

## Ink-jet printed codes on carton? cameras from Datalogic read them all!

“The success of the new BAT Productivity Program depends on the good printing and reading of the barcode”

In the centre of Groningen (North of Holland) you will find Tobacco Factory BAT Niemeyer, set up by Mr. Theodorus Niemeyer in 1848. Over the years, the company has been developed into the Multinational it is present. Royal Theodorus

Niemeyer has been acquired in 1999 by British American Tobacco (BAT) and present is called BAT Niemeyer. From all over the world BAT Niemeyer receives tobacco leaves in bulk. These will be specially treated, cut, dried and packed in cans or bundles. These cans and bundles will eventually be packed into different kind of transportation packages. At the moment the variety of pre-printed transport cartons is 150 types.

The BAT Head Quarters decided to replace the currently used pre-printed transport cartons by the ‘Non Branded Master Cases’, these are blank boxes. Finally there will be 15 – 20 different box sizes to be used. Of course the financial benefit is the initial reason for this change. Also handling the different brands is easier to realize because of this standardization. The content of the blank boxes needs to be identified right after they leave the case packers. This identification will be done by reading an Ink-Jet printed 1D barcode on the box. This is not as easy as it seems. Guiding of boxes within the case packers is difficult (because of the large variety in size). As they will not pass the printer at the same distance, the quantity of ink varies per box. Next to this, printing ink on carton will result in a typical characteristic, called ‘bleeding’™, so the codes will not get the good sharp lines, but blotchy stripes as result. Absorbing of ink results in a low contrast code (grey on brown). Print heads gets polluted because of the dusty environment, which has a negative result on the quality of the code to be printed. When the box leaves the machine line, this code is the only identification of the box. So everything depends on the good reading of this code.

After extensive tests the conclusion was that scanners, based on laser technology, will not give the best results. The new camera from Datalogic, the Matrix 400, came out to be the best solution for this application. Datalogic made a test installation in cooperation with their Quality Partner DL Tech at BAT Niemeyer. Mr. Feike Schootstra (Project Manager at BAT Niemeyer) admits he was sceptical about the test; the ‘different solutions’, which have been presented by other scanner suppliers until then, had no satisfying / good result. The test results with the Matrix 400 from Datalogic gave him

however the `eureka-feelingâ™ he hoped for. BAT Niemeyer bought four cameras to do more tests on several sorting points (3 pieces on the case packers and 1 piece on the line âœfinished productâ ). âœThis gave us an excellent resultâ thus Feike Schootstra. BAT Niemeyer decided for all scan points to proceed with the Matrix 400â„¢. This meant a replacement of approximately 25 scanners. Since then a lot has changed in the sorting process at BAT Niemeyer. âœEverything is read, 100%, every time I walk into the production I see the Green Spotâ„¢ lighten up; this gives a very good feelingâ . The Matrix 400â„¢ gives also a visual feedback of a good reading through a green spot, which is projected on the barcode. âœAlso in a noisy environment one can easily see if the code is read correctlyâ .

Also the employees of the controls department are very impressed; they call the âœMatrix 400â„¢ a very reliable component within the production line. Because the reading results of the Matrix 400™ are excellent, sometimes difficult to maintain the routine of cleaning the print heads. The camera reads everything in spite of dirty print heads, which can not print an optimal codeâ as Feike Schootstra tells. Also when the cartridges become empty, which results in a low contrast code, the Matrix 400™ continues to read longer. Less downtime is the consequenceâ . âœEverything depends on the good reading of the barcode .