



STANFRA TRADING
Bethlehem

1 December 2014

Dear Mr. F. Marais,

The Ziroflex Coating principle was introduced to Mpact Piet Retief Mill in March 2010 by your company Stanfra Trading. It is with pleasure that I refer to the reports below as compiled by our Instrumentation Foreman, to display the excellent performance of the Ziroflex coatings as applied in our plant.

First Report - March 2010 (by Werner Swanepoel)

Parts treated by the Ziroflex Coating (Electrolytical Process) benefits from surface hardness of 70 Rockwell C on 20 micron, compared to 32 Rockwell C to 316 stainless steel.

I gave Stanfra Trading a DN150 stainless steel NAF valve for a trial. This specific valve was completely scrapped as the body was corroded through, the seat and ball segment was also corroded beyond economical repair.

Two weeks later Stanfra returned the repaired valve which I couldn't believe at first until I saw the marks I've made on the spare parts of the old valve before giving it to them. To tell the truth, the repaired valve was in a better condition than a new valve from the original supplier.

The following shut in March 2010 the valve was re-installed at the same position where it came out of (FC-1433), and usually only lasts three months due to small control opening and high noise before it is completely scrapped.

At the same time we installed a new DN150 NAF valve in the same application FC-1434. In July 2010, I removed the two valves for inspection on a shut down. The overhauled valve had absolutely no damage at all where the new valve from the supplier had to be replaced due to severe damage.

The repair cost on the old valve came to one third of the price of a new valve, which I think could raise a huge saving.

I would recommend this product to the Engineering Dept. for all moving parts on pumps, valves, impellers and even volute casings.

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Second Report – April 2012 (by Werner Swanepoel)

During the PM4 shut on the 12th of April 2012 we did a routine inspection on the above mentioned valves as discussed in 'First Report' (FC-1433/4).

Our findings were as follows:

We replaced both valves as they have some wear damage on the body, seats and segments.

Although we changed the valves I am very happy with the outcome after 25 months of operation in the specific application. The Ziroflex Coating to me is a big success, not only on the life span but also on the savings with these two valves over the past two years.

Savings:

New Valve from supplier costs R29,500 each
Replacement on a three monthly basis = R59,000 every 3 months
Repair cost to these valves were = R15,800 in 2010
If we had to replace every three months: 8 x R59,000 = R472,000

Thus:

$R472,000 - R15,800 = R456,200$ over 24 months.

This to me is a huge saving on only two applications. Just imagine the saving on 300 loops! Where we normally replaced these valves on a three monthly basis we may now successfully do routine inspection on these valve maybe on a 12 monthly basis.

I am sure that the other MPACT sites will also gain great benefit and savings from this product, not only on valves applications, but with any other wearing equipment.

Third Report – April 2014 (by William du Plessis)

By the time I took over by Werner, all the above mentioned was already in place, I was fortunate to be involved in an exercise where we compared the prices of new valves to Stanfra Trading reconditioned valves and comparing the life span of both valves. The comparison was a no brainer and these reconditioned valves had become a standard applied to our department. All damaged valves are to be reconditioned by Stanfra Trading.

I have had other companies which promise and offer the same type of repairs but not come close to their work. Stanfra Trading has impressed us so that we have recommended it to our other MPACT sites so we can all benefit from it.

Other Examples of Zirolflex use on Piet Retief site:

- 1) Digester Sandtrap valve: The valve after repair is still class 4, the same as a new valve.

Stanfra did do some more critical valves like the sand trap valve where they manufactured a new ball and seats with pressure test certificate which is class 5 on metal to metal seating.

The repair cost on this valve from Stanfra was R185,000 against R460,000 for a new valve and R319,000 for the repairs to this valve from the original supplier.

- 2) Copeland Temperature Probes: We have applied the Zirolflex coating on the Copeland Reactor temperature probes which lasted about six months without the coating. After the Zirolflex application the probes lasts for more than one year (double the previous life span).
- 3) PM4 Wire and Fabric guide paddles: We applied the coating on these paddles in the beginning of 2011. Normally the fabrics cut through the paddle on a six to eight month cycle, depending on the application. We haven't replaced one paddle yet for wear since.
- 4) Valve Actuator Barrels: Stanfra Trading did repairs on damaged barrels with the Zirolflex coating. This repair and quality will be advised to any company at a fraction of the cost of a new barrel.
- 5) Knife and Through Gate valves: This is a new application that we are currently testing, and it seems the wear on the spade of the valve is well in hand. There is really a big difference over a certain time span so far on the waste plant applications. The repair on these valves also came in at about a third of the cost of a replacement valve.

Regards,

Johan de Waal
Senior Engineer Electrical & Instrumentation
Mpact Piet Retief Mill