

▶ Real Time Product Measurement and Recording

Advanced Image Analysis to Accurately Measure and Record Product for
Fisher SA by I-Cube

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ABSTRACT: It is possible to accurately, in real time, measure and record product width, height, thickness, length and other parameters. Where these measurements are outside SPEC, an alarm can be generated allowing this product to be identified and preventative steps to be taken.

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INTRODUCTION

Advanced image analysis can be used to accurately measure and size product width, thickness, length and other required parameters. This is proposed to occur in real time, allowing immediate reaction and prevention of out of spec products being produced.



Figure 1 Proposed area width measurements

Image analysis uses colour, shape, intensity, size or texture to identify the product to be measured, regardless how this moves within the measurement window.

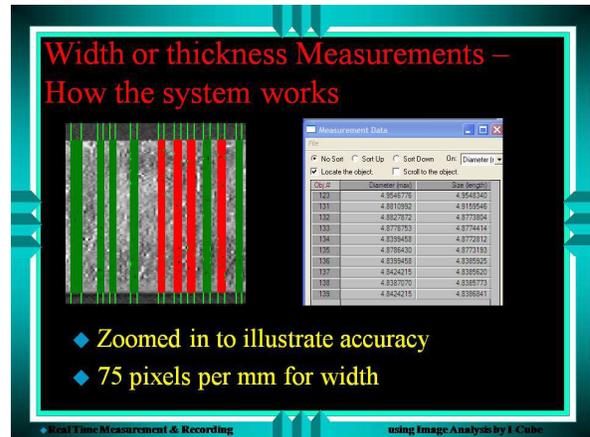


Figure 2 Recorded measurements are available for review

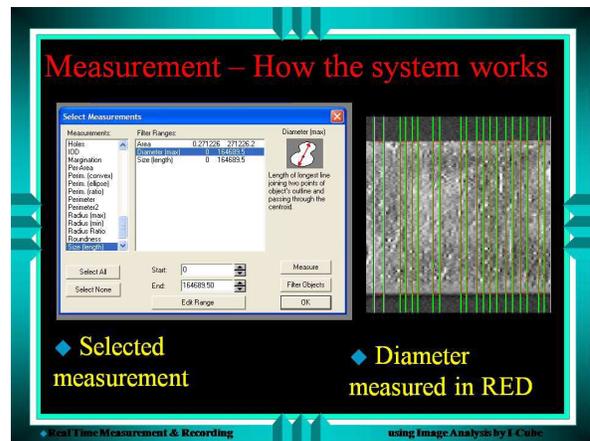


Figure 3 Wide ranges of measurements could be counted (over 40)

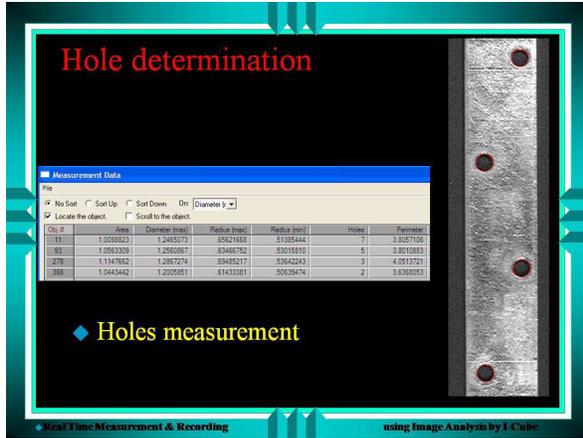


Figure 4 Area, diameter, radius, perimeter are some of the measurements possible.



Figure 5 Uniform lighting and a defined background the object to be measured clearly stands out.

The link between the image analysis data and the existing counts is crucial.

It is possible to link the counts obtained to be the image which was used for the count.



Figure 6 Object from which measurement was determined

Possibly the use of proactive measurement will reduce the number of rejects produced.

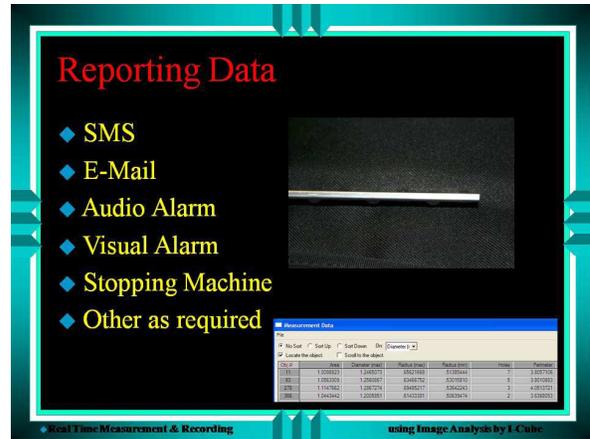


Figure 7 Link between the measurement and a report or action

It is crucial that the data from the real time measurement be linked to a database, allowing review of where problem products came from, when these are identified by customers.

WAY FORWARD

Output the data to an existing database or input existing counts to a new database, allowing comparisons to occur.

Two possible options exist to take this project forward:

Alarm as per current or future requirements

CONSULTING

Please indicate which option would be better for your current requirements.

PURCHASE OF SOLUTION

CONSULTING

I-Cube

At a daily rate of R7 500 I-Cube works on this project until a suitable solution is found. All IP created remains the property of the client. Once a clearly defined project is agreed to this can be better defined, however at present it is suggested about 25 days would be required to complete this project.

PURCHASE OF SOLUTION (SOFTWARE & HARDWARE)

The required hardware will consist of:

Camera & lens

Frame Grabber

PC

Lighting

The required software will:

Capture the image

Determine the required measurements