



**PALTECHNOLOGIES (PTY) LTD**

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2016/01/22

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1961

Attention: Francois Marais

To whom it may concern

**INITIAL TEST REPORT NUMBER Z – 20151212LJK002.**

This report serves as a performance reference of the durability of the surface conversion of Zirolflex overlay applied to a 150NB Paltech high performance butterfly valve wet end area surfaces to combat one of the most severe elements namely fly ash micro powder dry application pneumatic transfer process.

In the past standard stainless steel resilient seated butterfly valves were installed on this particular process for isolation purposes which lasted approximately six weeks due to the high velocities experienced during the process cycles. (Wire draw destruction)

A Zirolflex converted Paltech butterfly valve was prepared for an initial test to measure the durability of the overlay applied to the critical areas to the wet end at a thickness of plus minus 20 microns.

The initial test on the Zirolflex performance was interrupted after six months of strenuous operation when a minor leak through was detected during the process.

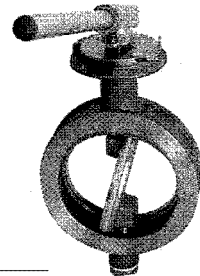
On closer inspection the failure was identified as a pin hole between the disc locking ring and the disc mounting fine threads which is difficult to observe during the disc assembly. (Not possible to identify with the eye when mounting the disc components)

An additional operation in the future will be included by having this critical contact area x-rayed to ensure zero defects. (Ensuring prolonged valve life and performance.)

Further detailed inspections on the rest of the wet end components ie. the body, top and bottom shafts etc. proved to be in order.

END OF REPORT

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New Paltech butterfly valves that we are currently preparing with Ziroflex overlay in wafer style as well as in the three piece design will be for severe testing in the liquid fertilizer process industry, Chrome slurries for the chrome mining sectors and for various effluents in the paper and pulp industries.  
(These applications are all tested under extreme conditions where the life span of the current butterfly valves in use have a limited lifespan.)

Please note that the following additional information will be attached to this e-mail: general arrangement drawing of the 150NB Paltech butterfly valve, photos of the initial test report as well as the information sheet of Ziroflex conversion.

Should you require any further information please contact Len Klassen for assistance.

Paltech is an active member of VAMCOSA and is ISO9001 certified. Our ISO registration number is 01 100 1420502.

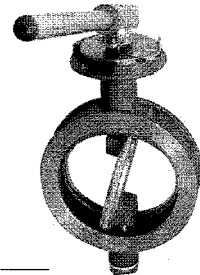
Kind Regards

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*From: Merrilyn Klassen*

*Date: 3/24/2015 3:00:55 AM*

*To: len@paltech.co.za; sales@paltech.co.za; rjburton66@gmail.com; extsales1@paltech.co.za*

*Subject: PALTECH BUTTERFLY VALVES - ZIROFLEX CONVERSION - TECHNICAL NOTE.*

**ZIROFLEX SURFACE CONVERSIONS TO  
PALTECH BUTTERFLY VALVE WET ENDS  
FOR THE MOST AGGRESSIVE OF  
APPLICATIONS.**

**TECHNICAL NOTE :-**

*Parts treated with the Zirolflex surface conversion benefits from the surface hardness of 65 - 70 Rockwell C / 900 Vickers / 750 Brenell compared to 32 Rockwell C of 316 Stainless steel. Zirolflex ensure that the life of these parts converted will outlast the original 2 to 4 times.*

**BENEFITS OF ZIROFLEX.**

- \* 30 - 100 microns.*
- \* Improved wear resistance.*
- \* Greater hardness.*
- \* Superior corrosion resistance.*
- \* Chemical inertness.*
- \* Lower coefficient of friction.*
- \* Better heat resistance.*
- \* Enhanced abrasion resistance.*
- \* Ability to take high polish.*

*REFER TO SALES FOR COST OF ZIROFLEX CONVERSIONS.*

*Len Klassen,  
Paltechnologies (Pty) Ltd.*