

O' mag

[O] THE NTN-SNR GROUP PARTNERS' MAGAZINE

N°5



walking
on fertile
ground

NTN  *With you*

03 MARKET
IN THE SPOT LIGHT
A TO Z OF THE RAIL
SECTOR

06 PARTNERSHIPS -
SCALA & NTN-SNR:
A PARTNERSHIP
BASED ON TRUST

08 DESTINATION
MOROCCO
A LAND OF PROMISE
AND OPPORTUNITIES



editorial



06



08



10

Our industrial strategy is already bearing fruit!

The NTN-SNR group has placed experienced industrial professionals at the heart of its development strategy with the aim of providing new and relevant solutions for several target markets, such as the rail, wind energy, machines tools and construction.

Putting ourselves "in the position" of our customers

We have appointed a new head for each target market. These leaders work with operational teams (sales, R&D...) and are responsible for finding answers to fundamental questions such as "what keeps our customers awake at night", and creating and developing an innovative, customised, and competitive range of solutions for these customers.

Real results? Lubrication has been considered in a new light by our "Experts & Tools" department. Just check out the new training sessions, which are popular with our customers because of their effectiveness and user-friendly approach.

Investing energies

This new approach has been met with enthusiastic approval by all concerned - from top management to sales teams, not forgetting the Business Units and R&D, the foundation stone of our historic success.

Results: a strategy understood and applied by all, encouraging investment decisions. In order to provide new and innovative products we have invested more than 13 million euros in new manufacturing lines.

Ensuring our customers understand our approach

This structured approach incorporates clear communication with our customers and "hits the spot". Our strategy of targeting industry has already born fruit, for example, in the rail sector. This O'mag edition dedicates several articles to this market and we particularly recommend you take a closer look at the strategic partnership agreement recently concluded with Alstom.

The train has started and we are ready to provide a few surprises for you along the way! Come and share in our new initiatives, visit us at Innotrans at the end of September, the must-see rail fair, and at Husum Windenergy, the wind turbine fair, just to mention a couple of forthcoming events.

Yohan Souteyrand
BU Industry OEM Manager NTN-SNR ROULEMENTS

Magazine SNR Roulements
RCS Anancy B 325 821 072
Editorial board: C. Donat
Design/production: Service publicité NTN-SNR
Staff reporter: J. Traverse

Contributors to this issue:
F. Travostino, D.Parayre, Y.Souteyrand, D. Sépulchre de Conde, A.Benvenuti, A.Rocher, J.B. Sandrini, R. Dannoun, M. Chadid, P.Deprez, E.Ould Sidi Cheikh, M.Marchand.

Photos: NTN-SNR - P. Flouriot - Pedro Studio
Photo - NTV - Shutterstock.
Legal deposit: N° ISSN 1961-425X
Any reproduction in full or in part of this magazine is subject to our express authorization
Printed in France - July 2010

03 | MARKET IN THE SPOT LIGHT
A TO Z OF THE RAIL SECTOR

06 | PARTNERSHIPS
SCALA & NTN-SNR: A PARTNERSHIP BASED ON TRUST

08 | DESTINATION
MOROCCO, A LAND OF PROMISE AND OPPORTUNITIES

10 | DOCUMENTARY
FOCUS ON THE MINES IN MAURITANIA

contents

With You

July 2010

SNR Roulements has changed to NTN-SNR ROULEMENTS: a new name and a shared future.



Didier SEPULCHRE DE CONDE



RAIL SECTOR: an international market with consistent growth.



Francis TRAVOSTINO

The rail sector is characterised by significant long-term investment involving many participants. This provides easier forecasting than many other fields of activity and simplifies the prediction

process. For more information, we spoke to an expert: Francis Travostino, Railway Market Manager NTN-SNR Europe.

A MULTI-FACETED WORLD WITH CLEAR DISTINCTIONS.

The term "Rail", explained F. Travostino, in reality covers a wide range of applications including urban transport, trams and metro systems, freight and cargo transport, locomotives, interurban and national lines, high-speed trains...

One distinct feature of this market is the timescales. This sector works to much longer time cycles than many other branches of industry. Development of new machines takes several years; anything from 5 to 7 years is quite common. Operating and maintenance periods can cover decades and the useful life of any product may be as long as thirty years, or more. One further distinct feature of the rail sector; it is entirely governed by strict Authorisations and Standards. Meeting these requirements requires long-term commitment and vision. These factors explain the low number of major participants at the international level. The rail sector was little affected by the recent economic crisis with growth globally, while not spectacular, continuing to be consistent and regular. The two main areas of growth are in the original equipment markets in the emerging countries and the replacement markets in developed countries.

NTN-SNR: GENERAL BEARING MANUFACTURER...

"Let us take a quick close-up, continued F.Travostino, the bearing market in Europe is estimated at 180 million euros. NTN-SNR is present, in both the original equipment and replacement markets, for all types of trains, and for all applications: for traction motors, transmissions and axle boxes.

... SPECIALIST IN HIGH SPEED TRAINS.

"Well before the merger", continued F.Travostino, "NTN and SNR participated in the high-speed train adventure in their respective national territories. From the start, some 30 years ago, SNR committed to this sector alongside Alstom, and has been present on all successive versions of High Speed trains. We are particularly proud of being the supplier of the axle bearings used on the world rail speed record held by TGV and using the same production bearings as fitted to the standard TGV. NTN-SNR is the most experienced manufacturer of bearings in the high-speed train sector. This sector is expected to face extensive development. In large countries such as China or the USA, rail offers a valid alternative to air transport, with clear environmental benefits. Many large scale projects are planned for France, as well as Italy, the USA, South America, China and Saudi Arabia. This network expansion is combined with substantial technological progress, indeed while the "cruising speed" of the TGV is currently still around 300 km/h, it is expected to increase to 400 km/h in the future. NTN-SNR, the specialist in bearings for high-speed trains, has a significant advantage in another promising future project; the AGV, a new generation of train using an innovative technology distributing drive to all carriages... To be continued."



125 In 2008, the world rail sector represented 125 billion euros. Europe alone represents 35% of the sector, with 10% in Japan. Specialists all predict strong growth for the rail industry in China.

144 Most experts estimate the value of the international rail sector will increase to approximately 144 billion euros by 2013, i.e. an annual growth of around 3%.





ALSTOM & NTN-SNR: A STRATEGIC PARTNERSHIP.



In July 2009, Alstom and NTN-SNR signed a strategic partnership agreement known as LP 150. What was the aim of this agreement? What developments can be expected? To better understand the terms of this mutual commitment, we spoke openly with Didier Parayre, Commodity Manager Transport for Alstom...

O'MAG: Alstom, a major player in the rail sector?

D.PARAYRE: Alstom employs 80,000 individuals throughout the world and has global sales of 15 billion euros, with around one third (5.7 billion euros) in the rail sector. With a 14% international market share, we are positioned as a multi-specialist primarily targeting 5 main areas of activity: rolling stock, transport flow information and management systems, infrastructures, maintenance and turnkey solutions.

O'MAG: What are your strong points?

D.PARAYRE: We are world No 1 in the high-speed sector and world No 2 for urban transport: metros, trams, etc.

Our aim? We aim to develop and offer innovative technologies: ground electrical supply systems, trans-national interoperability systems, computerised flow control, new generation of very high speed trains...

O'MAG: You have created a strategic partnership system to complete these technological developments?

D.PARAYRE: The LP 150 Strategic Partnership Agreement involves our 150 leading suppliers in all fields. These suppliers invest their resources in co-development and R&D in exchange for earlier and greater participation in all our projects. In July of 2009 we signed a partnership agreement with NTN-SNR. One of the primary aims of this agreement is the development of an axle bearing with an integrated sensor, a Mechatronics application for which SNR holds world-class expertise. Other issues under consideration: an axle bearing for very high speeds, over 350 km/h, which is currently

the maximum operating speed, electrically insulated motor bearings and various other products.

O'MAG: Can you describe tomorrow's markets?

D.PARAYRE: Up to now, the rail market has been fragmented and protected but it is starting to open up. Growth is constant and is expected to be around 3 to 4% each year for the next 15 years, however, more and more competition is present in the sector, with the leading manufacturers, like ourselves, increasingly coming head to head with the giant Chinese corporations and the highly reactive smaller niche suppliers. Prices are falling under this double-sided pressure. Tram and metro system prices have fallen by 30% since 2004. To counter the challenge from the competitors and continue to satisfy customer demands, Alstom offers two distinct type of products. On the one hand, our international presence enables us to offer a competitive standard product range, mainly focused on a "price to quality" ratio, and on the other hand, we offer "Premium" products for the more demanding applications making full use of our technical expertise, with a strong contribution from our R&D. In this second area the new AGV is proving to be extremely successful in export markets, a contract has already been signed with Italy and negotiations are underway in the USA. As a Strategic Partner, NTN-SNR is fully involved in this project, designing and developing some specific transmission bearings along with a new axle bearing incorporating instrumentation. "



AGV Model for NTV

ALSTOM

ALSTOM IN FIGURES

- Alstom is one of the world leaders in the production of electricity, transmission and rail transport infrastructures.
- Present in more than 70 countries
- Turnover for 2009: 15 billion euros
- Number of employees: 80,000

Rail department:

- 26,000 dedicated personnel
 - Present in more than 60 countries
- Alstom Transport manages an entire transport system and offers turnkey solutions: rolling stock, signaling, lights, infrastructure and maintenance.

RAIL AND NTN-SNR: NEW DEVELOPMENTS ON ALL FRONTS.

The NTN-SNR Group aims to reinforce its Industrial activities and the rail sector is one of the priority target markets. To meet the expectations of this demanding sector, the Group will be developing new and substantial synergies along 4 lines, for the period 2010/2015: technical, manufacturing, quality and commercial.



TECHNICAL AND THE DEVELOPMENT OF RANGES.

After many decades of a strong presence in the rail sector, and the high speed sector in particular, the NTN and SNR brands are sharing their technological resources.

Synergies within the NTN-SNR Group involves regular technical exchanges relating to best design practices in order to develop and launch the most advanced products in the sector. The TBU, for example, is a "cartridge" bearing and the development of its new polyamide cage was optimised by combining NTN design expertise with SNR material expertise. Exchanges of patents, the co-ordinated work of the different test centres, both at Annecy in France and Kuwana in Japan, all contributed to the rapid extension of the range and Approvals. NTN-SNR has increased its range with an additional 26 new products, including 9 new axle bearings and 17 new transmission bearings, now offering an alternative for the most popular references used in rail applications and further strengthening its position in the European market.

MANUFACTURING AND THE DEVELOPMENT OF PRODUCTIVITY.

Manufacturing benefits from the same high level of commitment. The NTN-SNR group has invested a total of 13 million euros in this sector, with 2 new production lines, and one million euros for the acquisition of 2 new test rigs dedicated to the development and Qualification of new products. Part of the new production resource will be the conversion of an automotive line into a rail production unit and this development will provide improved productivity and competitiveness, and is due to be completed and operational during 2011.

QUALITY AND THE DEVELOPMENT OF STANDARDS.

At the current time, products intended for the European rail market are subject mainly to the Quality Standard EN 12080. In 2010 NTN-SNR launched a process aiming to also obtain IRIS and HPQ Certifications in order to supply Deutsche Bahn in Germany. Obtaining these Standards will enable NTN-SNR to meet all the main quality requirements and Standards of its current and future customers. To ensure these different expectations are strictly satisfied, 2 senior project leaders within the NTN-SNR group are exclusively in charge of quality strategies.

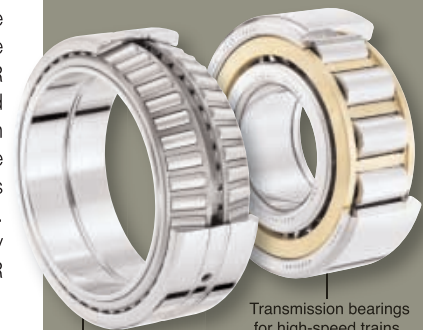
COMMERCIAL AND THE DEVELOPMENT OF SALES.

Within NTN-SNR, the rail sector is the subject of an ambitious global sales development plan. Final objective: a significant increase in sales. In 2009, turnover generated by NTN-SNR in Europe in the rail sector amounted to 12 million euros which represents a 6.7% market share. With the additional technical and human resources invested in this sector the aim is to increase sales by 15 to 20% each year, with the ultimate target to have a European market share in excess of 15% by 2015. In this context, the collaboration and coverage of the NTN and SNR sales networks is clearly a key point and, in each country, specific sales teams dedicated to serving the rail sector have been created.

SPECIFIC NTN-SNR RAIL BEARINGS

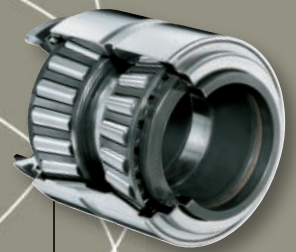


Axle box.
Application: locomotives



Transmission bearings for high-speed trains (intermediate shaft)

Transmission bearings for high-speed trains (end shaft)



Axle bearings for high-speed trains

THE COMBINATION OF THE NTN-SNR RANGES: "ADDED VALUE FOR SCALA AND ITS CUSTOMERS. "



NEEDLE BEARINGS: JUST ONE EXAMPLE OF THE SYNERGIES DEVELOPED BY NTN AND SNR.

NTN-SNR offers one of the widest and most comprehensive ranges on the international market: all types of needle bearings, cam followers, metric and imperial sizes, small (5mm) and large (diameter of 2+ m)! Within this vast overall range, needle bearings represent a prime example of the synergies created by NTN-SNR.

The main advantage of needle bearings is their ability to support substantial radial loads while remaining small. They are used in many applications: transmissions, reduction gears, agricultural machines, construction equipment, automobile, gearboxes, motorbikes, printing machines, hand tools, and a wide range of general applications. The manufacturing skills and techniques required to offer the entire range requires the technical mastery of many different processes, which few bearing manufacturers can offer. NTN-SNR is one of these and has developed and manufactured needle bearings for more than 50 years, not only with one of the widest standard ranges on the market but also many specific designs. NTN-SNR has developed and increased the range of stock held in Europe; current product availability at EDC (the European storage platform based near Lyon in France) is equal to 98%. A wide range, good availability and efficient logistics... All of these points convinced demanding Distributors like Scala SpA in Italy, Permarin in Spain, and many others.

THE NTN-SNR MERGER CREATES REAL BENEFITS FOR DISTRIBUTOR PARTNERS. WE INTERVIEWED DOTTOR ALBERTO BENVENUTI, OWNER, CHAIRMAN AND DELEGATE DIRECTOR OF SCALA SPA.

O'MAG: What is Scala SpA? Tell us about its history and its aims... ?

DOTT. A. BENVENUTI: Scala was created in 1956 in Vicenza, Northern Italy, to satisfy the growing requirements of an industry growing rapidly after the Second World War. The company later opened 4 subsidiaries in Treviso, Mantova, Trento and Cittadella (Padova). Our head office is currently located at Torri di Quartesolo in the Province of Vicenza. This building was constructed in 1999 and can boast a surface area of 9,000 m². The 3,000 m² storage area includes 3 automated carousels. The company employs a total of 60 people, including some from suppliers.

O'MAG: Forecasts for 2010?

DOTT. A. BENVENUTI: Our turnover for 2009 was affected by the general crisis. At 12.8 million euros, sales have reduced by 27% compared to 2008. During 2009 we still continued to sell around 25,000 lines to over 2,500 customers. Most of these customers manufacture machines and they are intended for a wide range of sectors: food, packaging or packing, woodwork and automation. We also serve our industrial customers with a wide range of other

product lines including those of our own "SBS" brand. We are also able to provide some of our original equipment customers with complete sub-assemblies for electromechanical applications with linear and rotary movement. In collaboration with our customers technical offices, we design and produce ever more innovative and competitive products. This is our mission: to provide our customers with products, services and ideas to increase their competitiveness.

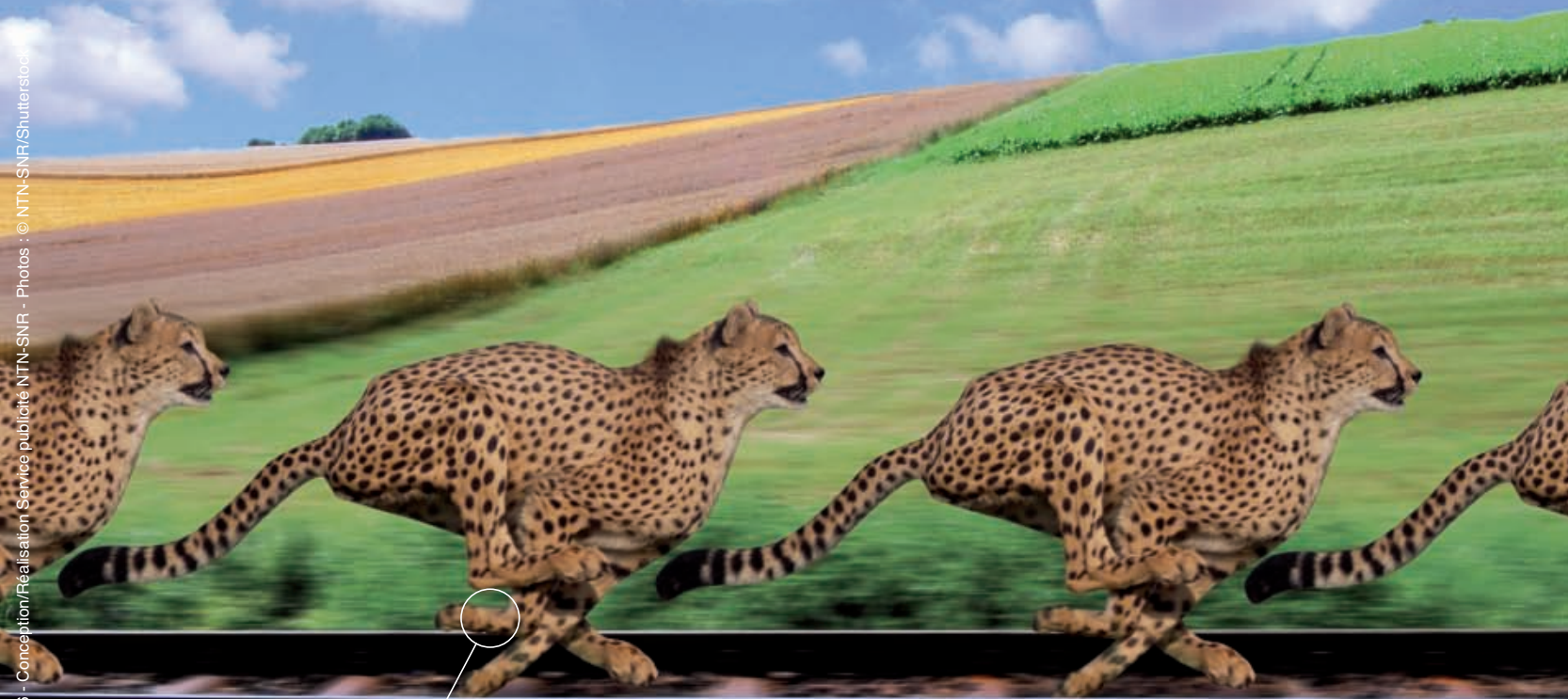
O'MAG: NTN-SNR, a priority partner?

DOTT. A. BENVENUTI: Our collaboration with SNR has been continuous since the 1970s. The NTN-SNR merger clearly extends our collaboration options. In addition to offering a wider range of products, NTN-SNR is a partner we can trust. The quality, innovation of its products combined with good stock availability and quick deliveries, and not forgetting a high quality before and after-sales service, all contribute to make an ideal partner. The extension of the NTN-SNR ranges has undoubtedly created additional value for Scala and its customers, particularly with the integration of needle bearings. If we consider the sectors in which we operate, our wide ranges of products and the quality of services indeed makes the difference.

NTN-SNR, controlling high speed travel!

InnoTrans 2010
21st - 24th September
Hall 22 - Booth 127

© NTN-SNR 2010-06 - Conception/Réalisation Service publicité NTN-SNR - Photos : © NTN-SNR/Shutterstock



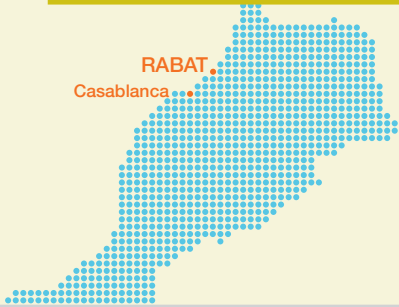
Just like a cheetah in full sprint, your rail applications are looking for performance in the form of ever more speed. Thanks to our experience, NTN-SNR bearings can guarantee robustness and reliability. We are ready to meet all of your technical challenges, for you and with you.



www.ntn-snr.com

With You

00 DESTINATION MOROCCO, A LAND OF PROMISE AND OPPORTUNITIES



MOROCCO: A DRIVING FORCE ON THE AFRICAN CONTINENT.

SINCE... 1949! THE FIRST SALES OFFICE WAS OPENED RIGHT HERE, IN CASABLANCA, SHORTLY AFTER THE SECOND WORLD WAR. THIS HIGHLIGHTS THE STRONG LINKS THE COMPANY MAINTAINS WITH THIS COUNTRY WHICH IS NOW IN FULL INDUSTRIAL BOOM.

"SALAM ALAIKOUM" OR WELCOME TO MOROCCO, LAND OF PROMISE...

Morocco is an emerging country, in the same way as India or Turkey. Its economy is based on a wide range of activities with mining as a key industrial sector. Morocco is the leading producer/exporter of phosphates in the world. In the last 2 years, the price of phosphate has increased by more than 300% and exports have reached record levels. This has encouraged OCP (State Phosphate extraction company) management to implement an ambitious investment plan involving 3.5 billion dollars, over the period 2009-2012.

INDUSTRIAL BOOM.

The industrial sector represents almost 28% of GDP and was long dominated by the food, textile and leather industries but other industries are rapidly growing thanks to investments in the chemical and pharmaceutical, paper and cardboard, automobile equipment and vehicle assembly, business services, IT, electronics and aeronautical industries.

CHEMICAL, CONSTRUCTION AND PUBLIC WORKS.

The Moroccan chemical industry is the most advanced on the African continent, after South Africa. The industry is still focused on the use of phosphates however the production of cement has been stimulated by a rapid growth in construction and the presence of international firms such as the Lafarge Group. They already operate 4 cement plants in Morocco and are

seriously considering building additional production facilities in the next few years. Italcementi or the ADDOHA group, a leading real estate developer in Morocco, are also planning to open new facilities. The total number of cement plants will climb from 11 to 17 by early 2011. Several iron and steel production units intended for construction purposes have also appeared. During 2009, 3 new steel plants were built, including one equipped with the first blast furnace in Morocco.

TRANSPORT.

In the north of the country, the Moroccan authority aims to transform the port at Tanger Med into a second Djebel Ali / Dubai. A high-speed train line is under construction to provide a quick link between Tanger and Casablanca. This will be the first high-speed train line in Africa and will be operational early in 2015. Morocco is also extending its motorway network by constructing Marrakech/Agadir and Casablanca/Béni Mellal links. A new 400km Fès/Oujda link is already under construction.

AUTOMOTIVE, AEROSPACE AND NEW TECHNOLOGIES...

Morocco has produced and assembled cars and trucks since 1959, mainly in Casablanca. Renault will open a plant in Tanger to initially produce 400,000 vehicles for export by 2012, later rising to 600,000. This new site is located close to 20 other equipment manufacturers who have set up in the area. An Aerospace district has developed near Casablanca, with around fifty European companies located there with activities ranging from the manufacture of components to the servicing and repair of turbines.

We should also mention the growing markets in film making, electronics, and new technologies. All of these activities make Morocco a land of promise and impressive potential.



5th rank to the African continent

From an economic viewpoint, the country ranks 5th in the continent, behind South Africa, Algeria, Nigeria and Egypt.

5,1 5.7 billion tons

According to the USGS (United States Geological Survey), Morocco and the western Sahara hold the two largest proven phosphate reserves in the world, with 5.7 billion tons (China: 6.6), and the largest potential reserves, with 21 billion tons (China: 13).

Morocco in figures

Population 2009: 34.8 million (estimate)
Surface area: 710,850 Km²
Capital: Rabat
System of governance: constitutional monarchy ruled by King Mohammed VI since 1999.
Economic growth: 5-6%
Priority sectors of the economy: agriculture, tourism, raw materials, Matières premières.
Distribution of GDP::
 - Primary sector: 18% (Agriculture)
 - Secondary sector: 35% (Industry)
 - Tertiary sector: 47% (Services)
PGDP/Inhab:
 3,800 USD (France: 32,800 USD)

NTN-SNR: PRESENT AND MAKING A DIFFERENCE.

SNR has been present in Morocco for more than 60 years, employing a large and dedicated team. The permanent close proximity to the customers guarantees effectiveness and success. We interviewed Rachid Dannoun, director of the SNR Morocco subsidiary.

"OUR CUSTOMERS" EXPLAINED R.DANNOUN "WERE DELIGHTED TO WORK WITH NTN-SNR

They are pleased to have access to an extended product range, with a strong brand image and guaranteed continuity. It is worth noting that NTN-SNR is currently the only bearing manufacturer physically present in the Moroccan market, providing a clear advantage over our competitors.

Continuous growth in turnover was once again recorded in 2009 but this is not the result of the international economic situation, this is the result of our commitment on all fronts: increased market share, increased sales of NTN products, diversification of our offers and, above all, the determination of our team.

The keys to our success? The integration of the NTN product ranges and also introducing new products, such as spare parts for crushers and screens, and the restructuring and strengthening of the service workshop for conveyor belts. We have become an indispensable partner for many of our customers and suppliers. (see insert opposite)

In 2009, we consolidated our partnership with the ONP to become their main supplier of bearings. We have also signed contracts with many other large customers. The Lafarge group entrusted us with the supply and replacement of an exceptionally long (5km) conveyor belt, one of the longest in Morocco. ASMENT DE TEMARA, CIMPOR group, placed its trust in us and once again ordering a



Rachid DANNOUN

1.3 km conveyor belt. We supplied our customer STROC, a manufacturer of conveyors and mineral treatment plants, with 1,000 conveyor rollers in a range of sizes from a diameter of 100 to 260 mm, and with a value of 700 keuro. These rollers are fitted throughout the new phosphate treatment plant in MRAH/Khouribga which will be opened shortly by King Mohammed VI. Maghreb Steel opted for the solution proposed by SNR Morocco and ordered 4 very large chock bearings (*) for the cold mill back up rollers. Each bearing weighs 2 tons!

Our partnerships will be consolidated and our sales force extended in 2010. We launch the Experts & Tools service, BEBOX. This type of product does not currently exist on the Moroccan market and meets real customer requirements and expectations. We intend to be the first to offer this product. "

*: Chocks are large housings that contain the main mill rolling bearings. They are used to mount the work and backup rolls, between which the steel sheet passes through for rolling.

28 HOURS



Planning for critical maintenance activity. In March 2010, NTN-SNR participated in a large-scale maintenance operation on the site of Morocco Phosphorus II plant. Report by Mr Chadid, chief engineer, head of the MPlI site.

"Morocco Phosphorus II, in Safi, is a phosphate transformation plant producing mainly sulphuric acid and ammoniac. It is fed by a single conveyor which carries phosphate in wagons from its arrival point on site to the inside of the plant. Shutting down this vital conveyor will unavoidably shut down the entire transformation line. We asked the NTN-SNR team to change the 900 m conveyor belt. Several meetings were arranged to create the organisation required for the success of the operation. We gave

three days to the various teams – i.e. exactly 72 hours - to replace the belt. The challenge was completed in a mere 28 hours, thanks to the planning, preparation and involvement of the highly professional NTN-SNR teams. Although the operations required the use of colossal traction devices everything was performed in perfectly safe conditions. "

In Situ



FOCUS ON THE MINES IN MAURITANIA.



Mining activity in Mauritania has constantly grown since the early 1960s. A brief history of a promising company with a bright future...

PART ONE: SNIM FROM ONE CENTURY TO ANOTHER...

The pioneers.

The history of SNIM dates back to the mid-thirties. In 1935, to be precise, the first deposits of iron ore were detected in Kediet ej Jill, in the north of Mauritania. The Second World war interrupted initial investigations but in 1948, with renewed peace, studies of the site were restarted to determine the feasibility and potential profitability of mining.

1952: the MIFERMA (Société des Mines de Fer de Mauritanie - Mauritania railways) was created. Research and initial workings were started under its authority.

Initial production.

1963: full scale mining and exporting commenced, the first ship loaded with Mauritanian minerals left the port of Nouadhibou.

1974: the Mauritanian Government acquired MIFERMA shares and transferred its assets to the "Société Nationale Industrielle et Minière", now SNIM.

1978: SNIM changed legal status and became a mixed economic company with a proportion of the ownership open to private capital.

1984: diversification of activities. The production of concentrates, obtained by enriching magnetic minerals from Guelb El Rhein, was added to the production of rich minerals from Kediet.

Targeting full boom.

1987: the deposit at M'Haoudat was discovered 60 km from Zouérat.

1991: the TO 14 deposit, to the South East of Kediet ej Jill, was surveyed and rapidly exploited. 1994: opening of the deposit in M'Haoudat.



2006: a symbolic date for the SNIM. The company has mined 400 million tons since 1963.

PART TWO: A VISION OF THE FUTURE AND FULL DEVELOPMENT.

SNIM exploits many large deposits and aims to set the industry bench-mark in all its activities.

SNIM particularly aims to place human resources at the centre of its concerns. Every possible action is taken to develop the skills of employees, improve comfort, well-being and safety. The company encourages open relations with all external partners and aims to ensure they have the same philosophy. SNIM ensures it takes full advantage of new technologies, mining methods and research. In this way, the company actively and substantially participates in the "transfer of technologies" to the rest of the country. SNIM monitors its economic viability and profitability, and is constantly optimising its competitiveness by perfecting its technical performances at all times, positioning itself as one of the best in the sector.

Mauritania in figures



Population in 2009: 3.1 million inhabitants (estimate)

Surface area: 1,025,000 km²

Capital: Nouakchott

System of governance: Islamic republic. Mohamed Ould Abdel Aziz has been head of state since 6 August 2008

Economic growth: 4%

Secteurs prioritaires : Agriculture, fishing and mining

Distribution of GDP:

- Primary sector: 25%

- Secondary sector: 29%

- Tertiary sector: 46%

GDP (per inhab): 1,800 USD

SNIM & NTN-SNR: BIRTH OF A REAL "PARTNERSHIP SPIRIT".

In February 2010 and symbolising a "win/win" spirit, the "Experts & Tools" team from NTN-SNR organised several training sessions at the production site of SNIM. We interviewed two of the participants...

"SNIM" explained Ethmane Ould Sidi Cheikh, company training manager, "has sold iron ore extracted from the Tiris Guelbs mines in the North of Mauritania since 1963. SNIM mainly operates in the area of Zouérat where its mines are located. Products are routed to the Port at Nouadhibou, 700 km from the mines, using mineral trains that can be as long as 2.5 km and weigh as much as 22,000 tonnes. The town has a deep water port able to load ships with a capacity of 150,000 tonnes and from here the ore is exported around the world but particularly to Western Europe and China. Both our mining and port personnel pay constant attention to improve and perfect their technical skills and it was therefore natural to organise a training session dedicated to bearings in close collaboration with the Experts & Tools team of NTN-SNR."

EFFECTIVE TOOLS

"In view of the distances involved", commented Philippe Deprez, Demonstrator from Experts & Tools "it was not possible to take our utility vehicle, the BEBOX, which is equipped with all the materials normally needed for our practical training courses. So before we arrived, we shipped out 60kg tools and equipment, including a 60cm shaft, a bearing heater, a range of mechanical extractors and several other pieces of equipment. We were able to organise 2 training sessions during the 5-day trip: one at the mine and the other at the port in Nouadhibou. Each of these sessions brought together a team of 15 to 30 technicians and supervisors. The initial theoretical section of the training was then followed up with a practical hands-on demonstration and

practise in smaller groups. We explained the different bearing technologies, including the various assembly and disassembly techniques. The SNIM teams paid attention and were well motivated to learn the correct methods and practises. "

EFFECTIVE RESULTS.

"Indeed", continued Ethmane Ould Sidi Cheikh, "participants really appreciated the training session offered by the NTN-SNR experts, despite its short duration.

Our teams were impressed by the different aspects of this training session. Heating bearings using magnetic induction to simplify mounting and dismounting was recognised as an undeniable "technical bonus". This highly positive reaction led us to acquire the training material used by the NTN-SNR specialists. Thanks to these tools, we can now organise internal workshops, within our own training centres. NTN-SNR demonstrations and the accompanying documentation proved highly useful and worthwhile. Ultimately, there can be no doubt that the NTN-SNR merger will enhance our bearing performance."



Ethmane Ould Sidi Cheikh





BONFIGLIOLI

Power & Control Solutions



Transmitting power to the future

Single and three phase gearmotors

Electronic drives

Electric motors

Mechanical speed variators

Gearboxes for mobile machinery

Power control and transmission solutions from Bonfiglioli.

Because we understand that quality of life depends on the advancement of technology, at Bonfiglioli we have always striven to lead innovation in the field of power transmission. Over the years, our ability to develop new ideas for manufacturing excellence has helped us grow into a major international organisation. Today, the Bonfiglioli Group boasts a complete range of products and solutions for an almost infinite number of applications, marketed under three distinct brand names, Bonfiglioli Riduttori, Bonfiglioli Vectron, and Bonfiglioli Trasmital. The Bonfiglioli Group currently has subsidiaries and production plants in 15 countries across 4 continents, all sharing a single corporate mission founded on customer satisfaction and the promotion of strong social values.

www.bonfiglioli.com

