



Lamiera
Bologna, Italy
14.-17.5.2008



SPCI 2008
Stockholm, Sweden
27.-29.5.2008



Metal + Metallurgu China 2008
Shanghai, China
3.-6.6.2008



Drupa
Dusseldorf, Germany
29.5.-11.6.2008



Zellcheming
Wiesbaden, Germany
24.-26.6.2008



China Paper
Shanghai, China
17.-19.9.2008



Euroblech
Hanover, Germany
21.-25.10.2008

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Automation Oy**

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AWA High Rise The Newsletter of AWA Advanced Warehouse Automation Oy
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OLVI Oyj, the speedy beer

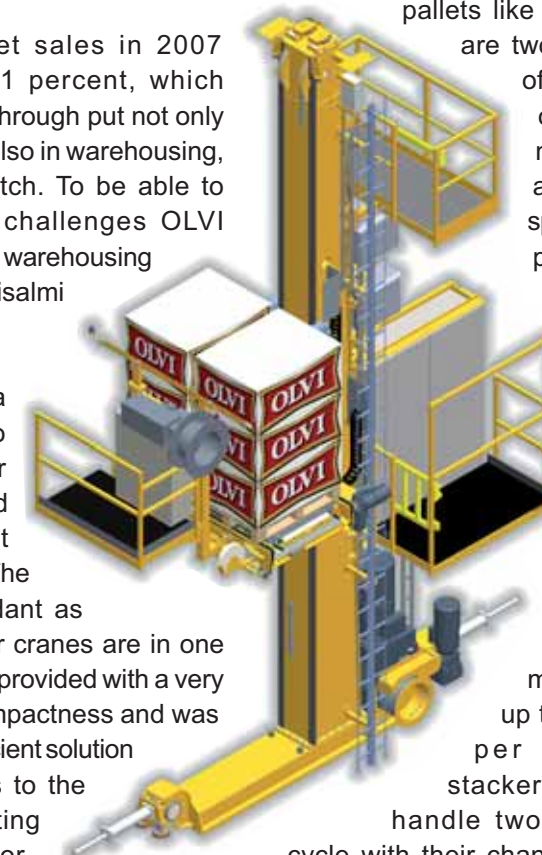
OLVI Oyj is the third largest brewery and soft drink company in Finland and the only nationwide domestic in the business. OLVI's brewery, soft drink plant and headquarters are located in Iisalmi, in central Finland. In addition to the Finnish facilities OLVI has a strong foothold also in the Baltic states Estonia, Latvia and Lithuania due to its production units.

OLVI Group's net sales in 2007 improved by 21.1 percent, which means increased through put not only in production, but also in warehousing, picking and dispatch. To be able to meet the future challenges OLVI decided to invest in warehousing automation in its Iisalmi plant.

AWA proposed a solution with two TransPallet stacker cranes equipped with double pallet channel vehicles. The concept is redundant as both of the stacker cranes are in one aisle. This solution provided with a very high degree of compactness and was the most space efficient solution proposed. Thanks to the concept the existing building utilized for the purpose made possible to achieve a storage capacity over 10.000 pallet places. The existing building was a challenge because of its limited free height (9 meters) for this kind of high-bay warehousing application. Perhaps one could speak about a semi-high concept?

The system, which is now approaching in production status, was planned to maximize the storage capacity. The length of the warehouse is 86 m, the

width 48 m. Breweries and beverage industry is going through a series of changes concerning all materials handling activities, because the carriers (bottles, cases, trays...) will be less based on glass. Instead plastic will together with aluminium take over the glass bottles used earlier widely in the industry. Still the deliveries to customers are based on wooden pallets like today. There are two main types of pallets used, one 800 mm wide, and another special brewery pallet 900 mm wide. The system will handle both types up to weight 1000 kg per pallet.



To be able to manage material flows up to 160 pallets per hour both stacker cranes can handle two pallets per cycle with their channel vehicles. AWA has utilized the same kinds of channel vehicles earlier for pallet and container handling.

Eight months after signing the contract all equipment are now installed and both stacker crane and conveyor system start up is on time. Handing over of the system will be just before the busy summer season on 30.04.2008.

Jouni Räisänen

Also in this issue:

Editorial: Juha Haimala, 'The Times They Are A-Changin'

Nestor Cables invests in top-class reel handling technology

AWA high bay storage in Netherlands in Finnish hands

Steel Days in Terneuzen

AWA-Pesmel material flow how concept

Quality and quantity walk hand in hand for Muovi-Heljanko

Exhibitions 2008

New AWA design:



Warehouse
Automation

The Times They Are A-Changin' (Dylan 1964)

There are times every now and then, when the old phrase by Bob is very up to date. This is one of those times. For a company AWA change is vital for survival and our change has to rise from the needs of our customers.

The owners and the management of AWA decided to carry out a series of major changes in operations, and after the implementation of the new ways of working, we are confident that we are able to serve our customers better both in project deliveries and after sales services.

I personally will meet the challenge to take over the lead of the company, and Jouni Räsänen will be responsible for the marketing and sales. Esa Huttunen will be responsible for project deployment. The new AWA structure is touched briefly in this issue of HighRise.

The elapsed year 2007 has been busy and has reflected the general economical situation in our main business areas.

While writing this story the expectations concerning the future are divided. Firstly nobody knows how the US economy with all the crises will spread its tendrils. Secondly, there are only best guesses for how long the rapid growth in e.g. China and India will continue. From our perspective the most difficult element in the US market is the dollar value but so far the other economies are not influenced too much by the collapse behind the Atlantic.

AWA has been working in multiple industries since the last issue, and you will have the chance to learn about those applications in this newsletter.

Our marketing and sales will be busy during the year as we will be present at several exhibitions, and we hope to see you there. Take a look at the closing page of the newsletter for forthcoming events.

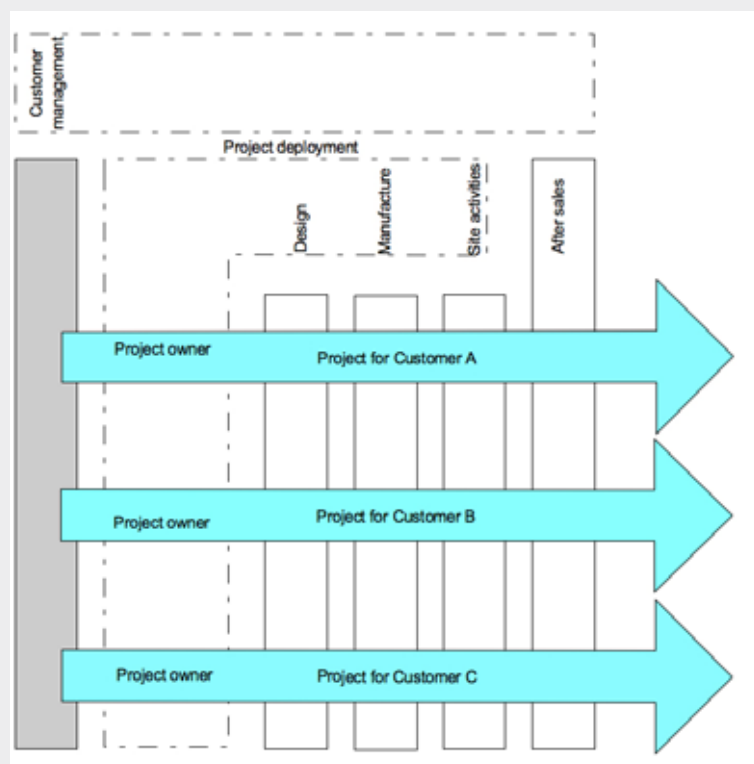
As the first visible sign of the change process in the company a new visual identity is introduced. The new logo will promote for the corner stones of AWA business: extensive experience in roll and coil handling, strong engineering background, and dynamism in developing versatile solutions to challenging customer problems.



Juha Haimala, Managing Director

The New AWA Structure

AWA will lean to a process based approach in its activities. From the customer perspective this mean continuous customer focus from the first contact until the use of an automated system. Customer management is the key process and all the processes aim at fulfilling the customer needs.



Quality and quantity walk hand in hand for Muovi-Heljanko



1 stacker crane with 2 channel vehicles.

Muovi-Heljanko Oy is a modern plastic canister and bottle producer based in Askola, 60 kilometres South-East of Helsinki. Its markets are in Finland, Sweden and other Scandinavian countries.

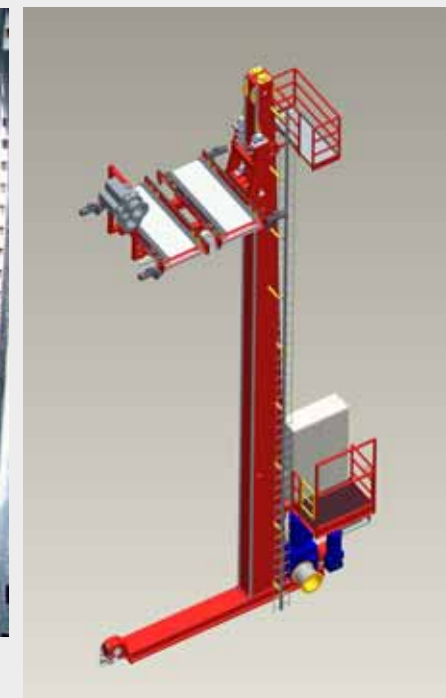
I met with Managing Director Simo Heljanko to talk about decisions that lead to this warehouse automation project. They have doubled their output over the last seven years, their annual growth has been +20% and is expected to continue.

Muovi-Heljanko's main customers are in the food industry, cosmetic and techno chemical industries. Plastic bottles and canisters are filled with their products.

AWA delivered an automated warehouse consisting of 3100 pallet places at the beginning of 2008. This modern Warehouse contains 1 stacker crane



Muovi-Heljanko factory in Askola.



with 2 channel vehicles. Both channel can handle 2 pallets at the same time. This combination gives a total material flow of over 100 pallets per/hour.

With this large investment Muovi-Heljanko is getting ready to meet the demands of the market. Mr. Heljanko said that the traditional warehouse was no longer an option; there was not enough room to stack pallets on the floor.

With this new automated warehouse they have 2,5 times more storage capacity compared to the old system. Muovi-Heljanko has made some major investments in their machinery over the past couple of years. Together with powerful new production machinery and effective automated warehousing it is easier to meet growing customer needs considering time constraints.

Mr. Heljanko says that it was a strategic decision to invest in bigger machines with robots to do the packing rather than "wasting" hours of labor for the final packing.

Production runs in 3 shifts, 5 days a week; it would take a lot of man hours to complete traditional packing and storing.

Large production capacity providing with possibility to serve customers best and quality products are keys to success, says Mr. Heljanko.

He also says that when planning for a new investment it's important to be able to work well with reliable supplier. He pointed out that it's crucial to have good vision of what buy, and AWA's Warehouse system allows for the warehouse to double in size for in future expansions.



Mr. Simo Heljanko, Managing Director

AWA - Pesimal "material flow how" concept

AWA Pesimal "Material Flow How" concept is a flexible manufacturing system for steel mills covering all handling, storing, sorting, packing and shipping functions.

System features:

Increased productivity

In Material Flow How concept production processes like Cold Rolling, Annealing, Slitting, Cutting, etc.. are all tightly integrated to the internal logistic system. By handling products automatically and integrating production

processes to the system productivity is increased. Having fully controlled material flow with predictable handling, packing and shipping capacity and real time information makes possible to maximize the capacity of production and give better and faster service to customers.

Increased quality

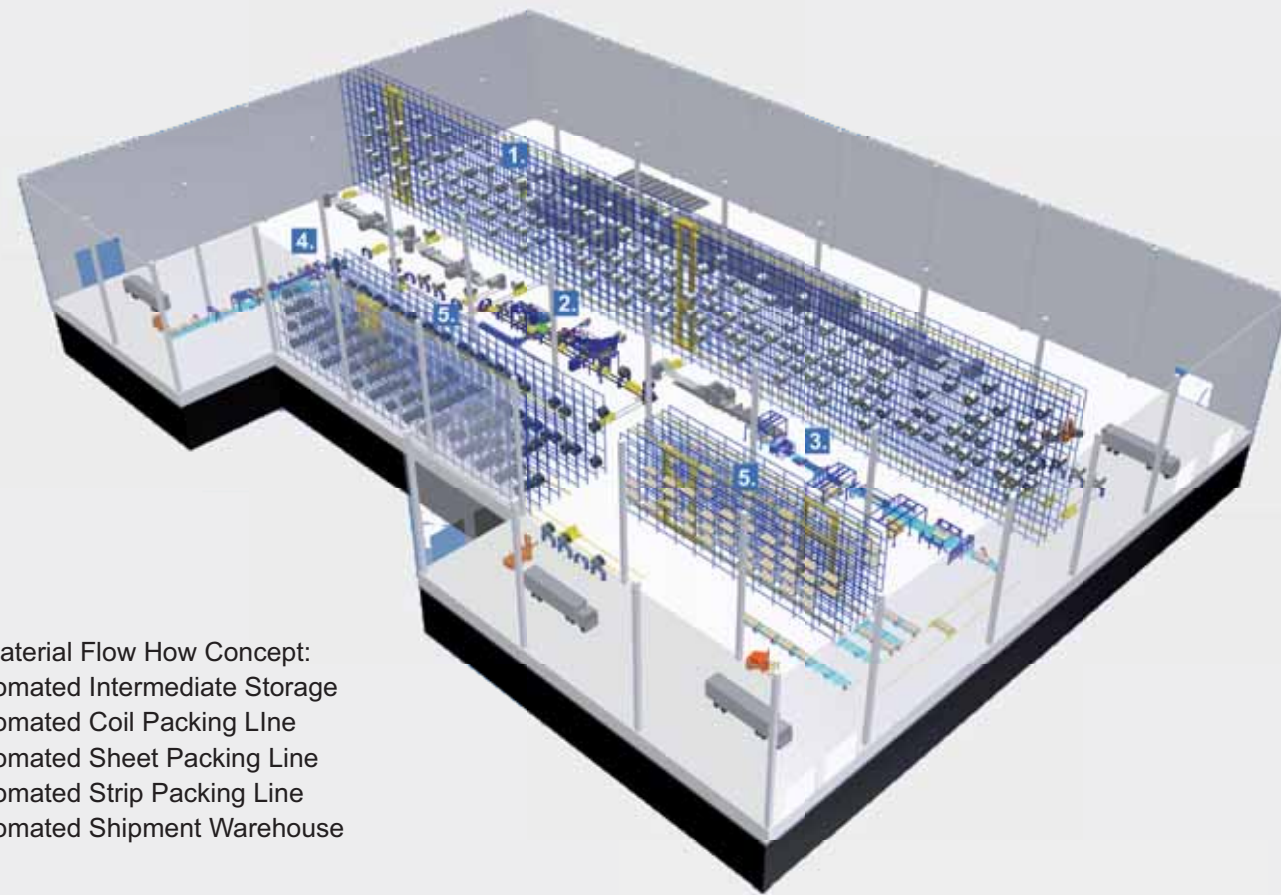
By fully automatic system products are handled and packed with secured quality, full control of materials means that there is no damages, lost products or error in deliveries.

Increased safety and working satisfaction

Fully unmanned operation is safe for operators, there is no need to work close to heavy coils, all supervising is done from HMI:s. System is divided to isolated safety areas.

Decreased production cost

Direct savings in quality, labour, material and operational costs. Indirect savings safety, working satisfaction, better customer service.



- The Material Flow How Concept:
1. Automated Intermediate Storage
 2. Automated Coil Packing Line
 3. Automated Sheet Packing Line
 4. Automated Strip Packing Line
 5. Automated Shipment Warehouse

Main parts of the system:

1. Intermediate Storage:

Tightly integrated to production. Receives the coils and integrates different production processes, stores all raw coils, intermediate coils and finished coils, covers the main material transportations between processes. Efficient using of space with high capacity, unmanned WMS controlled operation.

2. Packing Area

Fully automatic packing lines for Coils, Sheets and Strips are integrated to system, the functions are preparing products for customers shipments, different levels of packing can be mixed on same line automatically depending on customer or transportation. Operational costs decreased, material consumption minimized.

3. Shipment Storage:

Depending of the production this storage can also be combined with intermediate storage, shipment storage is for storing sorting and shipping of customer products. Increased selling by adaption to local market conditions, efficient using of space, unmanned operation, shorter shipment periods.

Tony Leikas, Pesimal Oy

Nestor Cables invests in top-class reel handling technology

Nestor Cables Oy is a recently founded Finnish technology company producing optical and copper cables for telecommunication networks. The manufacturing is scheduled to begin gradually during the early 2008. This tight schedule mentioned sets off a considerable challenge to the project deployment of the system suppliers. Therefore, Nestor Cables relies on AWA's experience on delivering innovative material handling and storage solutions.

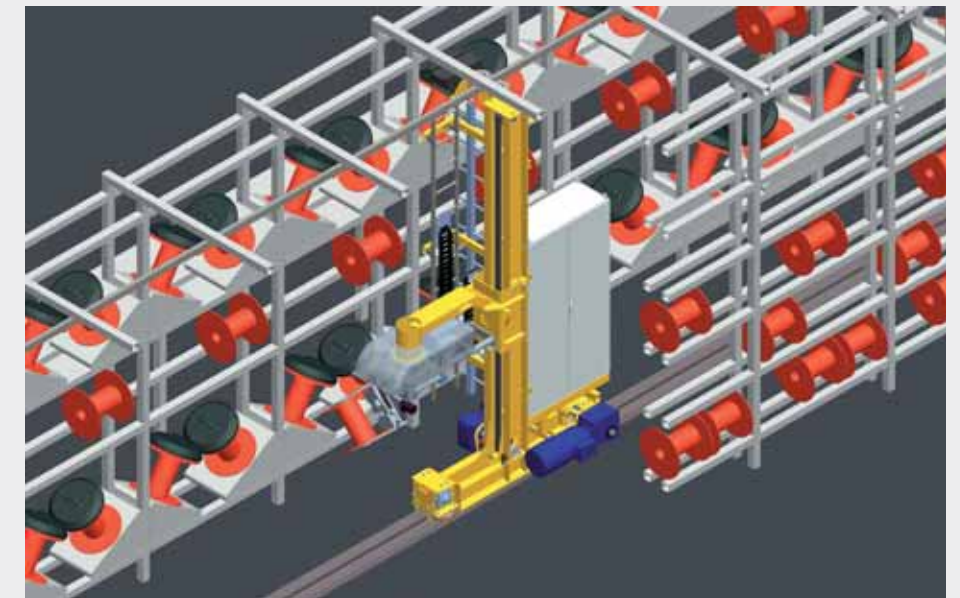
AWA's automated reel handling system – 21st century material flow

While being up to date cable technology company, Nestor Cables built up a new production plant in Oulu, Finland.

AWA's solution comprises racking for cable reels storing and all the necessary positions for automated production processes. The heart of the system is AWA Automatic reel manipulator, which can handle up to 60 movements per hour. The system is controlled and inventory managed by AWA's manufacturing control system for cable reel handling. In the next number of HighRise we will visit the site to follow up the commissioning of the system and we will share the user's view on the project.



AWA's reel handling system getting its shape in January 2008



Principle 3D model of AWA Automatic reel manipulator

Customer value is multidimensional

- Handling manually the flow of even 40-60 cable reels in an hour – weighing about 100 kg each – causes a mess in inventory management
- The system enables continuous production on copper cable line
- Seamless integration to production – connected material and information flow between production stages
- Efficient operating – production in order, no mistakes, less operating costs
- Concentrating on better quality of products – no possibilities to mix wrong raw materials to cable production
- Better capacity utilization and space usage rate

AWA high bay storage in Neatherlands in finnish hands

Markets are growing for stainless steel. It's a material for high standard of living goods. No wonder the demand is rising. I got a chance to meet Mr. Seppo Koivuniemi, MD Outokumpu Stainless B.V., Terneuzen, to discuss the future of stainless steel.

We were sitting in the office of the Terneuzen factory when a huge container ship passed by in canal right next to us. It was on its way to the factory to deliver coils. That led us to talk about logistics in general. The Terneuzen factory is a service centre which processes large stainless mother coils to customer specific dimensions. It serves all European countries. The mother coils are transported as sea freight from Tornio to Terneuzen. Both of the factories are located by the sea. Custom made products are being delivered to the European market from Terneuzen by both rail and truck. Location is a very important matter when considering transporting tons and tons of stainless steel. Here in Terneuzen coils are transported directly from container ship into the factory. Nowadays 60% of European customer orders are delivered from Terneuzen, but in the future it will be 100%. With new capacity built up in 2004, the Terneuzen plant will easily raise its capacity to meet the European demand.



I talked about the future with Mr. Koivuniemi, who tells me that due to the rising cost of nickel, manufacturers are starting to produce other than austenitic steel to the market. He gave me a quick lesson about the different kinds of stainless metals.

First there is austenitic stainless steel, which comprises over 70% of total stainless steel production. It has great resistance to corrosion because of its nickel content.

The consumption of austenitic stainless steel due to the high price of nickel. There is a serious need to produce more ferritic stainless steel, which is not so highly resistant to corrosion. Ferritic stainless steel is suitable for a lot of different products but not for all.

Outokumpu stainless steel is austenitic and is used to make products that needs high resistance to corrosion such as cars, kitchenware, components for different industries such as the food and as well as beverage industry, process and chemical industries. Duplex steel is mixture of austenitic and ferritic steels. Outokumpu just announced an investment program in which 550 million euros will be invested primarily to increase duplex steel production in Avesta, Sweden.

Automated Warehouse

There are many reasons why an automated high bay warehouse was chosen. Mr. Koivuniemi says that one of the main reasons was package losses - it takes a long time for personnel to find missing packages. The computer controlled system is always up-to-date. He also says that there is no need for inventory anymore; the computer



always knows the current stock. And naturally, the automated warehouse saves in labour costs.

Outokumpu Terneuzen used to store their coils on the floor the traditional way. I asked Mr. Koivuniemi about the experiences with the new warehouse in Terneuzen.

The first 3 AWA automated warehouses were built at the Tornio Outokumpu plant. The Terneuzen factory warehouse project came after those. "It's was natural continuum after Tornio delivery, we were pleased with AWA project deliveries" says Mr. Koivuniemi.



Mr. Koivuniemi

"In future, when ever needed, we will be able to easily expand our warehouse" he continued. Mr. Koivuniemi condenses that "the best way to store the coils is high bay storage".

After Sales

After sales has a very significant part after taking the system in use, Maintenance and regular inspection visits are an important part in the system's life cycle. Mr. Koivuniemi concludes "It's crucial to built up a relationship that last as a partners through the projects and after, the goal is to build equitable partnership". He

says that this way both parties will get most out of the project.

He also says that the personnel and users have been satisfied with the warehouse as well. We both agreed that when ever you don't hear from the customers things are working well for them. I had a chance to exchange a few words with the users and they seem pleased with the AWA automated warehouse.



Sheet cranes and the automated warehouse

Annamari Rauta-Ohenoja

Metal Days In Terneuzen

In mid-September specialists in different fields of steel and metals industry gathered together to discuss the current and future trends in the industries. The focus of the days was on automating the processes and packing the products optimally.

In order to get hands on perception on a very modern and highly automated process, the group started the days by visiting Outokumpu Stainless at Terneuzen. The operations of the plant are based automatic handling of products from the production lines until the loading gates. In addition becoming familiar with the process of the plant the group learned about

Outokumpu's objectives and results of the automation projects by Rudy Gejsels and William Passel.

Torgny Grundsström of SSAB in Sweden touched the topic and presented their objectives to move to automated processes.

Timo Nurmi of WalkiWisa and Mats Järpehag of Flamiflex presented currents trends of packaging materials and practises in steel industry. Ahti Rossi of Softsys gave an overview on virtual techniques in process design and optimization. Oliver Verwest presented principles of long range capital planning.

Juha Haimala

