIFTER_SHELL DISCH END - 2nd ROW





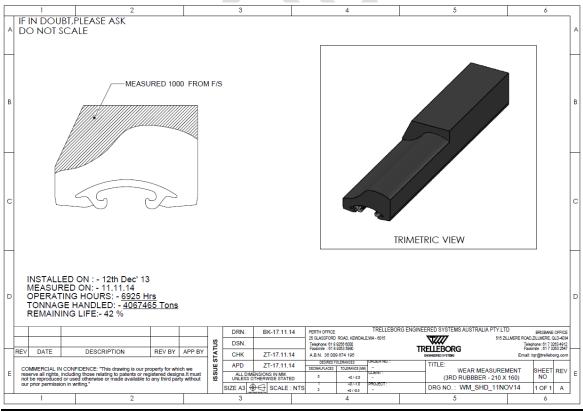






$\underline{RUBBER\ LIFTER\ SHELL\text{-}DISCH-3^{rd}\ ROW}$





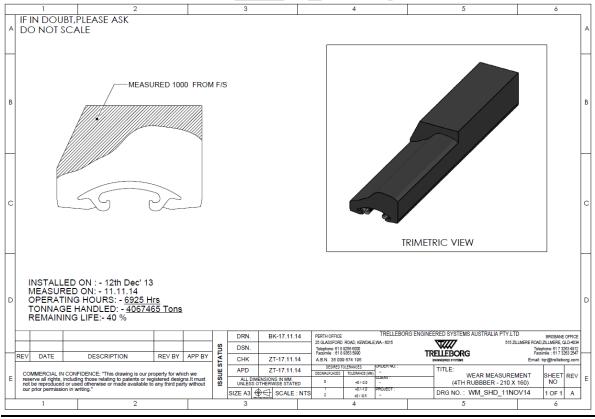






RUBBER LIFTER_SHELL-DISCH END - 4th ROW





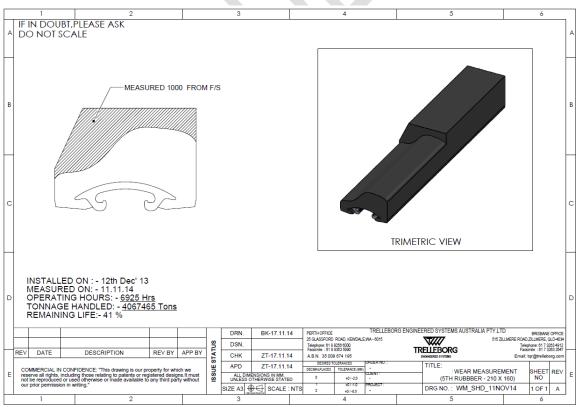






RUBBER LIFTER_SHELL_DISCH END - 5th ROW













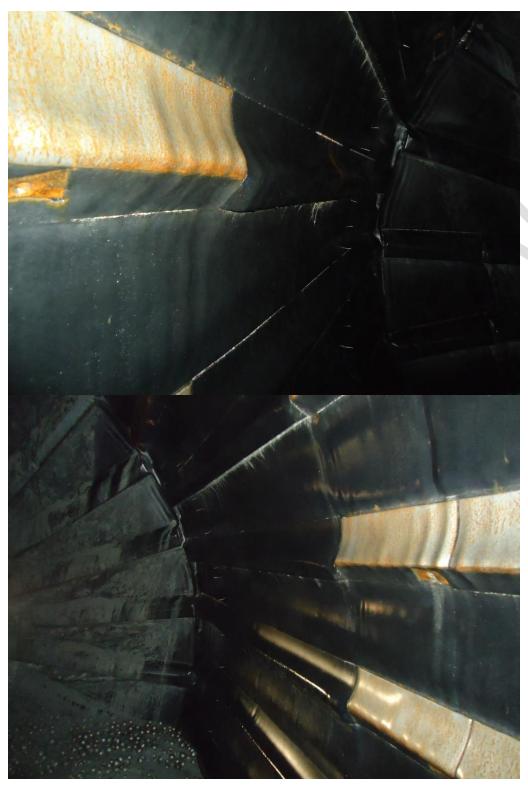


















RECOMMENDATIONS

Based on the successful results from the Trelleborg Rubber Lifter bar Trial, the Composite Steel lifter bars can now be substituted in both, BALL MILLS- 1 & 2 with lifter bars made in Trelleborg Special Rubber Compound, to attain the following benefits:

- LOWER COST
- LESS POWER DRAW
- REDUCED WEIGHT
- EASY AND FASTER INSTALL
- REDUCED LOAD ON MILL BEARINGS ETC.
- NOISE REDUCTION
- EASILY MONITORED
- NO CRACKING OR FALLING INSERTS –SAFE

COMPLETED BY: Zane Thomas DATE: 19" NOVEMBER, 2014	COMPLETED BY:	Zane Thomas	DATE:	19 th NOVEMBER, 2014
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