



busworld newsletter



Yutong has an extensive range of school buses.

busworld

CARES FOR CHILDREN

The 12th edition of Busworld Asia was held in the city of Guangzhou, in south east China, from 22 to 24 November. The event took place in the China Import and Export Fair Complex on Pazhou Island. It was held in conjunction with Auto Gangzhou, a car and commercial vehicle exhibition. This offered visitors an opportunity to see a complete range of vehicles, automotive components and services.

The latest priority in the Chinese bus industry, and a very important one, is school transportation. Following a number of tragic and fatal accidents involving school children and students, the Chinese Government moved rapidly to implement safety standards for vehicles designed and constructed to carry children. The comprehensive regulations focus heavily

on safety, including compliance with European R66 roll-over regulations, which enhance passenger survivability in the event of a vehicle turning over.

The Government has promised to back this initiative with funding equivalent to EUR55 billion over the next decade, largely to be spent

on up to 50,000 school buses per annum from 2015. That compares with an average annual intake of around 35,000 school buses per annum in the long-established market in North America!

Until the recent legislation, school children and students had been carried in old buses, if they



Higer also won the School Bus Safety Award.



Golden Dragon won the Innovation Award with its XML6901 school bus.



Higer shared the Busworld School Bus Builder of the Year with Yutong.

were lucky, but even in converted vans and, worse still, standing upright in little three wheeled vehicles that were at best unstable and highly vulnerable in the event of any accident. In one dreadful accident towards the end of 2011, 19 children were killed and 43 injured when their 9-seat minivan collided with a coal truck on their way to their school!

Busworld was quick to recognise the importance of the new legislation and the opportunity for manufacturers to develop vehicles which comply with it. Therefore the theme of the recent exhibition in Guangzhou was "Busworld Cares for Children". The leading Chinese manufacturers were invited to show their products, concurrent with conferences on the same theme. These included speakers from China, the United Kingdom and the United States.

The United States has led the world in the development of dedicated school buses for more than 80 years. The vehicles not only comply with Federal Motor Vehicle Safety Standards, but also a number of other specific regulations that are unique to buses used for school and student transport.

All the US vehicles have high floors, a number of steps above the ground, because that

makes the passengers more safe in the event of low level impact, from a car or light commercial vehicle. School buses are painted in a standard overall bright yellow colour and fitted with flashing lights which warn other road users whenever they are stopping to pick up or set down children. Other traffic must stop to minimise the risk of any accident to any child crossing a road.

There are additional mirrors located around the vehicle so that the driver can see a child who might be outside his normal field of vision. Drivers must not only have relevant licences for their vehicles, but must undergo security and other safety checks. Schools and colleges are required to hold training programmes so that children can be evacuated quickly and safely in the event of any accident or other incident, such as a fire on board the vehicle.

School buses are available at various lengths in North America, normally from around 6 to 12 metres. Especially at the lower end of the range, many are built on light truck-derived chassis, with the driver sitting behind the engine. On larger, full size, models, there is usually the choice of front or rear mounted engines, but much of the specification remains relatively simple. School buses do not operate high annual mileages, therefore prices are

kept down by using drivelines which are common with medium-weight trucks.

When the school bus regulations were introduced in China, it was only sensible that the leading manufacturers looked to North America for inspiration and guidance. That is not to say that they copied North American vehicles, even if they chose the same uniform yellow colour. Most of them adopted truck-derived chassis with a normal control layout, ie with the driver sitting behind the engine that was concealed under a large bonnet. They also adopted the additional safety mirrors, flashing signs to indicate that the bus had stopped, and additional signs that could extend from the side of the vehicle to indicate that it was a school bus and had stopped.

It is believed that Busworld Asia was the first bus and coach exhibition where safe transportation of school children was the principal topic. The experts agreed that properly designed and constructed school buses are a major step forward, but they are only part of the equation. Children have to be trained how to use their buses and what to do in the very rare event of an accident or other incident.

Mike Hagen, formerly a very senior officer in the Merseyside Fire Brigade in England, and now a consultant, compared school bus travel with air travel, which is widely regarded as safe. He listed the various safety features on aircraft, noting that there was extensive staff training and that safety information was provided to passengers on every journey. He also referred to research by the National Highway Traffic Safety Administration in the United States which found, over a ten year period of studying the number of fatalities of children during normal school transportation hours, that school buses were 87 times safer than private cars!

He stressed the importance of driver training, including safety instructions to pupils and understanding emergency evacuation procedures.

Busworld believes not only in safe school bus transportation, but in giving pupils and students consistently good experience of travelling by bus. That is more likely to make them willing passengers when they become adults.



Golden Dragon showed this forward control model with a rear engine.

DONGFENG SHIYAN SCHOOL BUSES

Dongfeng Special Vehicle (Shiyan) Bus Co of Shiyan, Hubei Province, is part of Dongfeng, one of the largest automotive groups in China.

At Busworld Asia, the company showed three medium size school buses. The EQ6661ST was built to 6.6 metres and the EQ6750ST to 7.5 metres. Both were 2.4 metres wide, but there was also the option of a narrower 2.1 metre wide, 5.5 metre long model, with capacity for up to 19 seats.

This last vehicle can be driven by anyone with a standard car driving licence and is therefore very likely to be popular with operators. A variety of Euro 3 or Euro 4 engines is available on the Dongfeng range, and the longest mod-



The very strong American influence in this larger Yutong school bus.

el can also have a Dongfeng Cummins ISF 3.8 litre engine.

Jasmine Zhao, Business Executive, Overseas Business Development, said that the bonneted layout protected drivers better than the flat front of a forward control vehicle.

All the school buses were fitted with ABS, GPS and cameras located in positions which are

now mandatory under the new regulations. They are inside the vehicle, viewing children on the bus, at the entrance on the inside step, and for viewing the front and rear.

Reflective strips were stuck on the sides, and there were also fold-out stop signs and flashing lights. Like the other manufacturers, Dongfeng Special Vehicle has developed its own telematics communications system called Safetyguard.

GAC PROMOTES GREEN ENERGY

Although school buses dominated Busworld Asia, a local manufacturer, Guangzhou Automobile Group Bus Co, known as GAC Bus, displayed a minibus to Toyota Coaster design, a city bus and an intercity bus.

On its full size vehicles, GAC uses technology from Hino Motors of Japan. According to Steven Zhao, Sales Director, GAC has promoted all-electric New Energy (EV and HEV) and also Clean Energy vehicles, fuelled by compressed natural gas, liquefied petroleum gas or liquefied natural gas. Due to this policy, its sales in 2012 increased by 45% with New Energy and Clean Energy sales accounting for around 1,400 units.

Steven Zhao said that the Government stimulated sales of New Energy and Clean Energy city buses by subsidies as high as the equivalent of EUR60,000 for full electric buses. That was almost half the cost of the complete vehicle.



GAC Bus also assembles the Toyota Coaster.

The Government was also installing charging facilities but operators were concerned that battery packs would not last the statutory seven year lifetime of a city bus. The batteries on the 11 metre and 12 metre city buses were located under the seats.

He also said that GAC can build its city buses in various lengths from 6 to 12 metres but not all lengths were available with the option of LPG and LNG fuel.



An all-electric midibus on the GAC Bus stand.

SCHOOL BUSES IN THE UNITED STATES

A number of conferences on various aspects of school bus design and operation were given during Busworld Asia.

A very interesting presentation was given by Dick Fischer and Peter Lawrence on the US school bus industry, including the extremely rare problem of fires on board vehicles. They reckoned that there are approximately 485,500 school buses in the United States which travel around 6.7 billion km annually. They carry 46 million children to and from school and school-related activities every day.

Dick Fisher shared with the audience what he had learned about school buses and their operation. He stressed the need for safe school

bus stops. "We need to look at the type of bus being used, at its capacity, at the type of student riding the bus, at school starting times and student pick-up times. At bus stops, we have to consider the type of roadway, hazards at the stop, the walking distance to the bus stop, the waiting area, and the number of school bus stops on a route."

Although the vast majority of journeys pass without incident, drivers are trained to handle emergencies. Pupils and students are also trained to evacuate a vehicle in the case of emergency, such as a major accident or a fire. This includes incidents where the driver might be injured or otherwise unable to assist.

In the event of a frontal impact, children can be evacuated through a full height emergency door set into the rear panel. The level of

awareness of safety is so high that each pupil is instructed five times a year in supervised emergency evacuation drills. Exits include front, rear and side doors, also windows and roof hatches. Emergency drills are carried out by types of vehicles, types of exits and by age groups.

Once off the vehicle, in an emergency evacuation, they are trained to move to a safe location away from traffic, and away from any risk of smoke inhalation. There is also communication with the control centre for the bus, the schools and with the emergency services.

These drills have been in place in the United States for many years and are continuously refined. They have resulted in commendably safe transportation for school children and students.

YUTONG SCHOOL BUS SAFETY TESTS

Zhengzhou Yutong Bus Co is the largest bus and coach builder in China and a loyal supporter of Busworld events. The company built 46,688 buses and coaches of all sizes in 2011 and was confidently forecasting to exceed that figure in 2012.

Yutong displayed a number of school buses at Busworld Asia including the first one to comply with the new national standard issued on 1 May 2012.

Yutong has developed a telematics system exclusively for school buses, called Anxin. It performs a number of functions, including monitoring the driver and warning him if he is speeding, over-loaded or using the wrong route.

Cameras on board the vehicle enable parents and schools to view children in real time through a smart phone app when they are getting on or off the vehicle or during their journey. Anxin can also offer a counting system to prevent truancy and a monitoring system to improve vehicle fuel consumption.

Part of the new Chinese regulations for school buses relates to seats and their safety. Yutong has carried out the first dynamic crash test of school bus seats complying with the new standard.



Yutong exhibited this hybrid city bus with stop-start technology.



A city bus by the Guangdong Cloud Mountain Passenger Car Co.



The most international bus and coach exhibition.

kortrijk

ALMOST FULL

We have not yet reached the end of 2012, but already almost all the available floor space for Busworld Kortrijk has been booked. The world's largest international exhibition held exclusively for the bus and coach industry will run from 18 to 23 October 2013 in the Kortrijk Xpo and will again include the two large temporary halls, laid on fully serviced hard standing, in a prominent position, between the Xpo and the main road into Kortrijk.

Mieke Glorieux, Director of Busworld Kortrijk, says: "We are very pleased to have such a firm commitment to Busworld from so many of our regular exhibitors, but also some who have not attended previously.

"Busworld Kortrijk will be a very important event for the industry, because it will be held just a few weeks before the Euro 6 emission standards become mandatory, for vehicles first registered from January 2014. We expect to see many world premiere launches, and other innovations from vehicle manufacturers and component suppliers.

"We keep an eye on registrations of new buses and coaches in all the main markets. De-

spite pressures on public funding, they have proved remarkably resilient in most of the Northern European countries. They are down in the Mediterranean countries, but there is strong growth in important markets like China, India, Russia and Turkey.

"Busworld Kortrijk is so international that we expect visitors from those countries and from many other parts of the world. We have great confidence in the future for bus and coach transport and for all the suppliers who have booked to participate in Busworld Kortrijk."

You can find out more about the participants and layout of Busworld Kortrijk on our website, www.busworld.org

It includes information about travel and hotel accommodation. Regular participants at Kortrijk book their rooms two years ahead as they

check out from the previous edition! Although hotels in Kortrijk fill up rapidly, our website offers links to many other hotels within easy reach of Kortrijk.

We will be including regular updates about the next edition of Busworld Kortrijk in the next editions of the Newsletter.



Busworld Kortrijk is famous for its talented Belgian musicians!



Many Euro 6 engines can be expected at Kortrijk.

HIGH SPEC HIGER SCHOOL BUSES

Higer Bus Co of Suzhou, Jiangsu Province, is one of the largest manufacturers in China and is expected to build more than 23,000 vehicles of all sizes in 2012.

At Busworld Asia, Higer showed a number of school buses. They were all normal control, with the driver sitting behind the engine. Higer has one of the most modern factories with full cathaphoretic dip anti-corrosion treatment of structures. They have been designed to protect children in the event of any external impact.

Front and rear panels were made in steel, instead of the normal fibreglass. Higer specifies a single width door behind the front axle to prevent children crowding around the doorway. Safety features include ABS, power steering, speed limiter, tyre pressure monitoring and a lane departure warning device.

Higer school buses are also fitted with an emergency hatch in the roof, school bus bells,



The extensive Higer range includes this 7-metre midicoach.

flashing lights, a stop sign and an emergency door in the rear panel.

They also have the latest Higer G-BOS telematics monitoring system.

ALPHA EXHIBITS ALL ELECTRIC BUS

Jiangsu Alpha Bus Co of Jiangyin, Jiangsu Province, came to Busworld Asia with its all-electric 12 metre city bus. A version of this vehicle has achieved European Whole Vehicle Type Approval and has been operating in Italy since September.

Wayne Xu of Alpha Bus said that there was strong demand in China for electric and gas buses. The cost of energy on an all-

electric bus was about one third of that of a diesel bus per month.

The company was holding a number of discussions with potential customers in Europe, including the possibility of supplying all-electric buses for airside applications at Frankfurt Airport. That is an ideal application for an all-electric bus, because it can receive regular recharging of its batteries between duties.



The Jiangsu Alpha all-electric city bus won a Busworld award.

MiX TELEMATICS

MiX Telematics participated in Busworld Asia in partnership with Shanghai Rainbow Heavy Vehicle Service Co. MiX Telematics is a global provider of fleet management, driver safety and vehicle tracking solutions.





The MiX Telematics stand.

They have equipped more than 10,000 buses across Europe and have achieved impressive reductions in fuel consumption, maintenance costs and accident rates. MiX Telematics and its local partner were confident that similar savings could be achieved in bus fleets in congested Chinese cities.

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