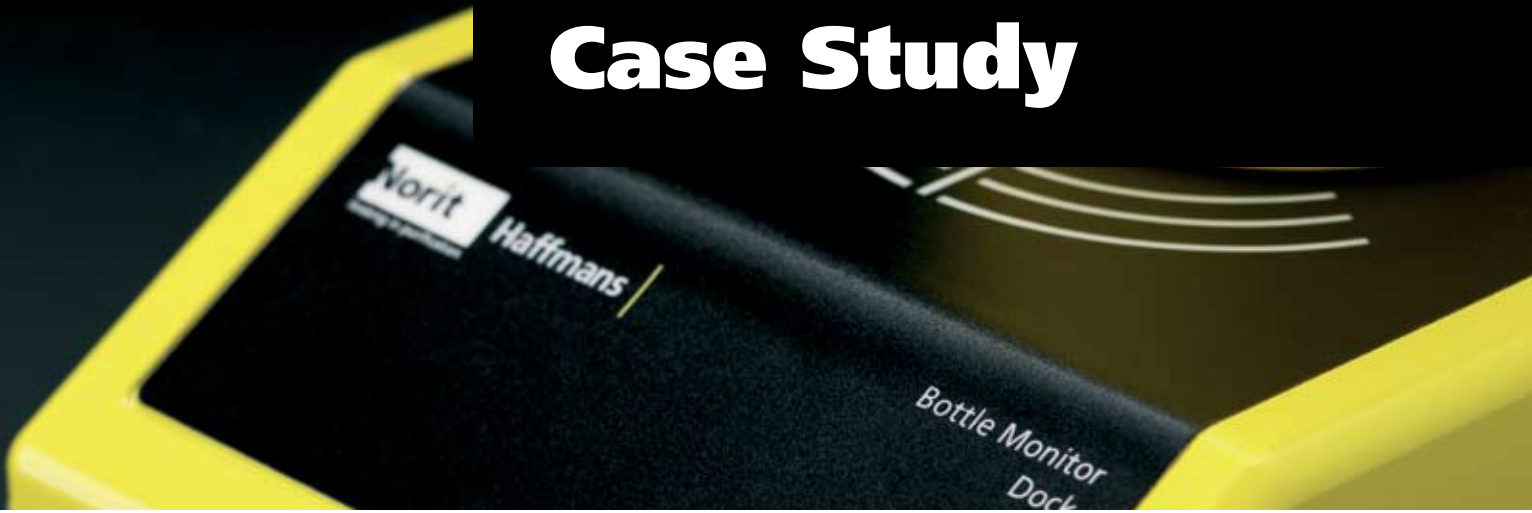


Case Study



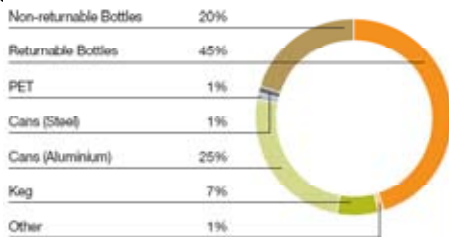
SAB Miller, South Africa - Standardizes on Bottle Monitor

Introduction

Founded in 1895 The South African Breweries Ltd. (SAB) is a subsidiary of SABMiller plc, one of the largest brewers in the world. SAB plc acquired the Miller Brewing Company from the States in 2002 and SABMiller was formed.

SAB operates seven breweries in South Africa with the brand portfolio of ten beers and three flavoured alcohol drinks (FADs). The annual brewing capacity is 31 million hectoliters. 45 percent of the produced lager volume is packaged in returnable bottles. SAB had identified the returnable bottle washing process and a key area to ensure a good product quality and customer satisfaction. SAB also recognized that preventing problems around the bottle washing process was a key area for the company and the

Group lager volumes by packaging type



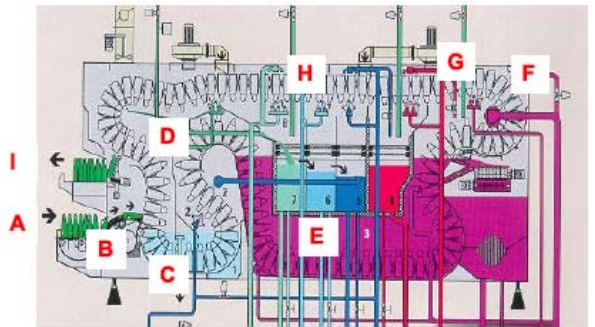
At the brewery in Cape Town SAB took the opportunity to look for new, state-of-the-art technology to monitor and control the bottle washing process and found the answer at Norit Haffmans in the yellow Bottle Monitor (BTM).

BTM and Bottle Washing Process

BTM is a customized bottle, equipped with a temperature-conductivity sensor and electronics to check the bottle washing process. The BTM is programmed with the process

parameters expected to be present in the washer. Once programmed, it is put into the washer and travels through the washer, taking records of the process data and comparing them with the pre-programmed parameters.

This intelligent system can already at the exit of the washer give an indication if the washing process is running according to the program or if something is wrong. Via a wireless communication with a computer the operator can



Trial and Approval of BTM at SABMiller Brewery in South Africa

When SAB management realized the benefit the BTM could bring to their business the decision to trial it didn't take long and the Cape Town brewery in Newlands was selected for this project. After introduction of the technology and product, Norit Haffmans has provided training to the operators and a continuous assistance in the evaluation of the trial results. Technically, SAB was supported by Norit Haffmans local service center; the company EUREKA Scientific c.c.

Bottle Monitor

Case Study



Through the BTM usage SAB realized that:

- There is a good correlation between BTM and their classic methods,
- BTM gives real time picture while classic methods report on a single point sample,
- BTM is more accurate than the classic methods,
- Beside visualizing the kind of problem, they can localize it within the process,
- BTM can assist the brewery to prevent problems and optimize the bottle washing process.

The positive results, the direct benefit from the BTM and presence of a highly professional service center in South Africa have convinced SAB management to approve the BTM as a standard equipment to be in each and every brewery to monitor the bottle washing process.

Product Information

Applications

- Monitor the temperature and conductivity in a bottle washing process

Technical Data

Measuring range

- Temperature : 0 – 85°C
- Conductivity : 0 -30 mS/cm (compensated for 20°C or 25°C)

Accuracy

- Temperature : +/- 0.5 °C
- Conductivity : +/- 0.5mS/cm + 2%MV
- Record interval : 1 sec.
- Storage capacity : 1 recording of max. 90 min.
- Battery : Lithium 3.6V
- Standard bottles : NRW 0.5l / EUR 0.5l / 0.33 longneck
- PC Connection : RS-232 via a dock station
- Bottle Weight : 600 g



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Please visit our website to obtain information about your local support.

Haffmans BV reserves the right to make changes in the technical specifications at any time.

Bottle Monitor