



## 4B GROUP

### CONSOL GLASS

The plant was experiencing continuous belt breakages and subsequent downtime due to having to do the necessary repairs and maintenance on the elevator system.

### Challenge

The customer was making use of a 3 – 4mm thick fabricated steel bucket supported with a steel fixing plate fitted with M16 bolts weighing in at 18 – 20kg each. To secure the buckets to the belt. They were experiencing continuous belt breakages and subsequent downtime due to having to do the necessary repairs and maintenance on the elevator system. It was clear that the original machine manufacturer felt that a heavier and stronger bucket would be longer lasting for this application.

They were also using a normal rubber conveyor belt instead of an elevator belt in the application, resulting in the belt stretching under the weight of the buckets.



# Solution

After consultation with Shane Coburn at our 4B UK office and with his help we came up with a revised retrofit design on the elevator components.

The proposal suggests the following:

- Replacing the conveyor belt with an elevator belt; as well as
- Replacing the fabricated steel buckets with AD400 Nyrin buckets. The existing buckets on their system weighed in at 3.250 Tons whereas the Nyrin Buckets would only weigh 484Kg. Weighing 2.8 Tons lighter than their existing system was a big step towards resolving the breakages and subsequent delays in manufacturing.

# Results

Consol were very happy with the proposal especially in light of the fact that it would reduce breakages and delays as well as power savings.

The installation down time on the old steel manufactured buckets and belt took 3 days to remove and install. In comparison our Retrofit Design took 1 day to remove the old belt and buckets and install the new belt and Nyrin Buckets.

The calculated Power Saving 12 Amp on start-up no load on the new installation compared to 68 Amp start-up no load on the old installation.

- Improved belt life
- Reduction in downtime
- Reduction in planned maintenance
- Saving on electricity costs
- Health and safety compliance.

