

PRACTICAL CASE

Bed linen weaving with USTER® Fabric Inspection

Reducing quality claims, saving costs and impressing customers... can automated inspection do all this?



A weaver of bed linens produces 3 million meters of fabric per month for bed linens, in both linen and cotton varieties. The final product is bleached and dyed. Typically, the mill use a 4-point system to classify the final fabric – working to a quite high standard, accepting 8-10 points per 100 m of fabric. At the same time, the mill operates very strict control of fabric waste, restricting this to only 0.5 % of production. Faced with increasing competition, the weaver decided to optimize costs, as well as guarantee 100 % control of fabric quality.

USTER solution

The weaver was receiving sporadic claims of remaining defects in fabrics delivered to customers. The company was determined to improve the consistency of its fabric quality, so it opted to install an automatic fabric inspection system at the end of the finishing line. To achieve this, the company installed USTER® EVS FABRIQ SHADE and USTER® EVS FABRIQ VISION in tandem at the end of its finishing line.



Normally, the production capacity of 3 million meters per month would require the weaver to use 15 inspection tables and about 30 operatives to inspect fabrics manually, before cutting. With the new installation of in-tandem automatic fabric inspection, the company now needs only three inspectors to mend defects on assorted rolls – 27 fewer personnel than previously. Calculations based on local cost factors showed this is saving the weaving company about USD 50 000 per year.

In addition, this will further reduce future costs for staff hiring and training. Employment in the textile industry – especially in production processes – is seen as becoming increasingly unattractive in the labor market, severely limiting the pool of appropriate candidates. Reducing the number of operators required will ease the recruitment headache for the weaving company.

An extra benefit, thanks to the USTER® *EVS FABRIQ SHADE*, is that the weaver can now separate those bleached fabric rolls showing 'yellowing' through longer exposure in the finishing department.

Previously, this weaving plant had around 0.5 % of production classed as second quality. Now, with advance quality information about remaining defects, the mill is able to classify the fabric rolls into two different qualities. This approach has increased the proportion of first quality fabric, achieving better prices for this and normal prices for the other quality. The combination of automatic inspection and automatic optimization of the cutting design has resulted in a reduction of total waste to between 0.1 % and 0.2 %. The price difference between first and second qualities of USD 2.5 per meter has produced an overall gain of around USD 90 000 per year.

The financial saving is not the only important benefit of introducing automatic inspection, however. Now, the weaver's customers also gain, knowing there is 100 % inspection of each fabric roll – to exactly the same standard of quality and reliability, which is difficult to achieve with human-only inspection.

The ultimate reward for the weaving company is enhancement of its brand reputation and market standing – the foundation for increased future business opportunities.



Conclusion and Summary

- Overall, the introduction of an automatic inspection system provided the weaver with direct financial savings of about USD 140 000 per year, as well as additional savings in the hidden costs of hiring and training.
- Now, for the first time, this weaver has full control of the product being sent to its customers, which reduces number of unexpected claims and related costs.
- Installing USTER® *EVS FABRIQ SHADE* and USTER® *EVS FABRIQ VISION* has given the weaver real financial benefits, as well as maintaining and improving his reputation with customers through maximized reliability and consistent product quality.

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