# TGW Conveys Big At Chinese E-Commerce Specialist CNSS

**7.5 kilometres of conveyor equipment on five levels ensure the shipping of 7,500 packages per hour during peak times. This is the new logistics installation of the Chinese e-commerce expert CNSS in Danyang, China. TGW helped the 3PL giant to provide the ideal environment for goods of all kinds and the motto: rent a distribution centre!**

It is just a small surface of the entire footprint of CNSS’s premises in Danyang in China that is covered by the new distribution centre implemented by TGW. CNSS has big plans which have started in 2012 and grown to become a logistics giant in the area of Shanghai. Actually, this new distribution centre is one of the first automated logistics installations for 3PL (Third Party Logistics) in the Shanghai region. “As the first highly automated warehouse and distribution centre in China, we are excited to cooperate with TGW, who support us with their international technologies. Together with TGW, we are aiming to guide Chinese e-commerce companies into a new logistics era,” says Jay Wang, CEO at CNSS.

**Convey big!**

Think of a big retailer who wants to offer its customers a huge sale. Think of storing all its goods into the manual warehouse of CNSS in Danyang and imagine all the goods being transported and shipped out of the warehouse within just a couple of days. This is exactly what CNSS is doing. “CNSS is not a classic 3PL. They have an entirely new concept for e-commerce,” explains Albert Fischlmayr, Project Manager at TGW. “There is not only one permanent customer storing its goods in the warehouse - it might be a different customer every few weeks. This is why the installation was designed to offer highest performance during peak times!”

TGW’s solution for this challenging industry was a five floor building 300 kilometres west of Shanghai with 7.5 kilometres of conveying equipment. All available processes work independent of each other and thus ensure shortest throughput times through the complete installation. The growth of the Chinese e-commerce business demands new ideas and concepts for the distributions of fast movers. By using TGW’s technology, CNSS is now able to fulfil the market’s demands and increases the efficiency of e-commerce processes. Jay Wang is happy: “Aiming to become the leading third party warehousing and distribution service provider worldwide, we want to establish a new standard in the industry via technology and innovation. For this reason, we equip our distribution centre with high-performance sorter and conveyor equipment from TGW. Combining excellent equipment, professional experts and tailor-made software, we have super capacity of processing an average of 1.5 million cargos in pieces daily. At peak seasons, we will be able to handle 2 million cargos daily.”

**Automation in China**

Logistics automation in China is a rather new field of the business. The aim was to build a logistics centre for 3PL with a smart warehouse management system for a manual warehouse and an automated conveyor system. Due to productive reasons, Chinese e-commerce experts need to automate their logistics infrastructure in order to be competitive on the market. “CNSS wanted to offer its customers something very special, something very fast and very efficient. Our solution helped them to fulfil those requirements,” Quentin Wu, Senior Software Engineer from TGW China knows.

A manual warehouse is serviced by up to 500 employees working in the distribution centre. However, the goods need to be transported to the numerous storage areas on five floors. The goods arrive in the trucks and are immediately forwarded to TGW’s conveyors to automatically reach their shelves, which are controlled by radio. “We connected all levels by our conveyor equipment and transport the goods on 7.5 kilometres of conveyors, three channelizers and two TGW Natrix sorters”, Fischlmayr says. “The customer is using his own radio controls, so we cared for the individual interface to make it work. You can describe the TGW-Gateway software as a translation software that knows about all processes in the installation. This specifically designed feature really is on top of things!”

**TGW’s picking strategy for ideal throughput rates**

As soon as an order has been transmitted online, the goods are manually placed on the conveyor lines and transported downwards to the ground floor. Scanners control the transported goods and prove the identity and the content of the totes. “The totes arrive on the ground floor and are conveyed to a pick-to-wall picking system. There are shelves that are accessible from both sides. One picking employee puts the goods into a designated shelf by using a put-to-light system. On the other side of the shelf, a light shows the packing employee when an order is ready to be packed,” explains the Project Manager. The goods are packed into cartons and immediately sent onward on their journey towards the sorter.

The longest TGW Natrix sorter has a length of 100 metres with 30 chutes. It makes sure that every package is sent to the correct shipping line. The other one, with four chutes distributes the picked totes to the right pick-to-wall lines. At the end of each packing line, the packages are weighed and scanned once again to ensure the correctness of the order. “If something does not correspond to the information of the system, the package is sent to another line – the re-check line. There the cartons are checked manually and then forwarded to the correct shipping line”, Albert Fischlmayr adds. “With this system, CNSS is able to send up to 7.500 packages per hour depending on the size of the cartons!”

**Energy management for an intelligent usability**

Due to the great number of conveyors and various conveyor areas, an intelligent energy management was inevitable. TGW solved this issue with an automated stand-by mode. “If you have so many conveyor lines working simultaneously, you also need an option that enables you to shut down individual areas that are not required at the moment”, knows Fischlmayr. During off-peak times CNSS assures a lower energy use, saves money and operates its installation in a sustainable way. “In such a high-performance environment, it has no effect if some of the conveyors are switched off for a certain period of time. The rest is as efficient as always and the switched-off parts can rest for a little time”, the Project Manager winks.

**Performance tests for Chinese festival**

The high performance of the installation was a prerequisite. The new business model of “renting” the installation to retailers who need it for a certain time, demands highest throughput rates. “We tested the installation’s performance during a very important festival in China, the Dragon Boat Festival. We celebrate this festival to remember QuYuan, a Chinese poet and minister who lived about 2,000 years ago and is considered to be the source of the Dragon Boat Festival. It is common to eat Zongzi, which are rice balls with meat covered with leaves. We filled up the warehouse with thousands of Zongzi and distributed them in record time!”, Quentin Wu is happy. In the end, the availability tests showed an availability of 99.8 per cent.

Whether Zongzi or other goods, the installation is equipped to handle whatever CNSS’s customers want to convey, to pick and to dispatch into the widths of China. High performance for a Chinese e-commerce giant powered by TGW.

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**About TGW Logistics Group:**

TGW Logistics Group is a worldwide leading systems provider of highly dynamic, automated and turn-key logistics solutions. Since 1969 the company has been implementing different internal logistics solutions, from small material handling applications to complex logistics centres.

With about 2,000 employees worldwide by now, the Group implements logistics solutions for leading companies in various industries. In the business year 2013/14, the TGW Logistics Group generated sales revenues of 371 million Euros.

**Pictures:**

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