

# Cementing multi-level success

**by Cimenterie Nationale,  
Lebanon**

*Leading Lebanese manufacturer Cimenterie Nationale thrives in a competitive sector, while striving to be a model employer and a responsible corporate citizen, who looks beyond the bottom line. Recent upgrades and expansion have turned the company into the country's largest cement producer.*

Previously a small local player, Lebanon's Cimenterie Nationale is committed to meeting the needs of a regional market that appears to be weathering the global crisis.

"Despite Lebanon's political challenges, the increase in oil prices had a positive impact on both the regional and Lebanese economies," explains Adib El Hachem, Cimenterie Nationale's marketing and sales director. "In fact, this increase has led to an overall GDP growth in the MENA countries, where there is rapid urbanisation and huge infrastructure needs that have translated into a significant increase in demand for cement. This demand has grown from 147Mt in 2000 to 285Mt in 2008 and is expected to hit 304Mt by 2010."

## Strategic location

The 56-year-old cement company – it was founded in 1953 by the Doumet and Asseily families – now produces 2.8Mt of cement per year. Because of its strategic location, high-quality product, and reputation in the regional markets, Cimenterie Nationale has made cement one of the most important Lebanese exports. In addition to supplying the needs of Lebanon's own construction boom, it is by far the biggest Lebanese exporter of cement to Syria and Western Iraq.

"Cimenterie Nationale "SABAA" (Lion) brand is a leader in these markets," says El Hachem. "We have contributed to building a positive reputation for Lebanon's industry beyond its borders." The company's Chekka headquarters are only 60km from Beirut, 300km from Damascus and Aleppo and 900km from Bagdad. It has the port of Chekka literally on its doorstep, putting it within striking distance from key Mediterranean markets and giving it an ability to compete with Turkish and Egyptian products.

Rapid urbanisation and huge infrastructure needs have kept Cimenterie Nationale's plant fully occupied, producing 2.8Mta of cement



**vdz.**  
Verein Deutscher Zementwerke

## Testimony

Attention: Pierre J. Doumet, Chairman and CEO, Cimenterie Nationale S.A.L.

Dear Mr Doumet,

The German Cement Works Association (Verein Deutscher Zementwerke - VDZ) is the technical and scientific association of the German cement industry. Quality surveillance and assurance of cement constitute one of our traditional core competences. FIZ-Zert is the certification body for Environmental and Quality Management Systems and CO<sub>2</sub> emissions.

Pursuant to our history of mutual cooperation, we would like to express our sincere tribute for the close collaboration with your team during many years.

Cimenterie Nationale S.A.L. has been a very active member of VDZ since 01.01.1998 and continues to be the only VDZ member from the Middle East and North Africa. We have started our long tradition of cooperation in March 1982 by testing cement properties of Portland cements produced by Cimenterie Nationale in Chekka plant.

Since March 2001 we have carried out the inspection of the factory production control according to EN 197-2 with yearly audits.

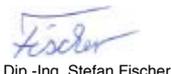
The laboratory of Cimenterie Nationale implemented a Quality Management System which was certified according to EN ISO 9001 by FIZ-Zert in July 2001. Two years later the certification process successfully continued according to EN ISO 9001:2000 for Cimenterie Nationale. In January 2005 a new Environmental Management System of Cimenterie Nationale was certified by FIZ-Zert according to EN ISO 14001:1996 and later EN ISO 14001:2005.

Cimenterie Nationale improved the quality of OH&S and recognized the importance of a reliable safety infrastructure and, most of all the necessary mentality. In 2008 Cimenterie Nationale started the development and the integration of the Occupational Health & Safety System according to OHSAS 18001 in a TQM-system. The certification of the Integrated Management System will be finished in 2010.

We thank you for the long lasting successful cooperation.

Forschungsinstitut der Zementindustrie GmbH  
Quality assurance and analysis department

  
ppa. Dr Silvan Baetzner

  
i. A. Dip.-Ing. Stefan Fischer

"These are key business differentiators that Cimenterie Nationale can rely on," remarks El Hachem.

### Staff is key to success

On both national and regional levels, the company continues to expand. Between 2006 and 2008, more than US\$110m was invested by Cimenterie Nationale making it Lebanon's largest cement manufacturer. It is one of Lebanon's main employers, with 550 talented, full-time staff. CN provides opportunities for indirect employment to around 1000 people in functions like transportation, cleaning, maintenance, new construction projects, etc.

The company continually strives to produce high quality product and to provide best services to its stakeholders, a policy that resulted in Cimenterie Nationale being awarded the ISO certification for Quality Management Systems in 2003.

But for Cimenterie Nationale, its most valuable asset is its employees. It provides them with the most up-to-date professional training, and never compromises in its bid to recruit the most motivated and qualified people to the company.

### Beyond the bottom line

Throughout its 56 years, this company has sought to preserve high standards of ethics and integrity in business and in the community. Abiding by the highest environmental standards, as well as OHS guidelines ensures that the tightest standards are applied across the board to guarantee a safe and pleasant working environment for its workers.

In fact, the health and safety of its employees in the workplace is a top priority. As such, the company has developed a series of measures that are in line with the highest safety standards, including the issuing of the latest protective equipment and provision of ongoing safety awareness training sessions. This is one more step towards the company's goal of having a "zero-accident" working environment.

As part of its commitment to corporate social responsibility (CSR), Cimenterie Nationale was instrumental in the restoration of many local schools and hosts an annual summer camp offering education, art and entertainment activities

## Finalised projects



### 1. Extension of Kiln No 4: Increase production from 2000tpd to 3800tpd

- Installing a second pre-heater string B with capacity 2000tpd
- Installing two tertiary air ducts to reduce the kiln thermal load
- Installing two combustion chambers to improve the pre-heater efficiency
- Installing additional new coal mill with production capacity of 16tph
- Upgrade the raw mill production capacity from 175tph to 320tph by installing a new impact hammer crusher before the raw mill inlet feeding
- Enlarge the dimensions of the cooler from 60m<sup>2</sup> to 75m<sup>2</sup>
- Installing a new main bag filter having a capacity of 425,000m<sup>3</sup>/h
- Installing a new electro static precipitator filter for cooler waste air having a capacity of 250,000m<sup>3</sup>/h
- Improving the control system in the control room by installing the latest Siemens version of CEMAT V6 (PCS7 version 6.1 with servo pack SP3).

### 2. New cement mill and new cement silos

- Based on the environmental impact analysis conducted for ISO 14001 certification, it was decided to minimise the stock of clinker stored in open areas. Therefore, an urgent environmental project was launched to increase the milling capacity of the plant and to build an additional environmentally-controlled buffer zone of 40,000t for cement storage
- A new cement mill of 4500tpd capacity has been installed
- Four cement silos have been built with a storage capacity of 10,000t each.

### 3. Expansion of Cimenterie Nationale's Diesel Power generation plant

- Installing two new 11.3MW "Wartsila" gensets, increasing the total self-generated power to 46MW
- Installation of sea water cooling station equipped with VFD motors, keeping the old brackish/wells system on standby
- Cimenterie Nationale is the largest producer of electricity in Lebanon other than the national EDL (Electricité Du Liban)
- Cimenterie Nationale is currently the largest consumer of electricity in Lebanon.

### 4. Roto packer IV and CARICAMAT

- Installing three automatic truck loading machines (CARICAMAT).
- Installing new Roto packer IV with automatic bags placer (RADIMAT).

### 5. Reclaimer and belt conveyors/ Stacker modifications

- Stacker modifications and installing of the latest technology reclaimer with rated capacity of 1000 tph and increase the throughput of transport belt conveyors to meet the required raw material quantity for both raw grinding plants and the upgrade of kiln No 4.

### 6. Increase capacity of the Petcoke transport belt from port to storage area

- Equipment suppliers include: Claudius Peters, Djuro Djakovik Montaza, Gerschbach, KHD, Polysius, Siemens, Thyssenkrupp.

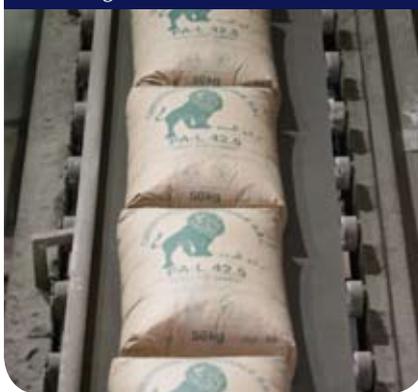


Highly-trained staff are fundamental to the company's success

Cimenterie Nationale has invested in upgrading its equipment across the plant



The lion brand is depicted on company cement bags



Serving the local community



to the children of the Chekka and Anfeh areas. Cimenterie Nationale also sponsors local organisations and events, such as the Chekka Fisherman's Association and the Chekka Summer Festival as well as supporting many local sports teams. On a national level, the company has sponsored Lebanon's Silk Museum, the Osseirane Foundation for delinquent teenagers, and "L' Ecocitoyen Libanais", a project undertaken by the T.E.R.R.E Liban Association, which seeks to raise environmental awareness nationally.

Bringing back Lebanon's dwindling sea turtle population to Chekka and other North Lebanese shores is another promising project launched in 2006 together with a leading University.

Of equal importance is the company's commitment to environment friendliness, putting the well-being of the community and its natural surroundings above all other considerations. It has made it a

priority to invest in eco-friendly facilities; a move that saw the company awarded the ISO 14001 Environment Certification in 2005.

Elsewhere, Cimenterie Nationale has also contributed to reforestation initiatives in north Lebanon, where over the past century, Lebanon's natural cedar and pine forests have been reduced to a fraction of their size due to overdevelopment and poor environmental management.

### Community partner

Cimenterie Nationale sees itself as more than just another national enterprise.

"We are partners with our community," explains El Hachem.

"This defines who we are and how we do business. It drives us to continuously uphold our standards of transparency, open dialogue and commitment to the well-being of our society."

The company continually aims to produce high-quality product



## Ongoing and future projects

### 1. Optimisation of raw grinding plant No 1

### 2. CDM (Clean Development Mechanism) project

- Modernisation of Kiln No 3 burner and Waste Heat Recovery from Cooler No 3
- The aim of the project is to reduce CO<sub>2</sub> emission throughout the modernisation of the kiln No 3 burner and the waste heat recovery from cooler No 3 to coal mill No 4

- This project has been developed in cooperation with CN and the international suppliers: Polysius and Pfister. Both projects are a combination of the following modifications:

- Replacing Kiln No 3 main burner with a state-of-the-art new burner.

This decreases petcoke consumption significantly; consequently, there is a reduction of CO<sub>2</sub> emissions

- Feeding kiln No 3 with petcoke from coal mill No 4 (vertical mill), instead of coal mill No 3 (ball mill). This means the stopping of coal mill No 3, which will lead to saving in electrical energy consumption and consequently, less CO<sub>2</sub> emissions

- Waste heat recovery from cooler No 3 to coal mill No 4: meaning saving of fossil fuel oil consumption of a hot gas generator; which also leads to the decrease of CO<sub>2</sub> emissions.

### 3. New façade design (face lifting and overall appearance)

### 4. Roads repair at the plant, port and quarry

### 5. New chimney

### 6. Optimisation of existing grinding plant from cement mills Nos 5, 8 and 9.

### 7. Circular petcoke storage

- Circular stockpiling and reclaiming system for petcoke storage and discharging
- Closed tube belts conveyors from wharf to circular stacker
- Eco hoppers preventing dust emissions during vessels discharge.