

Detailed engineering for NKF sugar refinery, Iran



For the Iranian market and for markets in neighbouring countries, the Iranian company AFRA HOLDING is building the new Khaleej Fars Sugar Refinery (NKF) near the Iranian port of Bandar Imam (see the detailed report about this project in BMA Information No. 46/2008). The basic engineering for this sugar refinery was developed by BMA in close co-operation with the NKF project management. It was completed at the end of 2007.

The detailed engineering phase for the NKF refinery is now also already nearing completion. The engineering services provided by BMA range from raw sugar refining and sugar melting to liquor concentration, crystallisation and centrifugation, to sugar drying and cooling. These are the process steps that are technologically relevant for sugar production. Other plant sections, such as liquor clarification and liquor decolouration, are catered for by integrating the planning services provided

by the equipment suppliers for these sections into the BMA documentation.

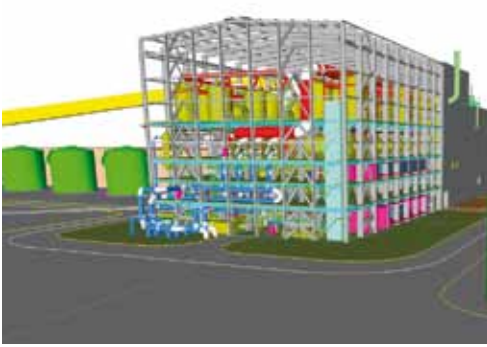
The following documents were prepared by BMA:

- Piping and instrumentation diagrams (PIDs) with lists and specifications for the required equipment, pipelines and fittings
- Dimension sheets for use in the preliminary layouts
- Specifications for instrumentation and electrical installations
- Process description

Additional detailed engineering services have been assigned by the customer to other German engineering consultants with extensive experience in the sugar industry. ARPO and APROKON have been put in charge of structural analyses and steel structure and piping layout, while cable manage-

*Final inspection of
the boiler plant for
the NKF sugar refinery*





*3-D model of
the sugar refinery*



*First steps on
the construction site*

ment and the detailed engineering services for the process control system are the responsibility of CEGELEC. At a higher coordination level, project meetings are regularly held with all project partners to discuss the status of the project and to effectively coordinate all necessary action.

There can be no doubt that the most advanced drawing tools are used to prepare a project documentation of this kind. The programs for the PIDs are database supported programs which are not only used for the graphical representation of the PIDs, but also link and completely manage equipment, pipeline and fitting data. These integrated CAE systems relieve planners from most of their standard decision-making processes and plausibility checks, and thus guarantee workflow efficiency at a high quality standard. Users can then concentrate on implementing the concepts that were defined during the basic engineering phase.

BMA's own engineering services and the services of other specialists add up to an overall concept for the NKF sugar refinery, which will be one of the most modern sugar refineries in the Middle East.

Dr. Andreas Lehnberger

Benefits

- Integrated CAE systems guarantee efficiency when preparing high-quality planning documents
- Transparent communication of the planning status during the entire project period
- Effective coordination of activities by BMA with other companies