

**Dear Readers,**

15 years of Maurer Rides; that is not a big anniversary. But these 15 years have been marked by innovations that are changing the market – and that is no coincidence.

Behind the 15 years of Maurer Rides, there is a much longer tradition: In 1964, Anton Schwarzkopf created his first roller coaster in an all-steel design. That was



the start of a success story that is also the story of Maurer, because Maurer Rides goes back directly to Anton Schwarzkopf. More than 2,000 steel roller coasters have since been built worldwide. Today, with the revolutionary X-Car and increasingly adventurous roller coaster layouts, Maurer rides count as the most innovative in this area. This is backed up by upon state-of-the-art planning programs, high-precision production technology, and comprehensive project management.

Jörg Beutler  
Chairman of the Board

## UNIVERSAL STUDIO'S – RIP RIDE ROCKIT Worldwide Highest Unique Lift



**IAAPA**  
Attractions  
**EXPO**  
Orange County  
Convention Center,  
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Booth No. 4828

### CONTENT



**Multimedia Car for Universal**



**15 Years of Maurer Rides**



**Indoor Spinning Coaster for Saudi Arabia**

## Record-Breaking, Multi-Sensory Roller Coaster Maurer builds an exclusive coaster for Universal Orlando Resort in Florida

The worldwide highest unique lift with a record breaking loop and the most superb video, light and sound technology – a roller coaster of the superlative kind is due to open in spring 2009 in Orlando FL "Hollywood Rip, Ride, Rockit" combines the ideas of the Universal entertainment professionals with the technical know-how of the roller coaster manufacturer Maurer Rides Munich.

"Rockit" – the roller coaster short name defines the whole program: While boarding, the guests can choose what kind of music will accompany them on their fast-paced ride. In this process, the roller coaster manages the fine balancing-act between the superlative and the family ride. Rockit has an extraordinary high capacity and an impressive Omnimover loading station.

### Unique Lift as an Eyecatcher

The roller coaster is already an eyecatcher from a distance. This was not an easy job because the Universal Orlando Resort is already well-known for its outstanding attractions. The world-wide highest unique Lift emerges with a height of 51 m (167 ft) and is equipped with the technically best security in the world.

### Innovation: World Record Loop

Universal's specification has led to a new development – the integration of thrills and special elements with no inversion. Maurer has solved this challenge with a new World Breaking Loop System. This new one-of-a-kind-loop with its towering

height of 41,5 m (136 ft) ranks among the highest Loops ever built.

### Full of Electronics

With over 1100 m of track length it is the biggest X-Car Coaster built by Maurer Rides. The elongated layout with a total of four airtime elements and suspenseful steep-curves captivates the passengers with one of the longer coaster experiences available including fantastic moments, surprises and just as many thrills. The custom-made sound system is integrated at head level. Also included, is a video camera that records the whole ride. The guests can purchase a music video once the ride is over.

Further highlights are some very close interaction with existing buildings wall

over the heads of waiting guests at loading and then out to the lake by the City-Walk Entertainment District. Special theming is also included in the ride vehicles with high-capacity LED's.

Rockit Orlando is due to open in spring 2009.

### Data and Facts

- Custom-Designed X-Car Coaster
- Height: 51 m (167 ft)
- Track Length: 1150 m (3772 ft)
- Max. Speed: 105 km/h (65 mph)
- Number of Vehicles:  
7 X-Car Tandems with  
12 seats each

# Brand-new Roller Coaster announced in Universal Orlando Resort



Illustrations: Rockit by Night

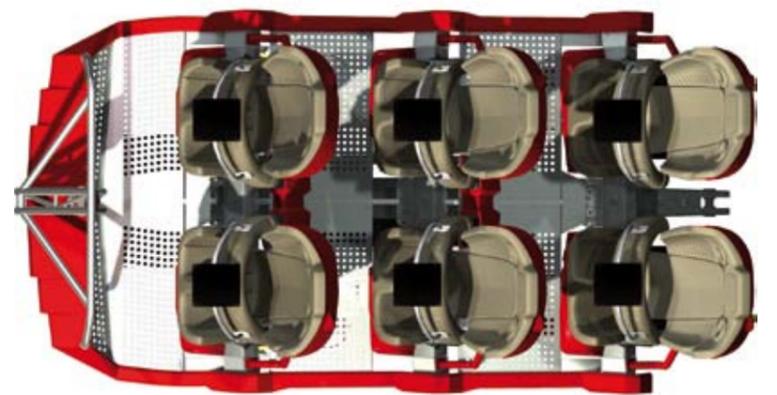


Worldwide Highest Unique Lift

**"This is the perfect intersection of the digital age and theme park entertainment,"** said Mark Woodbury, President of Creative for Universal Parks & Resorts. **"Hollywood Rip, Ride, Rockit blends roller coaster intensity and guest interaction in a way where no two experiences will be the same."**



Side View Multimedia Car



Top View Multimedia Car

Graphics: new artwork from Universal

## Spinning Experience at the VORTEX-Mall of Arabia-Jeddah

**Maurer Rides about to build Spinning Coaster in Jeddah, Saudi Arabia ordered by F. Al Hokair Co. and the FEC Developer Abdul Mohsin Al Hokair Group for Development and Tourism**

Roller coaster trip through the entertainment center. At the EAS Show in Nice, a contract was concluded with the Munich-based roller coaster specialist Maurer Rides. Maurer Rides will delight passengers with a Spinning Coaster, which will be perfectly integrated into an entertainment center.

As is typical for a Maurer coaster, the action-packed experience begins right from the start. From a mid-level platform the passengers make their way downwards along five rapid curves with the spinning effect unleashing immediately. Just shortly after arriving on the lower level, a lift takes the 4-seater vehicles to a height of 18 m (59 ft) – offering a fantastic view of the entertainment center. However, there is no time for tranquility on this eventful course. The tracks barely wind around a column, when the passengers already find themselves plunging down again. The drop features a small bump – airtime.

### Complete Integration

The Spinning Coaster will be superbly integrated into the building, with its tracks winding around individual structures, shops and other amusement rides. A particular achievement will be the Immelmann element, where the tracks wrap around other amusement rides. Combined with the spinning effect and all the glittering features of the center, passengers will slightly lose their sense of orientation.

In the block brake, rides are offered only a little time to catch their breath and gather their senses, because in the next moment, they race around the freefall tower in a spectacular omega curve before heading towards a climbing wall which is narrowly avoided. A 360-degree turn takes them round the climbing wall and back to the station.

The complete shopping center has been designed by the design company Forrec, Canada. Its opening is scheduled for 2009.



Overview VORTEX Mall



### Data and Facts

- Spinning Coaster SC 3000 Custom Designed
- Dimensions: 110 m x 60 m (360 ft x 197 ft)
- Height: 18 m (59 ft)
- Track length: 450 m (1,476 ft)
- Capacity: 700 pph
- Maximum speed: 64 km/h (40 mph)
- Total riding time: 75 sec
- Number of vehicles: 5

Graphics: Forrec



Photo: Tim Herre

When the first rumors began circulating that Helsinki's amusement park Linnanmäki was to receive a custom made Spinning Coaster 3000 from Maurer Rides speculations arose: where would the construction be installed? Some even feared the dismantling of another ride, after, the park is located on a hill high over the Finnish capital and is not particularly blessed with a lot of space. However, the Finns were resourceful – and requested Maurer Rides to erect the ride over the outward jutting Rafting ride.

The unusual location is simultaneously a big chance as it's very rare to be able to experience this type of intensive interaction between two ride constructions. The Rafting ride also suffered under the ever-

present lack of space in its time, and as a result to a large degree comprises of a narrowly combines serpentine. The new coaster has been built over many of the hairpin curves. 90% of the ride course leads over the rapid floodwaters of the "Hurjakuru", the typical Finnish name for the rapid ride.

"Salama", the name of the novelty, means "lightning" and after the Faarup "Lynet", it's already the second Scandinavian attraction with this name in 2008. Luckily the producers were a lot more creative in the planning of the track course as in naming the ride and with that "Salama" is a great construction – perhaps not quite as good as the top of the class "Dragon's Fury" in Chessington World of Adventures,

but almost on par. The first drop is particularly interesting, which at the beginning goes into a light S-curve from a great height, causing the cars to rotate decently before the tracks drop steeply and go directly into an Immelmann-turn. The track ascends again, travels into a right curve and then reaches the first block – and breather brake. This is followed by a drop to the right into an overbanked turn over the exit of the Immelmann-turn, and then goes back up to the right into the second track section is a little similar to the first. Another round follows over the water ride, however this time the track is flatter, which provides a completely different ride experience. This is followed by an extreme dropping curve to the left – yes, at long last in the opposite direction – that sends



Photo: Mathias Scherz



Photo: Tim Herre

the wildly rotating cars over a small hill and another left curve into the final brakes.

Not least due to the unusual setting, "Salama" is a successful construction. Despite the very compact track course, "Salama" rotates the cars decently even during a balanced loading. There's nothing more frustrating on a Spinning Coaster than when the cars don't rotate. This however is not the case on the twentieth delivery of the "SC 3000" from Maurer Rides.

Everybody is satisfied with the results: Park Manager Risto Raikkönen, who deliberately shows Maurer Rides after a number of personal tests in, amongst others, Chessington and Alton Towers, and the public which has another top coaster of German production in the park. And the passengers in the Rafting – they also have something to look at now.

Text: Tim Herre,  
Kirmes & Park Revue No. 08/2008

#### Facts

- Track length/ Track height: 420 m/17 m
- Max speed: 60 km/h
- Ride duration: 40 sec (lift/braking), 70 seconds (station/station)
- Capacity: 600 pph
- Manufacturer: Maurer Rides, Munich, Germany
- Operator: Linnanmäki, Helsinki, Finland

# 15 Years of Maurer Rides

## The name Anton Schwarzkopf commits Maurer Rides: to tradition and innovation

**Anton Schwarzkopf produced its first roller coaster completely in steel in 1964: This was the start of a success story. Well over 2,000 steel roller coasters have been built worldwide since then. Today Maurer Rides are regarded as among the most innovative in this sector and that is not a matter of pure chance: The company history that now spans 15 years goes right back to Anton Schwarzkopf.**

Anton Schwarzkopf was the roller coaster maker that was the most in demand in its time, with over 100 rides being produced. Acting as a supplier for the Schwarzkopf rides, the structural steelwork sector of the Bayerische Berg-, Hütten- und Salzwerke AG (BHS), a government-owned enterprise with production facilities in Peißenberg, located around one and a half hours from Munich, developed and proved its worth. When Schwarzkopf GmbH went out of business in the mid-1980's, BHS took up the Schwarzkopf business without a break and completed the four-looping "Thriller" that was still being worked on. It also took over various items of machinery and equipment,

### Without a hitch: Maurer takes over amusement sector

When BHS was privatized in the 1990's, the long established Munich-based company Maurer Söhne took an interest in it – although mainly to be able to take over the highly qualified staff. During the discussions it came out that the entire business sector of "Amusement Rides" fitted perfectly into the portfolio of the Munich-based steelwork and industrial plant builder. In addition to its traditional fields of bridge building and structural steelwork, Maurer Söhne had long been associated with mechanical and plant engineering, and has always been committed to innovative product ideas. The negotiations that were held a good fifteen years ago quickly came to the point: The manufacture of roller coasters with all the employees and machines was continued in Peißenberg, although under the management of Maurer Söhne from 1993 onwards. The company that was set up later for this purpose was given the name Maurer Rides GmbH.



Photo: Venus Coaster, Space World Japan

including Schwarzkopf's large and famous pipe bending machine that had been designed to its own specifications.

### A first: Elastomer bearings to reduce noise

With consultation from Anton Schwarzkopf, in 1987 BHS builds the "Lisebergbanan" for the Liseberg park in Sweden, which at that time was the largest stationary roller coaster in Europe and was the first in the world to be equipped with elastomer bearings to reduce noise. A number of other large customdesigned coasters followed, and a special one was the "Olympia Looping" in 1989, which even today is still the biggest transportable looping roller coaster in the world.

### Suitable for families: Wild Mouse beats out roller coasters with trains

Traditions are one thing, but only innovations make a company successful in the long run. In 1996, Maurer constructed the last big custom-designed looping coaster with trains according to the Schwarzkopf/BHS system in the Space World park in Japan. The future is called "Wild Mouse". These flexible tracks with their individual cars have been a huge success on the market, around 20 were built in the 1990's, and MAURER thereupon shifted its main focus to rides that are especially suitable for families.



MAURER X-Car Launch Coaster (Photo: Jochen Peschel, Formule X, Drievliet Family Park, Netherlands)

### Innovative: Spinning and freefall tower

The development of a further family coaster had been consistently pursued and in 1999, the new ride was put into operation as the world's first freely rotating spinning coaster that was certified by the TÜV. Since then, it has been continuously developed further and has likewise made its way up to become another successful product with over 20 projects so far.

At the same time the roller coaster makers in Munich were dreaming of going higher, turned the rails into verticals, and so invented the first Power Tower. The tallest transportable freefall tower was produced five times between 1998 and 2002. This all showed one thing: Maurer rides were in great demand. But although the production capacity was optimised, the distances between Munich and Peißenberg held the company back in its push forwards. The rented space in Peißenberg was given up in the year 2000. The employees and the machines moved to Munich and into a newly built assembly hall in the main factory.

### Doing the basic research Maurer Söhne Foundation

Due to economic pressures, in normal cases companies restrict their research to bringing about concrete product developments. However, genuine technical progress and innovation often only come about due to pure basic research that has the freedom of possibly good or bad results regardless of any economic benefits. In order to make a contribution of this kind, Maurer Söhne has donated a million dollars to the non-profit "Maurer Söhne Foundation".

The "Maurer Söhne Foundation" promotes basic research into technical dynamics. This is aimed at projects in areas such as the construction of transport routes, protection against earthquakes, and preventing accidents in the various forms of transport. Among other things, technical regulations that have up to now been based on experience are to be put on a scientific basis. Regarding the construction of roller coasters, the relevant topics here are acceleration limits and safety devices, for example.

### Dramatic effects: Tilting, hinged and drop tracks

The new proximity of development, production and sales gave the company new wings. The designers were working on a whole new set of novelties and innovations. "Tricktracks" is the overall term for all kinds of mechanical special effects such as seesaw, tilting, hinged and drop tracks. In 2001, the curtain rose for the first time on

tricktracks with the opening of the two "Winjas" spinning coasters in Phantasia-land, Germany. A further highlight of the Winjas is a high-speed vertical lift. But for all this technical refinement the designers always keep the passengers in mind: surprises, moments of fright, uncertainty – it has to be "a great ride." The special challenge for the design engineers is that they have to work so perfectly and come up with so many ideas that at the

end nobody notices anything at all of the technical side. For example, in the case of the tricktracks this involves a technical mastery of the interrupted track. Under no circumstances may a car go beyond the open end of the rail – the very latest safety and control techniques are the solution for this.

### Powerful: XTRAC™

Apart from the moments of fright, the complete layout of the track is extremely important. Customdesigned layouts were a leading topic for the Maurer engineers right from the earliest days. Back in the 1990's, the company started using its own computer programs to calculate the dynamics of the track, and the breakthrough came in 2001: The software was changed over to a completely new, object-oriented basis and reprogrammed to the very latest standards in collaboration with the University of Duisburg. Result: The MAURER XTRAC™ roller coaster track layout system, which has been used since 2002 to calculate all Maurer tracks. The programming has been continuing right up to today and thus it is becoming an ever more powerful tool that allows completely new roller coaster layouts.

### Coupled: XCAT™

XTRAC™ did not remain alone but found its continuation in XCAT™ in 2003. The new production method is in practical terms the extended arm of XTRAC™ up to the manufacture of the rails and made it unnecessary to set up the track temporarily on the company premises, as had always been done before. The track is set up virtually in the XTRAC™ planning tool, the individual parts are created with the aid of the coupled, industrially highquality measuring technology of XCAT™. As one of the few makers to do so, Maurer thus carries

out inhouse the complete planning and rail production according to the very latest uniform standards. This saves time and going back and forth, and has made possible a level of quality that has not been reached elsewhere. The exceptional rail quality and the high-precision, sharply curved rail sections that have only seldom been realised elsewhere are the direct result of this comprehensive capacity. But indirectly, this also formed the basis for the new big leap forward in technology: Maurer founded a new generation of roller coasters with the MAURER X-Car™ coaster.

### Courageous: Upside down without shoulder restraints

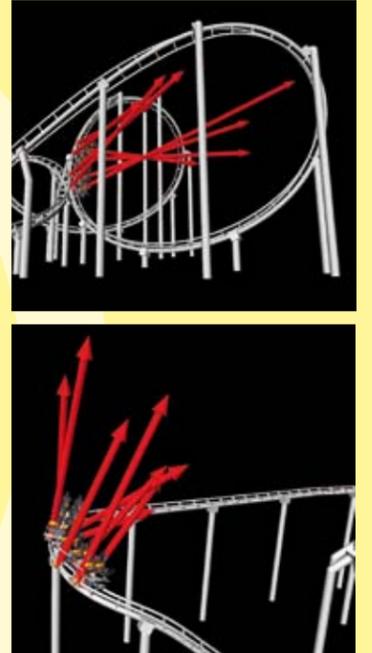
The development of the X-Car was based on a consistent commitment to question everything that had been known up until then. As always, a superlative ride experience was the goal and hence the intention was to specifically avoid anything that could get in the way of the ride experience. The requirement took courage, and the result was a radical departure: The shoulder restraints that squeeze in the passenger and rob him of a good view by paying tribute to safety disappear. The XCar was a sensation at its premiere in 2004 – appropriately enough, in an exceptional installation, the SkyLoop with its unique inversion lift.

The bold step taken by the developers also requires a certain amount of bravery on the part of the passengers: For the first time ever, they can "enjoy" the forces as they are lifted up, without any interfering shoulder restraints, and this in the highest inversion worldwide into the bargain. It is always a breath-taking experience to first take the vertigoinducing high vertical lift and then to slowly travel into the upside down position approximately 50 m above the ground and to be apparently pulled out of your seat with your upper body unsecured.

### The perfect track: MAURER XTRAC™ and XCAT™

The tracks are the heart of every roller coaster. For that reason, Maurer constantly works on optimizing the development and manufacture of the track system. The basis for this is MAURER XTRAC™. "eXtended Track Construction Software" – that is the full name – is a unique development environment for the design and complete dynamic calculation of roller coaster layouts. It has been in use at Maurer since 2002 and is being further developed all the time. As opposed to simpler calculation methods that reduce the car to a single mass point, XTRAC™ always calculates the complete car module, including occupants. Thus, the exact dynamic forces acting on any desired point of the car can be determined at any time. The degree of precision and realism that can be achieved as a result far exceeds the possibilities offered by other methods. The data is passed on to the statics calculation and design tools, which calculate the tracks and columns in a partially automated way.

The information then goes on to manufacturing without an interface to the MAURER XCAT™ process ("eXtended Computer Aided Track manufacturing"). Each separate track is thus measured exactly according to the coordinates specified by XTRAC™. A permanent comparison between the input data and the actual data ensures especially high production quality. XTRAC™ and XCAT™ are being improved continually, with the aim of achieving the maximum amount of automation from the designing phase to the delivery of the finished tracks and columns.



Rendering XTRAC™ Simulation

### Award-winning: 10 awards for the X-Car

The X-Car was an immediate star within the industry. Shortly after its premiere, a Sky-Loop with 300 m of additional and impressive tracks went into operation, as did another installation in the USA. Thanks to its innovative technology and exceptional design, the X-Car garnered 10 international industry and design prizes, including the highly regarded IAAPA Impact Award and the IAAPA Best Product Award.

### Fast-paced: Rocket drive with LSM

Development continued at rocket-like speed. In 2006, the year of the 130th anniversary of the founding of the company Maurer Söhne, construction started of the first X-Car Launch Coaster. As a worldwide first,

linear synchronous motors (LSM) with energy storage were used for the rocket drive. They provide an unmatched low amount of power input. In 2007, the innovative system was opened in the Drievliet family park in the Netherlands as "Formule X."

The impact of this new development soon became clear: Shortly after Drievliet, the longest Launch Coaster installation ever built was ordered. It has multiple acceleration sections, an exciting chase with rapid braking and renewed fast acceleration. The high-tech megacoaster "Hollywood, Rip, Ride, Rokit" is currently being built in parallel for Universal Studios, Florida. It too was announced with a record-breaking package: the highest unique Lift worldwide with an innovative, extremely comfortable recovery system; many completely new ride elements; a built-in and individually con-

trollable audio, video and light system. Both major installations will be opened in 2009.

A look back: Anton Schwarzkopf made a commitment to steel construction 45 years ago and revolutionised the field of roller coaster construction. The steel rails have remained, but today they are found in ever more adventurous and daring track layouts that have been made possible by the very latest design programs, high-precision manufacturing technology and comprehensive project management. And yet, Maurer Rides has taken over something else from its legendary predecessor: its consistent and untiring commitment to the readiness for innovation. Maurer Rides has created a series of innovation and technological milestones over the past 15 years. They are the guarantee for the success of steel roller coasters.

Photo: Frank Lanfer, Tarantula Spinning Coaster, Park Reunidos, Spain



Continued on page 6 » » »

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Historical Factory Hall Maurer Söhne

## Forces in Motion: The company Maurer Söhne

Maurer Söhne was founded in Munich in 1876. The small metalworking operation quickly developed into one of the biggest structural steelwork operations in the region. The list of references for the family-owned company is correspondingly long and reflects over 130 years of working in

the demanding field of structural steelwork and bridge construction. Today production is done at the main factory in Munich and non-roller coaster production at two further locations in Germany as well as in Turkey and China for the local markets there.

In addition to prize-winning structures such as Munich Airport International Terminal 2,

which gained the renowned European Steel Design Award in 2005, there is a noticeably high proportion of unusual and innovative projects. Thus since the 1970's, several kilometres of track have been produced for a new type of monorail system, the fully automatic H-Bahn (H-track). A little later the structural steelwork for GROWIAN, at the time the biggest wind power installation in the world was delivered, as was the massive steel tower for a solar updraft power plant in Spain. Again and again, Maurer Söhne is the first choice for solutions to special problems, for example, for the construction of large travelling cupola constructions for a mosque in Saudi Arabia or for hundreds of huge, adjustable parasols to provide shade in a pedestrian zone. In this way, the company quickly developed a wide and varied range of products and services: in civil engineering and construction, both above and below ground, in mechanical and plant engineering or in control and automation. In addition to holding a large number of patents of its own, the company offers its customers comprehensive application experience and brings through its wide range of know-how the ability to implement solutions that have been fully thought out to cover all project aspects.

In the 1960's, a number of large travelling scaffolding-type structures for bridges that had spans of more than 100 m were produced, soon after that followed the entry into the creation of other components for such bridge structures. Today, Maurer Söhne is the world market leader in the field of structural protection systems, and this goes far beyond pure bridge building.

More than half of the company turnover that has now risen to well over 100 million Euro is derived from structural protection systems, i.e. expansion joints, bridge bearings, vibration dampers and seismic devices. They all have one thing in common, namely, that they protect the structure against damage caused by forces in motion. The same engineering know-how is also the basis of the rapidly growing fields of roller coasters and amusement rides. Here the forces in motion are used to create special effects.

With more than 700 employees worldwide, Maurer Söhne has developed into a leading specialist when the interplay between forces and motion in various structures is involved. This is also expressed in the company slogan: Forces in Motion.

### Chronology of Maurer Rides

- 1964 Anton Schwarzkopf build its first steel roller coaster. More than a 100 more of them follow.
- 1986 BHS continues the business of Anton Schwarzkopf.
- 1987 Lisebergbanan: the first one to be equipped with elastomer bearings to reduce noise.
- 1989 Olympia Looping: the only transportable 5x looping track worldwide.
- 1993 Maurer Söhne takes over the "Amusement Rides" section of BHS.
- 1994 First Wild Mouse: Around 20 further rides of the same design up until today. 1996 Venus, Space World/Japan: The last looping ride built to the Schwarzkopf/BHS system.
- 1998 Power Tower: The tallest transportable freefall tower. Five built.
- 1999 World's first TÜV-certified freely rotating Spinning Coaster.
- 2000 The BHS premises in Peißenberg are given up and roller coaster production is transferred to the Maurer Söhne main factory in Munich.
- 2001 Winjas, Phantasialand: The first coaster worldwide with tricktracks.
- 2002 First use of the roller coaster design software MAURER XTRAC™.
- 2003 First production of rails in the MAURER XCAT™ system.
- 2003 X-Car: First roller coaster car worldwide for lifting forces without shoulder restraints.
- 2004 First SkyLoop: Highest inversion worldwide and first inversion Lift.
- 2005 IAAPA Impact Award and IAAPA Best Product Award for the X-Car.
- 2005 G-Force, Drayton Manor: World's first looping lift.
- 2006 130 years of Maurer Söhne.
- 2006 Formule X, Drievliet: World's first LSM Launch Coaster with energy storage.
- 2007 Salama, Linnanmäki: 20th Spinning Coaster order.
- 2008 Hollywood, Rip, Ride, Rockit, Universal Studios: Construction of a high-tech megacoaster with the highest unique Lift worldwide.



BMW Welt, Munich, Germany; Photo: © MarcusBuck.com



Universal Tracks: Intermediate Phase



Factory Tour: Column Manufacture



Full House for the Lectures



Forces in Motion

# IAAPA Summer Meeting 2008

Once a year, the International Association of Amusement Parks and Attractions (IAAPA) hosts a summer meeting for all its international members. And on the occasion of the Euro Attractions Show (EAS), the umbrella organisation of the amusement industry chose the Oktoberfest Munich as this year's event scene, where members met up three days before the exhibition.

As the finale of the Summer Meeting and simultaneously functioning as the start of the EAS the evening before, members attended the "Factory Tour & Reception" at Munich manufacturer Maurer Söhne. As a matter of fact managers Jörg Beutler and Horst Ruhe were initially expecting 120 participants; however, in the end there were 250! For this reason, the factory viewings as well as the seminar were carried out in three groups. On the one hand a pity, as the two top class speakers had only 20 minutes to hold their presentations for each group. But on the other

first idea right through to the opening, which generally takes up to three years: Blue Sky phase ("what is possible?"); concept development; scoping and contracts; coordination of ride, show, and facilities; design and engineering; fabrication and assembly; site props; shipping; installation and build up; testing and approval; opening and continued operation. "When this sequence is adhered to," continued Blum, "unexpected difficulties can be mastered." As an example he referred to the roller coaster "Hollywood Dream" that opened last year, where a support had to be turned 180°, a foundation was falsely grounded by two metres, and the test phase lasted four times as long as initially anticipated in the time plan. Despite everything, the construction could go into operation six weeks earlier than planned.

During the viewing of Maurer Söhne's huge factory grounds, most visitors were particularly astonished that such a large steelworks produces everything on site in Munich – the family company founded



Laser Show in the Historical Factory Hall



David A. Wilson, Project Director of Walt Disney Imagineering and Steven C. Blum, Senior Vice President of Universal Creative

hand, this event was not the well known and popular "Roller Coaster Forum", a seminar which is held by Maurer for park operators for a whole day every two years.

David Wilson, Project Director of Walt Disney Imagineering, made a presentation about "how storytelling becomes reality", and explained the subject with two examples: Vekoma's Adventure Coaster "Expedition Everest" at the American Disney's Animal Kingdom, and Maurer's Indoor-Spinning Coaster "Crush's Coaster" at the Paris Disney Studios Park. Accordingly, all attractions at Disney are realized in keeping to five rules: 1. Tell a great story. 2. Develop an attraction that meets the needs of the park. 3. Add some magic. 4. Maximize the capacity and reliability. 5. Safety comes first.

Steven C. Blum, Senior Vice President of Universal Creative lectured on "successful attraction project planning through realization". He mentioned, "in general it's always about guests going on a journey into famous tales and becoming part of the myth and story." Based on the examples of B&M's "Hollywood Dream" at Universal Studios Japan and Maurer's "Hollywood Rip, Ride, Rockit" at Universal Studios Orlando, he described the processes that an attraction has to go through from the

in 1876 not only manufactures roller coasters and freefall towers, but also bridge segments and innovative steel constructions such as for example the BMW Welt. Passing through the production hall, the trained eyes of the trade visitors fell in particular on the current production of a 50 metre high and approximately 1,000 metre long coaster for Universal Studios Orlando, which should already open at the beginning of the 2009 season under the name of "Hollywood Rip, Ride, Rockit".

The location of the concluding party also astonished a number of visitors: extra for the occasion and as the highlight of the Summer Meeting, an over 100 year old production hall was half emptied and presented in a spectacular new light. Guests could banquet and dance, and there was even a quiet lounge area available. Drum artists were presented as the live act and really livened up the atmosphere. A laser show rounded off the successful evening, and whetted appetites for the upcoming EAS event.

Frank Lanfer, in:  
Kirmes & Park Revue, Nr. 11/2008



Party on the Occasion of MAURER'S 15th Anniversary



# Model Construction Sky Wheel Coaster



SkyLoop Model IAAPA 2007, Orlando

**Last year the passionate fairground model builder, Heinz Stiel from Würselen in North-Rhine Westphalia, built a true-to-original 1:32 scale model of the loop roller coaster "Sky Wheel". With this model, the graduate mechanical engineer once again built a technically sophisticated model, further extending his collection of fairground models he has been building since 1988, all characterized by an impressive attention to detail.**

It took only seven months to build the automatic and fully functional Sky Wheel model according to original construction plans from Maurer Rides which built the prototype for the Skyline Park in Bad Wörlshofen in the Allgäu four years ago. The train consisting of two, six-seat "X-Cars" is drawn up the vertical lift by a chain, then travels through a quarter loop and along the track bent into the form of a dented wheel - rotating on its own axis in the Heartroll, and the proceeds back to the station and once again up the vertical lift to the quarter loop.

Upon arrival, the drive chain changes its direction, so that the "X-Train" travels backwards to the station once again. While the sub-structure of the model was made of wood, the super structures were made of brass profiles and tubes as well as sheet copper. For the two towers, the individual parts from brass H-profiles were cut to length and then soldered together. While it was no problem to build the towers, building the tracks soldered together from brass tubes was a real challenge. To be able to manually bend them to the right radius, Heinz Stiel had to make a lot of templates. To provide a backward smooth running of the train through the Heartroll and its exact form, a number of track segments had to be made several times, changed or repeatedly re-bent until all parts fitted together accurately to the very millimetre. Once all the track segments were finished, they were screwed together and the rail joints were then precisely adjusted. The parts of the train's two "X-Cars" were soldered together from sheet brass, brass tubes and profiles. With his love for detail, Heinz Stiel made sure that the lap bars of

the seats were also reproduced with precision. The total of 48 bearings built into the train's running gear serve as spinning rollers, stabilizing the train and guaranteeing a smooth ride.

The chain drive consists of a Faulhaber geared motor, an angular gear and five chain wheels. The drive chain is approx. 6 metres long and the chain clamping device was built beneath the station. After the Sky Wheel model was structurally completed and functioning smoothly, it was painted blue, red and grey just like the original. Having given the model its final touch in September last year, Heinz Stiel took it to Maurer Rides which presented it to the public at its stand at the IAAPA 2007 event in Orlando, where it functioned absolutely reliably and was well admired.

Extract from *Kirmes & Park Revue English Edition Nr. 130 - 5/2008*  
 Text: Rolf Orschel  
 Photos: Heinz Stiel, Maurer Rides  
 Translation: Agi Reddersen



## Response

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