

NAPCON ANALYTICS

PROVIDES VALIDATED

PRODUCT PROPERTY

ONLINE MEASUREMENTS

BLBOC, a joint venture between Bahrain Petroleum Company (Bapco) and Neste Oyj, Finland has erected a Lube Base Oil plant in Bahrain, which came on-stream in October 2011. The production of Group III base oils is very demanding because multiple product qualities must simultaneously be kept within specification limits. This dictates the use of online near infrared (NIR) process analyzers. In the BLBOC plant two NIR analyzers where installed.

Neste Engineering Solutions performed the chemometrical modeling of totally 44 product property models.

The key issue with NIR online analyzers, once they are calibrated, is to continuously validate the models by comparing the product property information provided by the analyzers with properties measured in the laboratory. At BLBOC, the long-term validation of the measurement results is automatically performed by NAPCON Analyst software, which is connected to the Laboratory Information Management System (LIMS). Validation reports are emailed to specified members of personnel according to a user defined schedule utilizing client's mail server.

The validated product quality readings representing valuable real-time process data can be further utilized in MPC (model predictive control), which closes the control loops and can really boost the operational excellence of the plant.

CLIENT

Bahrain Lube Base Oil Company (BLBOC), Bahrain

NESTE ENGINEERING SOLUTIONS DELIVERED THE FOLLOWING PRODUCTS AND SERVICES TO BAHRAIN LUBE BASE OIL COMPANY:

- NAPCON Analytics Chemometrical modeling services
- NAPCON Analytics Consulting on Analyzer equipment, Analytics shelter and Sampling system
- NAPCON Analytics QA/QC software and database
- Client training

BENEFITS FOR BLBOC:

- Well-functioning online product properties measurements for several product grades
- Automated measurement validation using laboratory test results as reference

NAPCON DELIVERY PROJECT HIGHLIGHTS:

- Fast start of the calibration project, initial property models ready for use 3 months after plant start-up
- Long-term commitment from Neste Engineering Solutions and BLBOC to expand the applicability of the calibration models for different product grades
- Secure remote connection to NAPCON Analytics software for efficient calibration data collection and software maintenance