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## This issue:

- > **LEAN ENTERPRISE:** Enterprise it is, but it has nothing to do with space flight. Lean Enterprise means a new way of thinking about business. Massimo Limonta tells us why.
- > **FORS AND GKN AXLES:** the success of this partnership, explained by a truly expert procurement operator.
- > **CRACKS:** engineers devise tests to beat cracks.
- > **SIDRA** steals the limelight at the 34th edition of Fima, Saragossa (honourable mention).

## Full marks for everyone



Usually, when somebody starts talking about "reorganising" companies, the impression we have is that there's bad news just round the corner. It's a polite way of saying "cuts", or "downsizing". That may be the case for many, but not for us at GKN Axles. Our decision to reorganise (which the changed corporate philosophy makes quite clear) comes out of a desire to develop and extend

business dealings so that objectives and feasible aims can be fulfilled to as great an extent as possible. We have already made progress in cutting back on waste and delays and have cut back on the red tape, but it's an ongoing process. Our exclusive aim is to improve the quality of labour and therefore also of productivity, which can only benefit career advancement (a necessary part of personal progress) among our staff members. Everyone (or nearly everyone) has understood this, including those who were (understandably) sceptical or diffident at first when faced with changes which forced new habits onto them and new approaches to their work. Now that all employees have adjusted to the changes, they have become a vital part of change for the future. The five new teams including production staff, technical staff, marketing staff, white-collar workers and managers, all work on the same plan. They have already put down roots. Their members are, professionally speaking, ideally equipped for the tasks at hand. They are open to innovation. Everyone (or nearly everyone) has come round to this new culture of improvement and of evolution of the whole through the efforts of the individual. So we can turn to eliminating waste, time losses, minutes wasted, and disorganisation. Thank you all!

*Domenico Traverso*



## Guarantees don't better than these...

Five-year guarantees are a very special feature of the new series of axles which GKN AXLES has finally completed development of, as part of its efforts to provide customers with the very best products. This is the promise that is implicit in the name of this product range. State-of-the-art technology and meticulous care over details are very much a part of the work done at the company premises at Carpenedolo, now an important part of the British giant, GKN

PLC. Its products will be most useful for very fast vehicles requiring performance specifications which would otherwise be unthinkable. The heretofore unprecedented duration of the guarantee is the company's way of taking on responsibility for its claims of super-efficiency. Axles are usually guaranteed for 24 months at the most.

According to Domenico Traverso, the managing director GKN AXLES, «More and more people are showing considerable interest, above all in view of the durability of the axles. This was bound to be the case, given the market the products target and their use. The Gold series is no more than a concentrate of the best we know how to do. We assembled it with great care and believe our customers will be totally satisfied».

We foresee a glorious future for our Gold products, with many outsiders taking an interest in them. The care we take over these products will inevitably lead the manufacturers of agricultural vehicles toward our door. "Distinguishing features?" One thing is the tubular beam, lowering overall structural weight considerably. The hubs are provided with Timken bearings (head and shoulders above the standard, quality-wise). It was decided to use high-speed bearings. This fits in with the ongoing trend in vehicle design for lighter, fast, user-friendly machines with high (and increasing) load and durability performance capacities. The hubcaps are screw-mounted, not applied by pressing. This enables better axle maintenance while allowing for the integrity of each part. These features, again, enable higher performance ratings and durability. A further feature reflects our response to an increasingly evident customer need. Each axle is set up for assembly of the toothed wheel. This enables both use of antilock braking systems (ABS) and application, in specific circumstances, of special trailer-speed sensors. Our desire to upgrade our products also shows in the look zinc-plated hubcaps, capped greaseniipples, and black (instead of the traditional red) painting. Yet another reason to choose Gold axles, now the star item in the GKN Axles brochure and already a groundbreaking chapter in the history of Carpenedolo.

*Laura de Laurentiis*

## Peter Pan in the guise of the TERMINATOR

For Tony Lindsay, Managing Director of the Wheel unit of GKN FAD, teamwork is everything. Playing football as a kid, he learned that all the players have to help one another out, give it their all, show that they want to win. He has transposed this same mentality to the world of work, because a company is a bit like a football team, and to win you have to believe. Everyone.

Watching him on a football pitch, as intense today as when he used to dream of playing for Doncaster Rovers, it's difficult to imagine him sitting behind an executive desk. "Football is still my great passion", explains Tony Lindsay, Managing Director of the Wheel unit of GKN FAD, "and

whenever I can I get out there, despite my 53 years and a ligament in my knee that said 'OK no more football'. The injury happened in Carpenedolo, during a match with the GKN FAD team".

*(Continues on page 5)*



## > New roles

# Efficiency first

He doesn't know how to close a deal, mount an axle, or handle an order, and yet he's changing the entire organisational structure of GKN Axles. Massimo Limonta, the lean manager at Carpenedolo, has a job that is as simple to define as it is demanding to put into practice: optimising work flows throughout the company, and cutting back on waste and unnecessary costs.



Introduction of lean production in an area in which 10-30 operators work enables:

- increased productivity (by 20-60%);
- reduced work in progress (by 30-70%);
- reduced defects (by 20-40%);
- reduced set-up times (by 50-80%).

(Source: Galgano Group)

«Finding out where inefficiency lies and getting rid of all that doesn't add value to our products. That's what "Lean Enterprise" means, put as simply as possible». This definition, provided by Massimo Limonta, the Site Continuous Improvement Leader at GKN Axles since November 2005, leaves us with the impression that his job can't be as complicated enough in themselves! Because that's what he's doing, revolutionising the Brescia company from top to bottom. Which, for him, sometimes means leaving the office very late in the evening. Lean Production is one of the most valid organisational models generated by the industrial sector. It is a model which can radically transform the way in which corporate commodities and assets are designed, manufactured and marketed. It's a Japanese invention. It first saw the light at the Toyota plants when one of the vice-chairmen, Taiichi Ohno, developed this approach within the context of the Global Production System. The techniques underpinning Lean Production, however, don't apply exclusively to giant corporations. All working structures can adopt them for organisational improvement, to upgrade both efficiency and market competitiveness.

«"Lean" thinking is not just for the manufacturing department.

If this method is to be successful, with concrete results, the entire company, all members and fields of activity, must become involved and must make this new culture their own. This is why, for GKN Axles, the more appropriate term is Lean Enterprise. First we must hunt down waste and then get rid of it. Constantly upgrading all activities and optimising resources are not concepts reserved for production alone. They must, instead, be gradually applied throughout the company».

Limonta is the manager who must be contacted for all production organisation decisions. His task is rather a strange one. He doesn't lead a team. No one has to report to him on what they're up to, and yet all organisational decisions have to be reached in agreement with him. «I like to see myself as a facilitator who, from time to time, will collaborate with expert staff from various areas of activity. I don't have their specific skills or experience.

My task differs from theirs. Since I am in a position to monitor the entire company, I can see how processes can be improved, whether it's production or exchanges of information on a customer or a job delivery... and, when appropriate, I step in to get rid of everything that leads to wasted time and money».

## > Meetings

# Lean is BEAUTIFUL

About a year after the initial concepts of lean production were introduced at GKN Axles, we already see the first results. Now, the entire company is involved in continuous improvement and everyone as come to understand how this revolution can transform the work of each of us. For the better.

According to various researchers, only 24% of waste in a manufacturing company derives from production. The remaining 76% derives from all the other corporate areas of activity taking place alongside production as such. With this concept in mind, the top management team at GKN Axles decided to take a second look at the entire structure from the organisational point of view. Lean Production concepts emerged at Carpenedolo for the first time last year. Acting on the basis of the work of a number of external consultants, an in-house event dedicated to Kaizen (continuing improvement of activities) was organised. The first results were noted immediately. However, for further progress to be made, the top management team at GKN Axles saw that it had to have an operator to whom it could turn with respect to all functions. Needs went beyond what external consultants could offer. This is where Massimo Limonta comes

into the picture. It also clearly indicates just how seriously the top management team GKN Axles believes in the advantages of having a staff member dedicated to company-wide improvements. Having established these priorities, a course was arranged on lean enterprise according to the programme drawn up by GKN. The meetings took place last February and were attended by 25 lean managers from all over the world, as well as operators at the Carpenedolo plant. Massimo Limonta, however, is merely the tip of the iceberg. We are witnessing a "revolution" which has changed the thinking at GKN Axles from the bottom up. There is little sense in talking of lean enterprise if the culture is not absorbed by all staff, with no exceptions. Everyone must have a firm grasp of the basics. This is what we ask of all, whatever their role within the company, because even what are apparently the simplest operations can generate errors and, therefore, waste (resources, materials, money). So it turns out that even the simplest and most commonplace operation can be improved on the next time it is performed. Lean managers therefore become coordinators of the various activities. But it is more appropriate to think of them as experts capable of collecting and redistributing information and organisational models that completely eliminate waste (including time). Massimo Limonta has been at work just for a few months. The idea is to turn the plant in Lombardy "inside out, like a glove". By the looks of what he has already done, the prospects are encouraging for the future.



### Thinking lean means...

- Pinpointing what is of value to customers;
- Focusing on the sequences of value-generating activities;
- Ensuring constant, uninterrupted flows;
- Designing and manufacturing only what customers want, when they want it;
- Making sure that when a task is done it will be done better the next time round (i.e. continuous improvement).

(Source: Centro Studi e Ricerche Gecos)



> Interview with...

## A procurement manager who minds our own business

As Fors MW started up in 1991, when one of the owners, Leif Fors, now general manager, decided to open a plant in Tallinn, Estonia, to produce agricultural machinery. In this part of Europe, called the “wild east” after the fall of the Berlin wall, people starting talking about a market economy for the first time, and the opportunities for enlightened entrepreneurs certainly aren't lacking. Neither are the problems. In 1992, the first fully Fors project, a notably bulky trailer, left the factory gates in Tallinn. Since then the company has seen constant growth. In 1997 it opened its new plant (more than 11,000 sq. m.) in the suburbs of Tallin, at Saue. With the new capital injection came a Swedish senior management team. This was the quality leap required for the company to tackle new markets and come out with new products while continuing to target, above all, small and medium size enterprises. Fors now has industrial premises covering 35,000 sq. m. in Tallin, and a staff of 125, plus 10 others on the marketing and after market side, travelling around the world. In Europe alone, there are about 350 Fors MW product retailers. Lets talk about relations with GKN Axles with Odile Mombelli, purchasing department manager.

**Which are Fors MW's main markets? What kind of customers do you deal with?**

Our activities are mainly concentrated in the Scandinavian area, but Germany, France and Great Britain are rapidly becoming more important for growth of the company's turnover. Our customers are mainly small and medium size industrial concerns in the sectors of farming, forestry, and excavators etc. who are looking for a good quality-price ratio.

**When did commercial relations with GKN Axles start up?**

Fors MW decided to purchase its first GKN Axles products in 2004. Collaboration with the Carpenedolo company has been

ongoing since that time, in the form of yearly contracts.

**What made you opt for GKN?**

At first it was purely technical, but we soon saw that our trust in those with whom we had dealings was well placed, professionally speaking. High quality, keeping to delivery schedules and excellent commercial relations led to closer and closer contacts between our companies soon after our first contact.

**What kind of partnership have you established with GKN Axles?**

Above all, technical. We began to study and develop solutions together with GKN Axles, and the exchange of information between the technical offices of each company has shown



itself to be fundamental, for example, during the braking system calculation and regulatory stages for our machinery. **What components does GKN Axles supply Fors with?** All our production uses axles manufactured at Carpenedolo. Our orders also include suspension systems. The wheels are GKN, but procurement is by other distribution channels.

> Interview with...

## An engineer in Italy, on a journey of discovery

He left the beaches of California and came to Carpenedolo to learn everything he could about materials, and for a massive dose of experience. Konstantinos Boukouris is ethnically Greek but very American, having been born, raised and educated in the US. He will be at GKN Axles in Carpenedolo for six months. Dividing his time up between the occasional budget meeting and trips to Lake Garda, Boukouris is preparing himself for a career as one of the top managers of tomorrow.

With a name like Konstantinos Boukouris there can be no doubt as to his Greek origins. But Boukouris (24) is a normal, regular Californian guy. He loves sport (especially swimming and beach volleyball). He also loves books and travelling, and displays considerable curiosity when he encounters foreign languages and cultures. He took a degree in mechanical engineering at Michigan University. His first career steps were at General Motors, followed by GKN. He worked first for the British multinational in research and development (for GKN Driveline) and went on to production organisation (in particular, lean manufacturing and continuing improvement) for the Aerospace division. He came to Carpenedolo in February for his first real mission abroad.

**What are your tasks and what is the main reason for your**

**transfer to the Italian GKN Axles branch?**

Technically speaking, I am a “material supply manager”. I work on the various problems relating to procurement of materials and the processing of these materials.

**You will be a member of the staff at GKN Axles in Carpenedolo for six months in accordance with the terms and conditions of the foreign training programme set up by the company for its employees. What is the goal that management set for you?**

My Italian “mission” was spelled out very clearly. I cover a new position in a company in which I come face to face on a daily basis with a language, culture and business methods which differ from my own. I must translate everything I see and which I come into contact with as part of my professional advancement and progress on a personal level.

**Can you tell us how you reckon things are going at this early stage, here in Italy?**

Professionally, I'm very satisfied indeed and very pleased that I accepted the proposal GKN made. I've had an opportunity to take up a new position with greater responsibilities and reach a turning point in my career. As soon as I got here, I worked hard and, above all, I had a chance to be in close day-to-day contact with the top managers here. I have been able to follow up projects which will greatly affect GKN Axles' performance. The only negative thing about my stay in Italy is that it will come to an end all too soon!

**Are you this positive about your stay as far as things outside the factory are concerned?**

I found it easy to appreciate the Italian lifestyle. I've had the chance to see new places and meet great people who have been very kind, to enjoy your cuisine... Relaxing after work by going to Lake Garda has become something I enjoy regularly. I had no knowledge of Italy before this visit. As far as I was concerned, Europe meant Greece, especially where my relatives

are. Now I can say I feel perfectly at home in Italy, apart from the language, of course.

**Is there an Italian mindset you see in the workplace too?**

The rhythm is less frantic than in the States. It's not that people work less here. Quite the opposite. But it's more relaxed. Domenico Traverso likes to say “foot on the gas” and this drives us to step up the rhythm, but the open-mindedness of Italians and their friendly approach also clearly shows in the workplace, and, the way I see it, this helps you work better and, I have to say, more willingly.

**What do you miss from back home in the United States?**

Obviously I miss family and friends, and the variety of food you find in America. From Chinese restaurants to Greek cafés and so on. Apart from that, I don't miss much. I live in a place where in an hour I can be in the countryside or the city, where I can check out locations of artistic and cultural interest... Hardly a day need go by without finding out something new to see and learn about.





## > Research and Development

**A perfect marriage** At the GKN FAD facility, the conditions that wheels and hubs encounter during use are recreated. The idea is to study reactions in detail. The results of the tests and trials enable analysis of the pros and cons of all solutions. Only in this manner can projects be brought forward without error.

Cracks are a nightmare for engineers, who must calculate the loads and stress the components can take. The main cause of wheel breakage is cracks appearing on the disk (nearly always starting out from the fixing holes to finally cover the entire component).

In most cases, cracks are generated by the disc bending while turning. This bending, itself, is caused by shifts in the disc's position with respect to the tyre centre line and by the lateral forces transmitted to the tyre from the ground and curves. It is therefore vitally important that, during the design stage, we should be able to calculate where stress is greatest, and how great the loads involved are. This enables us to establish the lifespan of wheels.

To study these developments we must recreate in the laboratory the physical conditions to be found in the field, so a trial unit was set up at the GKN FAD Research and Development facility with "fatigue" testing machinery that reproduces in the lab the stress the wheel undergoes during use. By increasing

loads until cracks are generated we can study the distribution of forces acting on the disc and the loads which each piece, according to its form, is capable of supporting.

A fundamental aspect conditioning the life of wheels is the coupling with the hub. All stress is channelled through this interface zone, and the influence of hub type on the wheel is extremely important.

The critical factor is hub shape, above all at a time in which the trend is toward lighter components, with less use of materials and therefore lower prices (the so called star-shaped hubs).

To meet their needs in this regard, many constructors opt for undercuts on the support flange, as an alternative to the more traditional circular flange. This construction solution, however, shortens wheel lifespan since stress levels are greater.

The tests carried out by GKN FAD have shown that the deeper the hub undercut the greater the stress transferred to

the disk, due to the lack of support, or the concentration of stress, at specific points.

These results have been corroborated by the findings of other wheel manufacturers and at the Fraunhofer Institute research labs in Darmstadt (better known as LBF): wheel lifespan can be reduced by as much as 50%. EUWA (the Association of European Wheel Manufacturers) has drawn up an official letter which will be sent to various axle users to provide information on this question.

We are faced with two separate construction philosophies. Some manufacturers look first to prices, with the result that wheel lifespan is shortened. Others, like GKN FAD, have opted for solutions which are apparently more sophisticated, but which ensure greater component resistance. Analysis, experimental tests and trials carried out at Carpenedolo provide extremely clear indications as to who did the right thing.

A.B.

## > Products

# A trailer with "power steering"

Innovation, research, development. At a company such as GKN Axles, production evolves constantly. However, alongside our new entries, we have our "historic" products which, however, are revised and modernised on an ongoing basis (as is the case with our self-steering axles).

We shouldn't be surprised to see, in the catalogue of a company such as GKN Axles, innovative and sophisticated products appearing alongside other technologically simpler products which (apparently) display less potential for development. «In farming», according to Daniele Consolati, sales manager at GKN Axles, «processes vary, and the machinery must adjust to needs: simple, low cost solutions when required, or more advanced and costly technological solutions, which are absolutely necessary if we are to meet the needs posed by the technological evolution of vehicles».

Self-steering axles are now clearly a standard product at GKN Axles. This product originally figured as a natural evolutionary step forward from fixed axles, but it is also significantly more expensive than the simpler solution, hence it targets the top end bracket of applications.

«Its evolution», Consolati adds, «is the direct consequence of the need to build larger, higher capacity, higher speed trailers. This meant developing twin-axle trailers with a front turntable, which were then superseded by the tandem system with cen-

tral twin axle designed for manoeuvrability in extremely cramped spaces. The tandem axle would be perfect since it means compatible carrying capacities and ease of manoeuvrability, but its small steering radius translates into excessive tire stress, with increased slippage on the ground and hence greater wear».

The self-steering axle was devised by GKN Axles (one of the leading companies in this sector) to solve this problem. «At GKN Axles we firmly believe all products can be improved.

That's why even a standard technology such as that on which self-steering axles are based has truly evolved over time».

The current proposition from GKN Axles includes a self-steering axle commanded by two hydraulic drive cylinders and a third control cylinder alongside the trailer drawbar. «It's a fully comprehensive kit», Consolati concludes, «which drivers can adapt to the machinery configuration. With this solution, tire wear is lessened and all loading and unloading processes are facilitated enormously, but, above all, it's a great improvement in terms of user comfort, because the control cylinder, parallel



to the trailer towing eye, realigns the wheels at every curve and enormously facilitates manoeuvres in restricted spaces, so that it truly functions as a power steering system both in forward and reverse drive. But there are even more advantages than these. This solution not only provides the trailer with servo-assisted forced steering; it also enables the axle to return to its self-steering configuration should the hydraulic unit of the trailer or the tractor break down».

Enrico Ravini

(Continued from page 1)

## “Peter Pan in the guise of the TERMINATOR”

Since then, thanks in part to friendly advice from Brian Newman, his boss, who reminded him that his Peter Pan days were over, football is gradually giving way to golf and, especially, his family.

Married to Gill since 1973, back when he was just starting his career, Tony describes himself as “the classic father, proud of his sons (Steve, 29 and Chris, 22), anxiously waiting for them to sooner or later make me a grandfather”.

This portrait makes it a bit difficult to recognize the Tony Lindsay who, at the time he was working in Denmark, his fierce determination earned him the nickname of Terminator.

“GKN is the third company I've worked for. After leaving my studies I started out as a technician with Lister Petter, a motor company specialised in diesel engines. I spent about 20 years there, first in the UK, then in Argentina and Morocco. After that I moved into the automotive sector with Alloy Wheels, working again in the UK, as well as Canada and South Africa. I joined GKN in 1999, at the wheel plant in

## Some numbers from GKN Wheels

4 production facilities - Telford (England), Nagbol (Denmark), Armstrong (United States) and Carpenedolo (Italy).

1450 employees worldwide.

263 million euros in sales last year.

32% share of the world market.

Telford”.

Throughout his career, Lindsay has shown himself to be a great advocate of teamwork. “I've always been convinced that only a great team, seasoned and cohesive, can achieve the objectives that have been set. At Telford, before making any technological investments, we had to work with people: they needed to be guided toward the objectives, motivated and convinced that the results were achievable. I went through the same thing two years later in Denmark. That's where the nickname ‘TTT, Tony the Terminator’ comes from. All it took was three months to change track and put together a great team. And the results prove it”.

As of February 2006, Tony is in Italy to apply that same team spirit that has invariably enabled him to achieve big results.

“There's a concentration of some of the best people in the GKN group at Carpenedolo: it's not going to be difficult to get great results with a staff of the highest calibre. We have some very specific sales objectives to reach, and we're still in the early phases, but with the right dose of conviction and



leadership from management, I'm certain that we'll succeed if we work together. I'll never get tired of repeating: with solid teamwork, personal involvement on the part of everyone, and a continuous exchange of information inside and outside the company, you can achieve excellent results and make your business grow.

The motto of GKN is ‘Expect more’. I think that's a perfect synopsis of our way of working at Carpenedolo. We've only just started our journey, but I can already say: we want to be better than the best! And we definitely will be. Take it from Tony the Terminator”.



## Warm wind from the north

Central and northern European customers are on the lookout for valid products, advanced services and assistance already at the design stage. The vision of a fundamental market for GKN Axles is illustrated for us by Josef Konersmann, area manager for Germany, Belgium, the Netherlands and Denmark.

the company can provide, ready availability of spare parts, technological innovation... These are elements which can influence dealings, for the good or for the bad. Supplier companies are increasingly selected on the basis of the service levels they can guarantee during the pre- and post-sale periods, and no longer on the basis of product prices. Collaboration with our customers very frequently commences already at the product development stage. We are very frequently asked to study technical solutions already at the stage in which frames are being designed, to see if we can meet the needs formulated by the engineers responsible for vehicle construction. Substantial differences are very frequently generated by current laws from country to country. In Denmark, for example, the regulations applying to axle carrying capacities are stricter than in the Netherlands. In Germany, the laws concerning carrying capacities and brake homologations also differ from those in the Netherlands». Which are the product typologies most in demand, from a strictly technical angle, within the marketplaces of northern Europe? «In the Netherlands, hydraulic suspension systems have been widespread for more than twenty years. The trend has been taking root in the rest of Europe for some time now. GKN Axles is of course very interested in further development of the SIDRA suspension system in its efforts to win over customers and acquire market shares. In Germany and the

Netherlands, customers frequently request complete suspension systems (such as bogies and tridem systems). There is also a growing demand for complex systems for agricultural trailers. With increased trailer speed, machinery must meet higher performance demands. This is why our products must ensure high speed, greater transport safety and greater braking capacity whatever the conditions of the ground». The central European market is closely linked, now as in the past, to export. It is a market in which the more flexible companies, those which can operate within a variegated range of scenarios and which can respond to requests rapidly, are those which benefit most, and which most successfully beat off the Asian competition which we, here too, also consider a source of concern. «Obviously, we at GKN Axles», Josef Konersmann concludes, «are particularly well placed to meet the needs of a global market and, thanks to the organisation we belong to (GKN Offhighway) and thanks to our distributors' network, we can ensure spare part availability in the various countries in which we are operational. An example? Collaboration with GKN Walterscheid Belgen for distribution of products, and the spare parts service for the French and Belgian markets. This puts us streets ahead of the competition». Most definitely.

Five million euros per year. This is the turnover for GKN Axles in the countries of central and northern Europe. Josef Konersmann is the area manager for this zone. «I see myself as the link between the company and its customers in Germany, Belgium, the Netherlands and Denmark. My duties mainly consist in drawing up offers and managing orders and deliveries (in collaboration with the pertinent offices in Italy), but I also deal with customer assistance and new product development (here again, in collaboration with the experts in Lombardy)». It seems such a long time ago when the success of offers depended exclusively on end prices. «Nowadays, much more attention is paid to quality, to the technical support

E.R

> Success stories

## Sidra looks east



They first met Sidra at Eima 2005. A number of managers from a well-known Japanese firm that manufactures tankers visiting the Bologna fair took an interest in Sidra, the hydraulic suspension system produced by GKN Axles (and the pride of the Carpenedolo branch!).

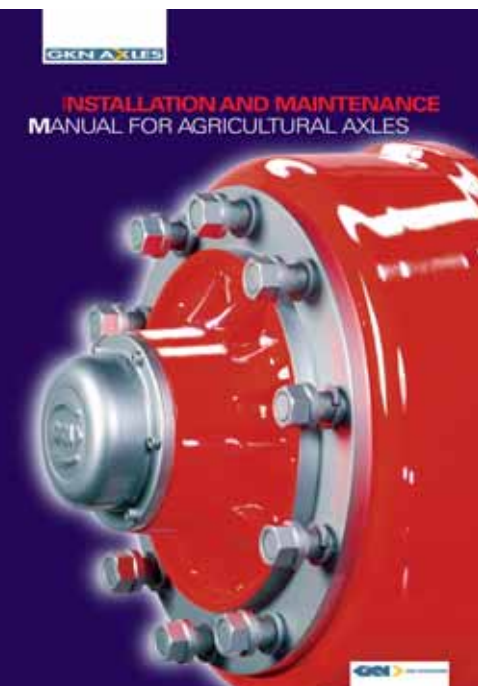
They wanted further information and explanations, and then asked us if they might receive as soon as possible the entire dossier on the product in Japan (technical brochures, video material, demonstrations and all other specifications for a full assessment of this technological masterpiece).

It only took them a few weeks to decide that they wished to design a new product using the Sidra suspension system. They were particularly interested in exploiting the considerable value added which a state-of-the-art component such as this can provide for their product.

What happened next is what's happening now. The first Sidra system targeting the Japanese market is at present at the Hokkaido plant for assembly on a prototype used for initial tests. When these tests are over, more or less in August, serial production shall start up for the first models for the northern Japanese market.

> Browsing the bookshelf

## Axles: instructions for use



Customer care also means being able to provide customers with the means for optimal use of the products provided. This is the idea behind the Installation and maintenance manual for agricultural axles. A user-friendly publication with detailed information on how to use the various axles manufactured at the Carpenedolo plant. The manual (both for agricultural machinery manufacturers and end users) specifies the characteristics and functions of the various products, indicates how to carry out set-up procedures correctly and how the products should be used for optimal results. «It is a technical manual», says Stefano Chitò, the manager of GKN Axles' R&D facility, «which enables all, not just technical operators, to use our products correctly, to install them safely and to maintain component quality over the entire lifespan of the products in question. A section dealing with maintenance lists, all the control operations required for maintenance of axle efficiency and safety levels. It deals, for example, with testing for lubrication or brake adjustment, while also providing full information on when and how routine periodic controls should be carried out».

Although many GKN customers have already received the manual, copies can also be downloaded from the Internet site of the Carpenedolo company.

Cover of the installation and maintenance manual for agricultural axles.

> Solidarity

## Trekking for the benefits of others



The GKN team in a festive mood: Mike Dann (in the middle) and his team mates, Tim Tottenham and Simon Edmundson, celebrate their Polar Challenge 2006 triumph.

«I'm afraid Mr Dann is unavailable at the moment. He may be approaching North Pole...». So spoke Mike Dann's secretary in a very business-as-usual manner. Mike Dann is a member of the A380 project team at GKN Aerospace on the Isle of Wight. So, what took him so far north? Some material to be tested at extreme temperatures for durability? No. One reason was sheer love-of-adventure, the other was generosity.

Dann and a couple of friends, Tim Tottenham and Simon Edmundson, decided to take part in the 2006 Polar Challenge, the trekking race between Canada and the North Pole. The aim was to raise funds for the Laura Crane Trust and promote scientific research into cancer among adolescents. Mike Dann's (temporary) absence from GKN Aerospace is not without leave. Quite the opposite, GKN reckoned the mission taken on by Dann and his team deserved its technical support and sponsorship.

In eleven days, Dann, Tim and Simon walked more than 320 miles, at temperatures constantly ranging from -20 to -35 degrees. With them they took a sledge with 90 kilograms of food and equipment. The effort was well worth it. This British team reached the magnetic pole first (15 hours ahead of the runners up in second place!). As far as Dann is concerned, however, the real satisfaction is the £10,400 raised for the Laura Crane Trust through advertising and donations from those who believed in his project.

## > Let's talk about you

# A lathe operator from afar

Sardinia to Carpenedolo is a long way. Stefano Portas made the journey four years ago when he joined the staff at the turning shop. He's the right person to tell us what life is like on the shop floor

Nearly four years ago, Stefano Portas (37) came to the GKN Axles plant in Carpenedolo for the first time. «It was a decisive turning point in my life. It meant leaving Sardinia where I had a job in a machine shop and coming to northern Italy. It wasn't easy. I only found out by chance that a large company in the Brescia area, a company I actually knew practically nothing about, had jobs on offer, so I decided to submit an application».

Portas was first taken on as a welder-assembler. «In Sardinia, where I worked on cars, I had already assembled hundreds of bearings and disassembled and reassembled no end of braking systems. I was experienced. I could count on that, so I didn't feel completely out of my depth when I arrived».

The next step was when he applied to be transferred to the turning shop. «First, it was cast-iron drum lathing. Then steel hubs. I've been working on a regular basis at the axles turning shop for a couple of years now».

Have you seen any corporate changes in these four years? «Very many. I arrived just after the old company was passed on to the GKN group and I witnessed the radical changes the new management was imposing on a company-wide basis right from the start. An example should tell you what I mean: cleanliness and tidiness of equipment throughout the production line. Everything was much less systematic before. Certain details which are only apparently unimportant were neglected. But they slowed down processes quite a lot and, more than



once, led to faults and rejects. People who had been in the company more than me perhaps found it hard to adjust or understand what these new measures were all about, but now my senior colleagues are the ones who most appreciate the benefits that these changes have led to».

These changes have also taken place on the level of communication and the participation of all in corporate matters. «We're all involved in the company. We are informed when new customers have been acquired, for example. Or we can bring in our own point of view, based on our day-to-day experience, and submit ideas and proposals to upgrade processes and create a more efficient organisation. On more than one occasion, these suggestions have been put into practice, following the required assessments. This is another way of upgrading a company».

# Spanish award for Sidra

GKN Axles was the star entry at the latest edition of Fima, the major international farming equipment event held at the trade fair district of Saragossa.

The stand of GKN Geplasmatal, the Service & Distribution division company of GKN OffHighway, hosted the presentation of the latest items from the new GKN OffHighway division.

The "main course" on the "menu" was the Sidra hydraulic suspension system, which attracted the attention of many visitors and also of the jury whose task was to pick out the major innovations present at this Spanish exhibition. GKN Axles is very pleased to announce that Sidra was singled out for the special mention as a "Technological Innovation", for the 34th edition of Fima in Saragossa.

This confirms the validity of the project and the excellence of the work carried out by the Carpenedolo company, in collaboration with DBD Components.



## FFFFFLASH

GKN Offhighway was at the 2006 edition of Agrishow, the most important agricultural sector trade fair in South America (Ribeirão Preto, Brazil, 15-20 May).

More than 130,000 visitors came to the fair. Six hundred companies from around the world exhibited their wares (1,200 dynamic demonstrations took place in an exhibition area of 240 hectares). These are the basic facts and figures for the event, at its thirteenth edition. Commercially speaking, this is one of the three major farming sector events worldwide.

GKN Offhighway was there with representatives and products from the entire division. The Brazilian event was the occasion for unveiling the company's new communication strategy (planned for future trade fairs, with the participation of the various group companies, each representing its own specific area of activity). The objective is the development and promotion of an overall image embracing the many solutions that only a fully comprehensive, structured body such as GKN Offhighway can provide. Info: [www.agrishow.com.br](http://www.agrishow.com.br)

## > Bits and pieces

# The key to success

Famous universities and prestigious master's programmes are not all it takes to train a successful executive. Customer and colleague credibility and respect from collaborators are assets which managers can only hope to obtain by field work. Successful managers must show in all their dealings in all corporate areas that special quality called, according to the military jargon, "aptitude for command". Managers with aptitude won't waste their time looking for someone to blame when something goes wrong. They will look for solutions. They don't want yes-men around whose only job is taking

orders from somebody else. They will provide the motivation to go after ambitious goals. They do not fear comparison, and any criticism they receive they see as an occasion to learn something new and hence improve. Managers who know the art of command know that being determined to get something done has nothing to do with being aggressive and that value also means being aware of the value of others.

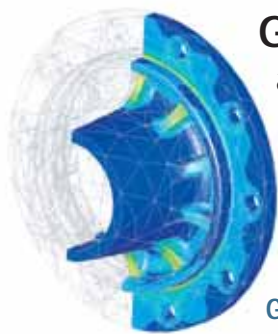
Aptitude for command is not something you're born with. It's something you must cultivate within yourself day by day. You

must train your character so you will be able to cope with snags and upsets, when they arise, without losing your patience. You can get a lot of practice during peak traffic hours. As you sit at your wheel and wait, without getting all tensed up with all the other drivers around you and in your way, you learn self-control, a part of what leadership is all about.

*Alessandro Bolla, content and communication manager, partner Soluzioni s.r.l*



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