

BABYLON PACKAGING

Babylon Trims Ltd., Kandi Boilarpur, Hemayetpur, Savar, Dhaka, Bangladesh.

INTRODUCTION



Babylon Trims Ltd are one part of Babylon Group, a company based in Bangladesh who are heavily involved with garment and fabric production and dyeing, washing and printing. The company currently employs over 11,500 employees and has a turnover of about \$127.00 million. Babylon supply a range of household names, including J C Penney, Tesco, Walmart, Sears, K-MART, New Look, H & M, ZARA and many more.

This particular arm produce packaging from paper and card. There was significant investment being made to modernise the factory, such as building a large underground water tank for fire suppression. As part of this investment process, they were looking to improve the operation of their 3 Ton steam boiler and reduce costs.



The water feeding the steam boiler was treated by both a softener and antiscalant. The softener required 400kgs of salt per month, costing 7,200 Bangladeshi Taka or around \$90, per month. The amount of antiscalant used was approximately 16.5kgs per month, costing 8000 Bangladeshi Taka or around \$100, per month.

Before installation of the Hydroflow, blowdown was required one time every hour, with a duration of 10 – 15 seconds. Cleaning the boiler took approximately 3 days.

Esprit de Corps, official distributors of Hydroflow for Bangladesh, installed a Hydroflow S45 unit in February 2017, on the boiler cold water inlet after the high pressure pump. The softener and the antiscalant treatment were both stopped.



RESULTS

After 1.5 Months, the boiler was opened and inspected.

Boiler tubes and shell



The boiler tubes were found to be completely clear of scale – cleaner than they had been immediately after cleaning, indicating that the unit had removed existing scale. The surfaces of the boiler shell were also clear of hard scale, with just a fine powdery deposit remaining. There was no need for the difficult descaling that previously took 3 days.

Before installation, blowdown was one time every hour for 10-15 seconds. After installation, blowdown was only needed one time every 4 hours, for 10-15 seconds.

T-Header

The T header, where the water from the inlet is sprayed onto the boiler tubes, was also inspected.



The T-Header was coated, inside and out, with a soft putty-like substance which can easily be wiped off by hand, as can be seen in the images above. This putty is composed of fine calcium carbonate crystals formed by the action of the Hydroflow unit. Also noticeable are several separate hard chunks of limescale which have become caught in the holes of the T-header. These chunks are pieces of old scale from the inlet and other parts of the piping system which the Hydroflow has caused to detach. These deposits are not bonded to the header and so are easy to remove by hand without chemicals. Once the system has been fully cleared of old scale, there will be no such deposits in the future.

Conclusion

The factory were more than happy with the results and the savings on antiscalant alone justifies the cost of the unit. They are considering installing additional units on their cooling tower and heat exchanger.

