WIRTGEN GROUP

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Langfang is located around 45 km south of Beijing in Hebei Province. On a 45,000 sqm site for assembly, sales, service training and administration, we are well prepared for our customers.

From Beijing Capital Airport Terminal 1 & 2

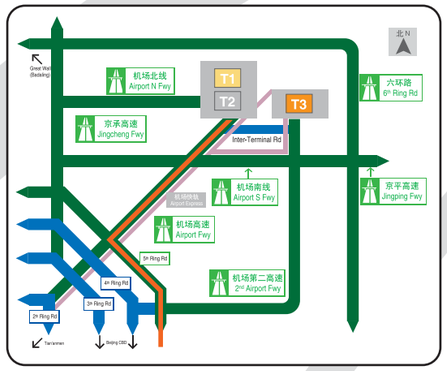
Airport Expressway to the City.

Exit south 5th Ring Road.

After 22km take the Jingjin Tang Expressway in the direction of Tianjin.

After 35 km exit Xianghe / Langfang.

After the toll gate turn right. At the next traffic light turn left and follow the Wirtgen China signs.



From Beijing Capital Airport Terminal 3

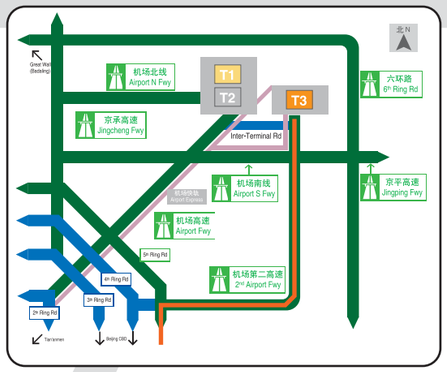
South Airport Expressway in direction 5th ring road.

Exit south 5th Ring Road.

After 22km, take the Jingjin Tang Expressway in the direction of Tianjin.

After 35 km, exit Xianghe / Langfang.

After the toll gate turn right. At the next traffic light turn left and follow the Wirtgen China signs.



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JOB REPORT
WIRTGEN FINE MILLING
ON THE AIRPORT EXPRESSWAY
IN XIAN

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ROAD TECHNOLOGIES

www.wirtgen-china.com.cn

LOCATION

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Shaanxi is considered one of the cradles of Chinese civilization. Thirteen feudal dynasties established their capitals in the province during a span of more than 1,100 years, from the Zhou Dynasty to the Tang Dynasty. The province's principal city and current capital, Xi'an, is one of the four great ancient capitals of China and is the eastern terminus of the Silk Road, which leads to Europe, Arabia and Africa. Xi'an is also known the world over as the home of the famous Terracotta Army of Qin Shi Huang, the First Emperor of China. The terracotta figures, dating from 210 BCE, were discovered in 1974 by several local farmers near Xi'an. Current estimates are that in the three pits containing the Terracotta Army there were over 8,000 soldiers, 130 chariots with 520 horses and 150 cavalry horses, the majority of which are still buried in the pits. The Army is often called the Eighth Wonder of the World and has been included by UNESCO in its World Heritage List.

XI'AN Since the 1990s, Xi'an has played a major role in the revival of China's interior. A city of 8 million people, it is now a major cultural, industrial and educational centre. Xi'an is also home to important research facilities aimed at developing national security and China's nascent space exploration program.

AIRPORT & THE FORMER AIRPORT CITY LINK

THE NEW AIRPORT EXPRESSWAY

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Xi'an Xi'an Yang International Airport is the major airport serving the city and is the largest airport in the northwestern part of China. The airport is located in the northwest of the city, between Xi'an and Xi'an Yang. As a city of unique cultural assets, Xi'an attracts many international travelers and as a result runs direct flights to numerous destinations in Asia, including Singapore, Bangkok, Tokyo, Osaka, Sapporo, Fukuoka, Kyoto, Hong Kong, Seoul, and Pusan. From 2003 the airport and the city was linked by the China National Highway 211 (G211) which runs from Yinchuan in Ningxia to Xi'an in Shaanxi. G211 entered Xi'an on the east side and it took passengers around one hour for a one-way trip. With passenger traffic reaching 12 million per year, the construction in 2005 of an Airport Expressway became a priority. The new direct link of 20km, 3 driving lanes plus one emergency lane for each direction cut driving time to around 40 minutes only.

THE NEW AIRPORT EXPRESSWAY

The new Airport Expressway is owned by the Shaanxi Provincial Transportation Construction Group and the Airport. The construction was awarded to China Railway Construction Cooperation 3rd Bureau, 2nd Branch of MOC in Xi'an. Asphalt work started in 2007. As the new connection is scheduled for opening at the end of 2009, the project is already in its final stages. Before paving the wearing course, CRCC decided to check the binder pavement for smoothness and discovered some minor problems. As a top-quality contractor, CRCC decided to even out the road using a Wirtgen milling machine equipped with a fine milling drum. The contract for this pre-maintenance work was awarded to Beijing Capital Highway Development Company (BCDH). BCDN decided to use a quiet new Wirtgen W 2000 equipped with a 2m fine milling drum. A total area of 2,000sqm had to be milled. Each single spot is not larger than approximately 72sqm.

FINE MILLING

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Fine milling is a modification of the standard cold milling method, the difference being that cutting tools on the drum are arranged at much narrower intervals. One speaks of fine milling when the tool spacing is 8mm or less. These special milling drums are fitted with a much larger number of cutting tools than standard milling drums. This method is very often used for the rehabilitation of asphalt surfaces. The goal of fine milling is to produce a new, precisely defined surface texture. Even though fine milling drums are not capable of eliminating damages that are located deep within the pavement structure, they can produce an even pavement surface with excellent grip. After installing a fine milling drum in the milling

drum housing, the cold milling machine cuts grooves into the pavement at intervals of between 8mm an 3mm and at a maximum depth of 50mm, producing a fine surface texture in just one machine pass. Additional work steps, such as paving a new surface layer, are usually not required but if fine milling is used on a binder course to eliminate bumps, the wearing course can be paved to a high-class evenness.

After milling: the typical fine-milled profile is skid resistant, with rough valleys ensuring optimu interlocking of the next layer. Result: a strong and even bond between layers as proof of quality. The reclaimed sphalt material comes in sizes of up to 12m.The Wirtgen FB 2000, 6x2mm Fine Milling Drum is equiped with 672 pcs. Cutting tools Type W 5 EH



THE MACHINE WIRTGEN W 2000

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It goes without saying that a high-quality result also requires machinery which fits the bill for the job in hand. The cold milling machine of type W 2000 used in the project outlined above were equipped with fine milling drums which produced a profile with optimum intermeshing structure for placement of the new pavement. The special milling drums are produced in this precise version and high quality by the market leader Wirtgen in a unique manufacturing process at its plant in Windhagen. The optimum tool system with high-grade point attack tools and tool holders for equipping the milling drums are a important factor for the final result. The Wirtgen W 2000 is a powerful, compact cold milling machine mounted on crawler tracks for the removal of individual pavement layers or complete carriageway structures at depths of up to 32 cm in one single pass on a width of 2m. The machine's powerful engine, large tracks and generously dimensioned conveyor system ensure high daily production rates.

FEATURES

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Mr. Wang Meng and Mr. Zhao Bin and
Mr. Du Guihai from BCHD
Mr. Yu and Mr. Li from CRCC 2nd Bureau 3rd Branch;

As the milling areas lie diagonally to the lanes, a high degree of maneuverability is a must. This is when operator can rely on the excellent driving properties of the compact W 2000. This is ensured by the smooth, hydraulic all-track steering system including a manually electable, hydraulic flow divider which acts as a differential lock and guarantees a uniform tractive force even under adverse conditions. The high-lift, individually height-adjustable track units result in a remarkably high ground clearance. In addition, all four units provide large steering angles, which allow the W 2000 to perform an amazingly mall turning circle.

Wirtgen has also developed a highly accurate, proprietary leveling system including software that has been designed specifically for cold milling machines: LEVEL PRO. The overall system includes an operating panel, a controller unit and several sensors. The graphics-enabled LEVEL PRO screen shows key parameters in a clearly legible fashion. For example, target and actual values for the left and right milling depth and slope parameters are clearly shown on the displays. In addition, the memory feature isvery useful to program, store and invoke target values.