

POMA news

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P O M A G A L S K I N E W S P A P E R

EDITORIAL

Adaptation to clients' needs and innovation are our daily aim, so that we can meet your highest expectations. Every one of us is continually striving to give the fullest attention to your needs.

At POMA, there are no 'off-the-shelf' solutions. We have learned to be flexible in our thinking, to react quickly to your changing requirements, and to be ready to go with you in whatever direction your business takes you. There are plenty of recent examples to illustrate this point: We have developed a special angle station half-way along the Dubai indoor ski slope to take account of the curve in the slope, we built a high capa-

WE MOVE FORWARD, WITH YOU



city chairlift at L'Alpe d'Huez capable of carrying 3 600 skiers per hour in full comfort, we gave a firm undertaking to re-open the Bellecôte gondola lift at La Plagne in less than five months when said it appeared almost impossible, and we developed a solution for Lélex-Crozet in the Jura involving renovation, new construction and even the relocation of a skilift in order to meet an ambitious project within a tight budget. In the autumn of 2006, we will deliver an extraordinary gondola lift in Vietnam with towers on off-shore platforms, some of the towers more than 120 meters high!

We believe that our customers are our most valuable capital resource and the driving force behind our future growth. Our main source of motivation is to listen carefully to your specific requirements, from the most precise specifications to the less clearly expressed, so that your problems become ours.

I look forward to meeting you on the POMA booth (No. 420 in row 4) at the SAM exhibition in Grenoble from the 26th to the 28th of April. A warm and friendly welcome awaits you from our Sales and Technical teams who will be pleased to show you our latest installations. An excellent opportunity to come and discuss your future projects!

Jean GAUTHIER
Chairman of the Executive Board

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POMA : Rising to the challenge

POMA has been presented with two major challenges in recent months: The reconstruction in record time of the gondola lift terminal at Bellecôte (La Plagne) and the redevelopment of all the aerial lifts at the Lelex-Crozet resort in the Jura mountains.

In the morning of the 5th August 2005 a fire broke out in the terminal of the Bellecôte glacier gondola lift at La Plagne, located at 3050 meters altitude. The terminal collapsed and the rupture of the 39.8 mm track cable in the heat caused the destruction of five gondolas, one tower and three cross arms. POMA responded immediately and by early afternoon a team of experts were at the site. The challenge was accepted later that same evening: The gondola lift will re-open in time for Christmas!

"The POMA team was immediately aware of the potential damage to our resort", states Bernard Chancel, Chairman and CEO of the La Plagne development company. "The engineering department was exceptionally efficient and replacement parts and assemblies were delivered in record time, meeting every deadline in a schedule that many thought was impossible. Congratulations to these people who worked tirelessly on site under extreme conditions". The challenge was really demanding: Four and a half months to carry out work that would normally have taken nine, without even considering the difficult access to the site. "We had to call on all our resources, even to the extent of working seven days a week",

POMA: Creative solutions



THE NEW G6 TERMINAL, BELLECÔTE GONDOLA LIFT.

notes Jean Souchal, Director of Services. But he goes on to add, "We would have done the same for any of our customers".

A little further to the north, in the Jura, POMA was faced with another unique challenge: The redevelopment of all the aerial lifts at the Lelex-Crozet resort. The Jura Gessien joint syndicate issued a call for tenders for the design and installation of a full set of new aerial lifts. "This was a superb challenge. The specification left us com-

pletely free to exercise our creativity", recalls Sébastien Martin, Customer Relations Manager for France and Andorra. In place of the three old skilifts, POMA proposed a three-part solution: Modernization of the Catheline six-passenger gondola lift, the construction of a MULTIX six-seater detachable chairlift for the high-altitude section of the resort, and the relocation of the Montoissey skilift. "We are always ready to innovate in order to identify the best solutions for our customers" explains Didier Balavoine, Area Sales Engineer. Even if it means moving an entire ski slope!

Safety

Launch of the Hi.Gard system in Europe

Developed by POMA in the USA, the Hi.Gard system, Cable Position Switch, overcomes the risk of derailment of the carriers traveling on the cable.

Increasing the intelligence built into the system! The use of the Hi.Gard improves the reliability and availability of aerial lift installations. "The position of the cable on its supports is a major safety consideration. When the wind is increasing, the installation must be shut down before it gets strong enough for a localized gust to derail the cable onto the cable catchers at one of the supports on the line. With the Hi.Gard system, we can now monitor the situation at each cable support and take action precisely when needed, not too soon and not too late", observes Frankie Tamisier, Director of Development and Products. Shutting down the lift unnecessarily or as a result of a derailment can seriously hamper traffic flows in the middle of the winter season.

The technology used in the Cable Position Switch has been developed and tested by POMA over a period of several years. Today, the Hi.Gard technology is mature and completely understood. All POMA detachable lifts installed in the USA are fitted with the Hi.Gard system. The Hi.Gard has been proven to reduce the number of operational shut-downs while providing important reassurance for the operator. Electronic device built to comply with European standards, the Hi.Gard monitors the position of the cable on the sheaves in a sheave train. "As soon as the lateral movement of the cable



THE "HI.GARD" SYSTEM IS FITTED TO ALL THE POMA INSTALLATIONS IN THE USA, SUCH AS THIS VILLAGE EXPRESS 6-SEATER CHAIRLIFT AT SNOWMASS, COLORADO, INSTALLED IN 2005.

exceeds an acceptable threshold, two sensors fitted to the sheave train send a signal to the monitoring and control panel. This signal automatically slows down or stops the lift depending on the magnitude of the displacement before the derailment threshold is reached", explains Frankie Tamisier. The Hi.Gard can be fitted to all types of lift, including those already in service.



Technology

MULTIX 6 XL : High capacity skiing

Up to 3600 passengers
per hour: A record
for the new Romains
six-seater detachable
chairlift at L'Alpe d'Huez.

Gone: Three skilifts, around thirty towers and six terminals. Replaced by: One MULTIX 6, size XL, two terminals, ten towers. Jean-Charles Faraudo, Chairman of the Executive Board of SATA and his team are impressed. The latest in the range of POMA detachable grip chairlifts is already achieving an outstanding performance and is well on the way to a successful future career. The revolutionary technology used in this lift is capable of

carrying up to 3600 passengers per hour while maintaining a smooth passage through the terminal. "The layout of the terminal is similar to a slip road on a motorway. New traffic can easily enter the main flow" summarizes Christian Bouvier, Commercial Director for France and Andorra. It is fast, but not frightening. What is the secret of the MULTIX 6 XL? "We have modified the radius of the contour in the loading area, making it longer and wider. The departure terminal has been designed with a single radius followed by a double radius with a positioning conveyor to synchronize the various phases in loading the skiers. The chairs simply slot into the flow of departing skiers", summarizes Jean-Paul Huard, POMA Director of Operations. The system is ideal for inexperienced skiers and children who feel completely safe while quickly reaching the start of the ski runs. Yann Carrel supervised the entire installation (mid June to mid November 2005) and observed the first passengers on the lift: "The first passengers were a ski instructor and a group of children, an ideal test. As soon as I saw them seating on the



THE MULTIX 6 XL AT ROMAINS: COMFORTABLE, FREE-FLOWING TRANSPORT FOR 3600 SKIERS PER HOUR.

chairlift without anxiety or hesitation, I knew that we had a winner". These positive first impressions were confirmed a month later by

Eric Muller, Mayor of l'Alpe d'Huez and Chairman of the SATA Board, "The first weeks of operations have been very satisfactory. Our expe-

rience has confirmed the ease of use and reduced traveling times enjoyed by visitors to the resort and SATA customers".

Testimonial

"Exemplary cooperation"

Zhang Tongsheng,
Chairman
of the NINGFA group,
main investor
in Tianmenshan
Scenic Spot.



"Our group has great confidence in the Chinese tourist industry. After developing its activity in the property sector, it has now become involved in a number of projects in various provinces in China - Sichuan, Hainan and, of course, Hunan.

For our first major project at Tianmenshan Scenic Spot, in Hunan province, we decided to work with a foreign manufacturer and POMAGALSKI was our choice. Our companies worked hand in hand for 3 years to complete the project. The task was not an easy one but, right from the outset, the POMA team were the only people who really believed in this unique and exceptional lift. I would like to stress the fact that the

Tianmenshan gondola lift is among the most spectacular in the world. We have now begun working with POMA on a new project - this time for a jigback line. As we are keen to use the very latest in technology, the lift will be the first one in China with a built-in rescue system. Approval from the Chinese inspection authorities was gained through close cooperation between the French and Chinese authorities. Building work should be starting in the next few months!"

Gondola lift

2005 installations



THE TIANMENSCHAN GONDOLA LIFT, IN HUNAN PROVINCE, CHINA, IS 7.3 KM LONG IN TWO SECTIONS.



THE SKY CAB PULSED GONDOLA LIFT INSTALLED AT SNOWMASS, COLORADO, WITH 6-SEATER DIAMOND GONDOLAS.



THE GULMARG GONDOLA LIFT IN KASHMIR, INDIA THAT RISES TO AN ALTITUDE OF 3 992 METRES.



THE ROC DES 3 MARCHES ARIANA 8 REPLACES A 4-SEATER GONDOLA LIFT AND A 4-SEATER CHAIRLIFT AT MENUIRES.

THE GONDOLA LIFT AT FUNCHAL'S BOTANICAL GARDENS ON THE ISLAND OF MADEIRA.



MODERNISATION PROGRAMME FOR THE TRACKS AND CABINS DIAMOND 6 FOR THE CATHLINE GONDOLA LIFT AT LELEX, IN THE DEPARTMENT OF AIN, CONSTRUCTED BY POMA IN 1982.



Indoor skiing

Skiing in Dubai?

POMA makes it possible !

The indoor ski center in the Dubai desert has set new standards in indoor skiing. POMA has matched this achievement in developing, with standard grips, the world's first fixed grip chairlift with a line angle.

Nothing is too good for the Emirate of Dubai. "The Europeans have ski resorts with snow in winter? Our ski resort is open throughout the year!" boasts this citizen of Dubai taking his lunch-time ski lesson before returning to work.

The largest artificial ski resort in the world - the size of three football pitches - Ski Dubai opened on the 2nd December 2005. Thousands of cubic meters of groomed snow where you would normally expect to find desert sand. In the Emirate of Dubai, everything is possible!

Philippe Adrien, POMA Export Director, is not about to argue: "We were awarded the contract for the cable lifts, one chairlift and one skilift, but there was a major problem: We had to develop an aerial lift system capable of turning through an angle of 30° half-way up the slope".

A unique challenge for POMA, who based this UNIFIX 4 lift with a line angle on a design created by GIMAR MONTAZ MAUTINO in the 1990s. This lift is the first in the world to incorporate an intermediate terminal at the point where the ski slope changes direction



THE UNIFIX 4 AT DUBAI'S SKI DOME, THE FIRST FIXED GRIP L-SHAPED CHAIRLIFT.

at which skiers can leave the lift (see POMA INFOS No. 14, page 1). This skilift is proud to stand alongside its companion chairlift. For the skiers, it is an attraction on its own. POMA knows how to be flexible, whether at the top of a mountain or in the sands of a desert. The installation was not without its problems due to the hot and humid climate and the lack of experience of aerial lifts on the part of the local teams. "This has been a major challenge, right to the very end", admits Aurélien Roux, POMA site manager at Ski Dubai. "It was very difficult working in a dusty confined space at a temperature of 50 °C before the cooling system was switched on in the dome. It is not much easier working on the site now, having to move frequently between 50 °C outside and -7 °C inside".

Ski Dubai : Key numbers

- Cost of the indoor ski resort: \$ 270 million
- Surface area of the Emirate of Dubai : 3 885 km², mainly reclaimed from the sea
- Capacity: 1500 visitors, 400 000 visitors per year expected
- Ski area: 22 500 m² of ski runs
- + 40 °C outside, - 7 °C inside
- Longest ski slope: 400 meters
- Vertical rise: 62 meters
- Two POMA aerial lifts, including one chairlift and one skilift
- 6000 tons of real snow at all times inside the ski dome
- 30 tons of powdery fresh snow produced each night by snow guns



COURCHEVEL, THE GRANGETTES GONDOLA LIFT. REPLACEMENT OF THE "BUBBLES" BY DIAMOND 4 GONDOLAS FOR THE GONDOLA LIFTS AT PRAZ AND GRANGETTES, CONSTRUCTED BY POMA IN 1970 AND 1975 RESPECTIVELY.



COURCHEVEL, THE PRAZ GONDOLA LIFT.



THE MARMOTTES GONDOLA LIFT AT ISOLA 2000, FITTED WITH DIAMOND 8/10 GONDOLAS HAS SWING-AWAY SEATS TO INCREASE PASSENGER CAPACITY AT PEAK TIMES.



Skilifts keeping up with demand in Amnéville

Following in the footsteps of Dubai, Spain, the Netherlands and Great Britain, POMA has now supplied aerial lifts to the first indoor ski center in France which opened on the 9th December in Amnéville les Thermes, north east of France. On the slopes of the largest slagheap left by the old steel works, the Mayor, Dr Kiffer, has completed one more component in his ambitious project to create a multi-activity center (see POMA INFOS No. 14, page 2).

The new center has very quickly established itself. "Our customers come from the local area, and from as far afield as Luxembourg, Belgium and even Germany", states Jean-Marie Risse, the technical manager of the 'Snow Hall', who did not hesitate to abandon the slopes of Deux-Alpes - where he was ski area manager - to take over this small scale version of a ski resort. A native of Amnéville (which may explain his decision), he has no doubts as to the potential of an indoor ski center. "This is a fantastic product in an area such as ours. It is ideal for all those wanting to learn to ski and for regaining your



SOLIS SKI-TOW FOR THE AMNEVILLE "SNOW HALL" IN MOSELLE.

'ski legs' before leaving for the mountains". With 217 400 passengers carried during the first two months of operation, and a record of 7200 in a single day, the SOLIS skilift, designed to carry up to 800 passengers per hour, has hardly had time to draw breath, and certainly could not afford time for a breakdown. "There must be the minimum possible breaks in service or the customers will simply leave

the center", observes Jean-Marie Risse pointedly. After extensive testing and fine tuning, André Revenant, POMA Skilift Systems Engineer, is very confident: "In an outdoor ski resort, our lifts are never called upon to operate on a continuous basis. At Amnéville, the skilift operates seven days a week, with up to 14 hours of continuous operation on Fridays and Saturdays. That's what it was designed for!".



Organization

Development and maintenance of products under the same roof

By bringing together the Development Division and the 'Product Expertise' Center from the Direction of Services, POMA will take advantage from the return of experience in order to provide a better service.



THE DEVELOPMENT AND PRODUCTS DIVISION PARTICIPANTS.

Creating and designing cable transportation systems for tomorrow is a noble enough aim in itself, but POMA also wants to provide a service that is continually adapting to meet the changing demands of our customers. This requires a program of constant improvement that applies equally to the internal POMA organization.

For many years technological innovation has been the task of the New Products Development Division, a team of 'aerial lift researchers' whose experience acquired over the decades is worth its weight. However, observing the latest developments in the market, Jean Paul Huard, Operations Director, arrived at the following conclusion: "The new installations requested by our customers have now reached such a high technological level that they must make full use of the experience acquired by our Services divisions from installations currently in service. It would be a shame to ignore this valuable resource in the form of experience gained from our customers and in the field".

Who better than the Services and Products Experts, responsible for managing products throughout their life cycle (renovations, modifications, etc.), to provide this customer feed-back? When asked, the Director of Services, Jean Souchal agreed: "Let us pool our resources in order to provide a better service to our customers!".

That is why the Products and Development Division came into being in the Spring of 2005, bringing together the two teams under the same roof. The leadership of the Division is also drawn from both organizations. Frankie Tamisier leads the Products and Development Division with the assistance of Jean-Pierre Battistini, previously manager of the Services and Products Experts. Eight months later, the verdict is clear for Frankie Tamisier: "The improvement in performance is clear: Our New Products engineers are making good use of the experience gained by our Products Experts in the field to design flexible solutions capable of developing over time. The Products Experts, for their part, now have access to a higher level of technical expertise that can only benefit our customers throughout the life of their installations".

A chairlift over an 18-hole golf course

At first glance, nothing could be easier than replacing a 450 meter long chairlift over almost level ground (a vertical rise of just 80 meters). But not at Les Gets! Since the original Nabor two-seater fixed grip chairlift has been installed by POMA twenty years ago, a golf course has been built underneath the towers. A headache for Gilles Vibert, Head of the New Installations Division and Etienne Million, Operations Supervisor. They had one consideration above all others: "How to minimize the impact on the golf course!". They pulled out all the stops to reassure the golf course managers: "We carried out all the work using a helicopter in order to avoid damaging the fairways, in spite of the site being easily accessible by lorry", comments Etienne Million.

The installation of the UNIFIX 4 four-seater fixed grip chairlift was completed in record time: Ten weeks instead of the normal fifteen. There is very little time between the end of the golf season and start of the winter skiing season! "We visited the site well in advance to gather all the data needed to prepare a detailed schedule for the installation. We then worked day and night in order to complete the work on time". On-time delivery and no damage to the environment. Just two examples of the care taken by the POMA teams.



THE NABOR UNIFIX 4;
VIEW OF THE SNOW-COVERED FAIRWAYS
OF THE GETS GOLF COURSE.



IN SHORT

VIETNAM

A gondola lift on the high seas

Stranger still than aerial lifts serving snowy mountain tops or hilltop towns: A gondola lift linking a town to... an island! The world's first such gondola lift has been installed by POMA on the Vietnamese coast linking the town of Nha Trang and the tourist island of Hon Tre. The two are 3316 meters apart. Nothing is too good for those staying in the five star hotel on the island. They can make as many crossings as they wish between the mainland and their holiday resort. The gondola lift consists of 47 eight-passenger DIAMOND gondolas capable of carrying up to 1000 passengers per hour. The line is designed for a maximum of 65 gondolas, enabling the capacity to be later increased to 1500 passengers per hour. The construction, started in October 2005, has a number of unique features: There are nine towers, of which six stand in the water. Some of the towers rise to almost 70 meters above sea level, providing a clearance of 55 meters for the passage of cargo ships under the line. As these towers are built on off-shore platforms which are themselves almost 60 meters high, the total height of the supports is around 120 meters!!! The span between towers has an average of 450 meters, a value only made possible by a number of specific solutions developed by POMA. The lift is expected to be handed over to the client in October 2006.

SPAIN

A surprise from above

POMA aerial lift transportation systems are equally at home on the mountain or in the town! Since the 14th October 2005, the Esparraguera aerial cable car, operated by Ferrocarrils de la Generalitat de Catalunya (FGC), has changed the daily lives of those living in this northern suburb of Barcelona. Esparraguera is a small residential township situated high on the top of a hill. It used to require a great deal of patience to live there as the access roads were regularly jammed with traffic. Now, the local inhabitants have abandoned their car keys in favor of public transport, and have flocked to the new aerial lift from the day it first opened.



With 10 500 passenger journeys in the first five weeks of operation, the new aerial lift is set to be a great success. "This is a method of public transport that generates a lot of interest. It is quick, comfortable, attractive, cheap, and environmentally friendly. It is an ideal solution for providing access to elevated residential areas, or those surrounded by natural obstacles. These are the comments I have heard most often from the operator and passengers", confides Bernard Choukroun, Deputy Export Sales Director. Esparraguera is now just four minutes from the Olesa de Montserrat railway station at the foot of the hill, from where the center of Barcelona can be reached in just twenty minutes. In a race with a car, there would be no need for a photo finish, but there is a fine photo opportunity in the beautiful view as the lift crosses the river between two towers with a 500 meters span!

SWITZERLAND

The golden plateau of Villars

There is something odd about the MULTIX 8 passenger gondola lift recently designed for the Télécabli Villars Gryon company in Switzerland! The specification set by director Pierre Besson included one request that was unusual to say the least: As well as carrying passengers, this gondola lift had to be capable of delivering food and water to the Roc d'Orsay restaurant located at the top of the ski area. No problem! The POMA design teams came up with an ingenious solution: A dedicated garage track in the terminals for loading and unloading a water tank and containers for food and waste. An automatic switch gate provides access to the dedicated garage track and the addition of this system has required a modification to the cable speed entering and leaving the terminals. The new lift will be installed this year replacing the four passenger Villars-Roc d'Orsay gondola lift built along the same route in 1959 and renovated in 1984. The capacity will be increased to 2000 passengers per hour (6 m/s). We wish the skiers 'Bon appétit'!