

## Approaching Beijing Airport

### **New terminal designed by Norman Foster**

**With its gigantic dimensions and its imposing design, the new Terminal 3 of Beijing Airport is setting new global standards in air traffic. The striking eye catcher of the new building designed by the British architect Norman Foster is the roof of the passenger hall, which has been realized with Reynolux<sup>®</sup> Building. Its jagged form is designed to evoke in those flying into Beijing the image of a sleeping dragon. As an architectonic symbol for up-and-coming China.**

The countdown is on. In order to be able to cope with the rapidly growing number of passengers and the rush of visitors coming to the 2008 Summer Olympics, the new Terminal 3 of Beijing Airport will now be fully opened in July. Costing about two billion Euros and completed in only four years, the new building expands the current capacity of the two existing terminals of 36 million passengers annually to 62 million passengers per annum. Every 30 seconds around the clock, a plane will take off or land, making Beijing one of the world's five major airports. If required, the capacity of the airport could even be increased to 90 million passengers.

### **Architecture of the superlative**

Together with the Olympic stadium of Swiss architect duo Herzog & de Meuron and the new China Central Television Headquarters designed by Rem Koolhaas and Ole Scheeren, the futuristic steel-glass and aluminium construction of Beijing Airport Terminal 3 represents one of the most significant highlights of the city's new architecture. The almost four kilometres long and nearly 800 metres wide passenger hall aims at conveying an image of modern China to the arriving passenger.

Apart from the impressive space of about 1.3 million square metres – the Chinese authorities proudly call it the “the world's largest building” – the technology and the infrastructure of the terminal might also be record-breaking: a state-of-the art baggage transportation system will handle up to 20,000 pieces of luggage per hour. And if previously visitors had to use public transport or a taxi to get to the city centre that is 20 km away from the airport, they can now take advantage of a high speed train that will get them there in minutes. Or they might use their time for a bit of last-minute shopping in one of the ninety outlets of the airport or visit one of the ca. 60 restaurants.

## Balancing act between past and future

Apart from modern steel and glass elements, Norman Foster has also integrated elements of traditional Chinese architecture into his design. Beijing is not only an aspiring metropolis of the 21st century; it can also look back on a 3000 year history. The deep red columns in the passenger hall remind of the Imperial palaces and temples in the city. The striking jagged form of the roof deliberately evokes the idea of a sleeping dragon, one of the most important figures in Chinese mythology. Only a closer look reveals that the individual “jags” are in fact triangular roof lights, filling the space with light thereby giving the terminal an airy appearance. Another direct pointer to Chinese culture is created by the layout of the building - a combination of two “Y”, an intentional reference to the Chinese sign “Ren” which translates as “character” or “people”.

## Gigantic aluminium roof

The gigantic roof of the passenger hall has been built as an aluminium construction with Reynolux® Building in accordance with the plans of Norman Foster and the participating structural engineers of Arup Group Ltd. The coil-coated aluminium sheets did not only convince the planners because of their high resistance to weather and their resistance against high wind pressure and air pollution, but also because of their light weight and ease of processing. The curved form of the roof could therefore be realized in accordance with specifications without any problems. Apart from that the wide range of coatings and colours and the excellent colour fidelity for Reynolux® Building were persuasive factors.

Overall, 1200 tons of Reynolux® were used on the site. One of the special features was the design and creation of the roof lights, which were constructed in the shape of yellow triangles opening out of the outer skin. The excellent physical and chemical characteristics of the coatings thereby guarantee that the areas will retain long-term their bright colours.

## Infinite growth

Currently the last preparations are being made to ensure that Terminal 3 can start full operation by the beginning of the Olympic Games on 8<sup>th</sup> August. Afterwards it is planned to gradually expand the building for a capacity of up to 90 million passengers by 2012. What will happen afterwards has not yet been decided. The continuous economic boom and the rapid growth of China’s middle classes have resulted in an almost 20 percent annual increase of passenger numbers. A further expansion of Beijing Airport or the construction of an additional airport therefore only seems to be a question of time. As so many other things in the Middle Kingdom.

**Facts in brief:**

<b>Project:</b>	Terminal 3, Beijing Airport
<b>Architects:</b>	Foster + Partners, London
<b>Consultants:</b>	Arup (Davis Langdon, Michel Desvigne), Speirs and Major, BIAD, BNP Associates Inc, Design Solutions, Logplan GmbH, NACO, Reef U.K.
<b>Fabricator:</b>	Eastern Way
<b>Surface:</b>	1.3 million m <sup>2</sup>
<b>Product:</b>	1200 tons of Reynolux <sup>®</sup> 0.9 mm, coated with PVDF

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