

Reach for the Sky

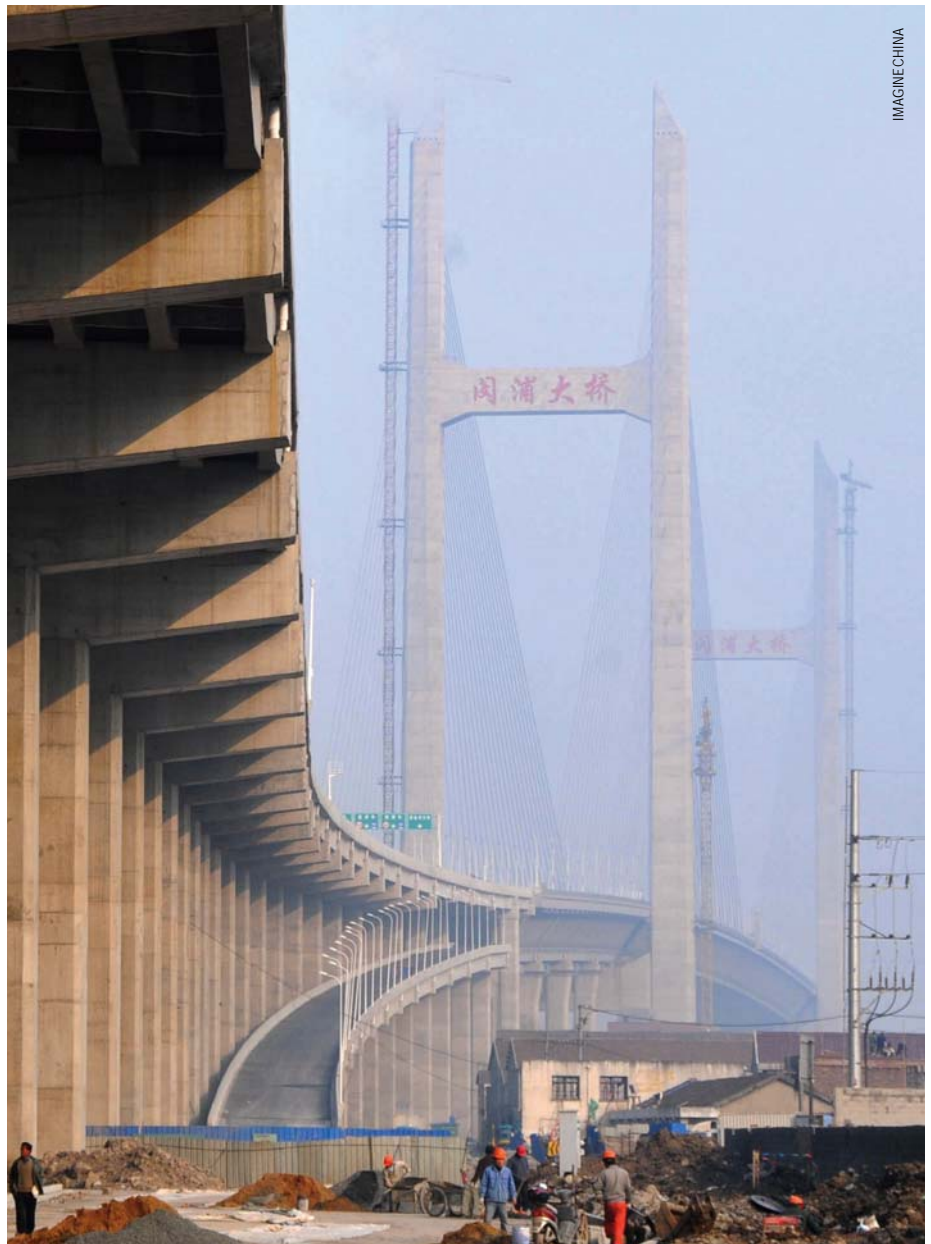
China's dynamic construction industry appears to have shrugged off the downturn, and most foreign construction and engineering firms are here for the long haul and optimistic for the year ahead.

By Elaine Wu

IN CHINA, NOTHING REFLECTS the pace of change and renewal better than the construction industry. The skylines of major cities appear to change overnight as towering skyscrapers and gleaming residential buildings spring up with careless abandon, while outside the cities, factories, plants and sprawling industrial parks are built with astonishing speed.

In a span of three decades, China's construction market has become the second largest in the world after the United States. From 2003 to 2008, the country's construction industry grew at a compound annual growth rate of 20.6 per cent, making it the world's fastest growing market, and its output value increased from USD735.8bn in 2007 to USD850bn in 2008, according to research compiled by World Market Intelligence. The industry created over 30 million jobs in 2008, and it is estimated that over the next decade, China will build half of the world's new buildings.

While globally, the construction market was one of the most affected by the economic downturn, in China, like many other industries, the construction business was less severely impacted. "The construction industry went into the downturn first, and we got hit hard. But we're starting to see a surprising amount of business activity," says Andrew Kwok, General Manager of SSOE Group China. "The global downturn has caused multinational companies (MNCs) to reassess their manufacturing requirements, and, to many of them, China is the bull's eye where you can produce more cost effectively, and also enjoy a surging new consumer market. Companies are getting more serious about making inroads into China, and they're looking to step up their investments in facilities and operations. China is extremely well positioned for this bounce



IMAGINE CHINA

Massive infrastructure projects such as the Minpu bridge development offer plenty of opportunities for developers

back in the global market.”

China’s sustained investment in one of its pillar industries will continue to push boundaries and expand the scale and scope of development in the country. Around the nation, major work is being done on new residential and commercial buildings, groundbreaking industrial parks and massive public infrastructure. The dogged push to increase the nation’s construction output poises China to be the largest global construction market by 2018, worth USD2.4tr and representing 19.1 per cent of worldwide construction output.

Despite its expansiveness and untapped potential, China’s construction market is not without obstacles, especially for foreign companies seeking to make their mark along the country’s skylines. A currently immature market, growing domestic competition, opaque regulations and cultural differences are some of the noteworthy issues many companies face while doing business in China’s construction sector. At the same time, many construction and engineering companies in China are leading the charge

in technology and best practices, especially in building “green” and sustainable structures.

Infrastructure Investment

China’s construction industry has fared

better than its global counterparts primarily due to the Chinese government’s massive stimulus measures toward maintaining growth in construction and infrastructure development. RMB1.5tr out of Beijing’s RMB4tr stimulus plan last year was ear-



Shanghai’s love affair with tall buildings will not be ending any time soon.

We’ll satisfy your appetite for trouble-free facilities.



Save time, trouble, and cost with SSOE.

As a U.S. engineering, procurement, and construction management (EPCM) firm, we offer global expertise and experience that allow us to make promises other firms won’t: We’ll deliver better quality with significant savings. And we’ll quantify and document these savings on your project.

What enables us to deliver greater value:

- Over 60 years experience with Fortune 500 firms globally
- 19 offices worldwide including Shanghai and Beijing
- China design license (in-house engineering)
- Green design expertise: global LEED AP staff
- Experts in cost reduction approaches including BIM and Lean Manufacturing

For more information: www.ssoe.com
or contact Rob Benedetti: rbenedetti@ssoe.com.cn





ALPINE - Build for Your Dream in China

Alpine Bau GmbH, the second largest contractor in Austria, is renowned globally due to its outstanding expertise, dynamics, flexibility and innovation. Its business focuses on the Central European countries and extends to the Eastern European countries and onwards to North America and Asia, such as China, Singapore and India. Alpine's business ranges over the complete spectrum of construction activities. In 2005, Alpine's footprint was increased because it became part of FCC Group, a Spanish construction and service group which was ranked at No. 11 of ENR Top 225 Global Contractors in 2009.

In 2003, Alpine took over Philipp Holzmann's businesses in China and founded the Alpine Mayreder Construction Co., Ltd. (AMCC). AMCC is a fully licensed contractor and has successfully operated in China for nearly 30 years in combination of the operation of the former Phillip Holzmann (China), with its head office in Beijing, a branch office in Shanghai and project offices in many cities.

AMCC has been offering services for project planning (including achieving authority approvals), engineering design, general construction, project management and facility management for commercial and residential buildings (embassies, schools, hotels, hospitals, stadiums, offices, apartments, etc.), production plants, heavy and complex infrastructure works such as roads, railways, bridges, tunnels, hydropower, water and waste water treatment plants, etc. AMCC possesses the expertise, systems, and resources necessary to design and construct all these kinds of projects. In particular, AMCC has built more than 50 superior-quality industrial production facilities for international investors in China.

Alpine represents the highest quality standard in diverse areas of the construction industry. They strictly implement the ISO 9001, ISO 14001 and OHSAS 18001 systems for all projects. They are also proficient with LEED requirements and have sufficient experts and trained engineers to fulfil the execution of LEED-related projects.

AMCC's major strengths are:

- Permanent establishment in China for nearly 30 years
- Full-range services
- Proven track record in various construction sectors
- Professional team with tremendous international client/project experience
- Extensive group experience in diverse sectors of construction, and HQ support
- Dedication to quality and time
- Value engineering, especially for energy saving, green building proposals

Whenever and wherever your needs come, AMCC is always your best construction partner in China.

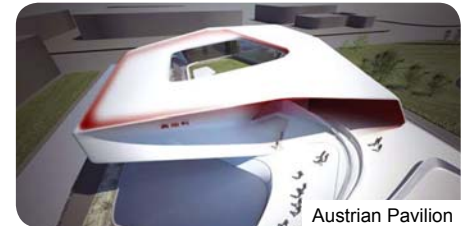
ALPINE China Contacts:

Beijing Head Office

Unit 1080, Beijing Sunflower Tower
37 Maizidian Street, Chaoyang District
Beijing 100125, P.R. of China
Tel: +86 10 8527 5116
Email: alpine@amc-constr.com.cn

Shanghai Office

20C, Zao Fong Universe Building
No. 1800 Zhong Shan West Road,
Shanghai 200235, P. R. of China
Tel: +86 21 6440 0498
Email: roider@amc-constr.com.cn



Austrian Pavilion



German Embassy School, Beijing



Shanghai Zhangjiang Mansion



ABB Factory, Chongqing



Ningbo Expressway



Yellow River Diversion Tunnel

marked for various infrastructure projects including roads, ports, railways, airports and affordable housing, especially in secondary and tertiary cities.

“There is enormous potential in China’s infrastructure development right now, partly due to the fact that more individuals are travelling for business between second- and third-tier cities and there is a need for better, more efficient transportation systems than what is currently in place,” says Callum MacBean, Shanghai Managing Director for Gensler, a global design firm with offices across North America, Europe, the Middle East, and Asia.

Nowhere is this infrastructure overhaul more apparent than in Shanghai, where the Metro rapid-transit system has been undergoing extensive expansion. “Shanghai is now the world’s biggest metro builder. There is almost more building going on underground than aboveground,” says Geoff Mills, Director of Shanghai SIP Engineering Consulting Company.

Shanghai’s metro system has grown from a single subway line in 1995 to 11 lines (including the Maglev Train) with 367 kilometres of operating track, making it the second longest network in Asia, after Seoul. This year, five more lines will be in service before the opening of Expo 2010, covering over 400 kilometres and making up over 35 per cent of the city’s mass transit system.

Besides infrastructure development, construction in China has also been heavy in the pharmaceutical and chemical sectors. In

It’s just a matter of time before the learning curve will come to an end for Chinese companies and foreign companies will have to figure out how to compete better against them

2009, a vast majority of construction work in the industrial sector was done on research and development infrastructure and logistics centres as both foreign and domestic pharmaceutical companies expanded operations. This year, many industry experts expect to see residential construction take off as the government “attempts to deal with the supply and demand imbalance of not enough housing,” adds SSOE Group China Business Director, Robert Benedetti. Benedetti is also chair of the Amcham Shanghai Design and Construction Committee.

“The growth in the residential building

sector is mainly for low-cost buildings, as the government aims to help low-income families be able to afford housing,” says Mirosław Adamczyk, Asia Pacific Director of Selenia, a company that manufactures and distributes construction chemicals. “This growth will also stimulate the growth of commercial buildings, such as shopping areas and entertainment centres.”

Competitive Advantages

Although state-owned construction enterprises are predominantly the main players in the industry, China’s construction market is still largely underdeveloped, and foreign companies entering have considerable room to manoeuvre and bring in specialities. “China’s construction market is still relatively immature, but over the last few years some of the more sophisticated parts and developed aspects of the market are coming in,” says Ray Chisnall, country manager of Gleeds China, a UK-based construction consultancy. “A lot more foreign investors are realizing that China is a place you can invest in and build a portfolio of assets that give you a long-term return, rather than building things fast and cheap and selling them off. This pulls in a whole set of different consultancies and services, and demand for the types of services foreign companies can provide will grow.”

Many foreign construction and engineering companies differentiate themselves from their domestic competitors through their international experience, quality of service, and ability to deliver on safety, time and bud-

The general contractor had good experience, until...





IMAGINECHINA

Building green has become a trend that is quickly catching on in China.

get. Most foreign companies have MNCs as their main clientele, who are used to doing things a certain way, explains Phil Branham, president of American project management and construction consulting company B & L Group. “MNCs want certain requirements and expectations met. They hire us because we understand their demands and quality levels and we can deliver them.”

Foreign firms are also able to provide fields of expertise and specialization to the market that many Chinese firms lack, such

as in project management, which involves utilizing a third-party entity that takes responsibility for the entire range of planning, executing and closing of a project. “Construction project management is a relatively new phenomenon to the Chinese construction market, but increasingly we’re seeing more Chinese firms launch project management services,” says Kwok. At the same time, a number of Chinese design institutes and general contractors have begun to include project management as

part of their services, and some foreign companies have raised concerns over existing regulations that favour granting licenses to Chinese project management firms over foreign ones.

Nevertheless, as Chinese construction firms continue to catch up to their foreign competitors, foreign companies need to re-examine their strategies. “The competitive advantage that [foreign firms] have in China is our international practice and our best practice standards that we bring to projects here. Over time, Chinese firms are going to absorb and learn those best practices, which are going to minimize the differentiators that we have. It’s just a matter of time before the learning curve will come to an end for Chinese companies and foreign companies will have to figure out how to compete better against them,” adds Kwok.

“The most successful firms are also fully integrated with the local community and culture. You need to know how to execute projects in China, not just design them from afar,” says MacBean.

Building Green

Foreign companies are also taking the lead in environmental sustainability. Building green has become a trend that is quickly catching on in China, as a growing number of developers seek international accreditation for environmentally sustainable buildings, such as Leadership in Energy and Environmental Design (LEED), a rating system designed by the U.S. Green Building



With a presence in China since over 35 years and based on profound experience, Züblin offers the complete range of Project Management services and ensures state-of-the-art realization of:

- **OFFICE AND COMMERCIAL BUILDINGS** → **INDUSTRIAL PLANTS** → **INFRASTRUCTURE**

As a fully licensed General Contractor Züblin has realized more than 130 complex industrial projects for a wide range of international clients and has a particular focus on high quality and energy efficiency.

For further information, please contact: **Mr. Harald Kuhn, General Manager**
 email: harald.kuhn@zublin.com.cn, phone +86-21-5831 8816 or visit www.zublin.com.cn

**GERMAN EXPERTISE
IN CONSTRUCTION
AND PROJECT
MANAGEMENT**

ZUBLIN
中国

Council. LEED certification verifies that a building is energy and water efficient, has low emissions and utilizes local resources that use smaller amounts of energy. According to the China Greentech Report 2009, published by the China Greentech Initiative, building operations account for about one-sixth of China's total carbon emissions.

"We're seeing an increased interest in sustainable design, not just from MNCs with experience developing green buildings, but also from Chinese companies looking to make a social statement as well as see long- and short-term returns on their investments. This is a marked change from only five years ago," says Gensler's MacBean.

China has taken significant steps to achieve energy efficiency around the country and reduce pollution. Under the government's 11th Fifth Year Plan in effect from 2006 to 2010, China set goals of reducing water and air pollution emissions by 10 per cent and decreasing the use of energy in urban buildings by 50 per cent. China has also established its own green building standard similar to the LEED system. Known as the "Three-Star Building" standard, it provides guidelines for greener design, construction and building operation. The country already has many prominent LEED certified buildings and over 100 are currently under construction seeking approval.

In September 2008, a joint venture aircraft engine maintenance facility between Pratt & Whitney and China Eastern Airlines, located in Shanghai's Qingpu district, became

the first industrial facility in China to receive the highest rating of LEED Platinum certification. On the commercial end, Beijing Parkview Green, a mixed-used development designed by Integrated Design Associates that uses a "microclimate" to regulate temperature within buildings and minimise energy consumption, is aiming to be China's first LEED Platinum certified commercial building. In Shanghai, the city's marquee project, Gensler's 632-metre-tall Shanghai Tower, will also feature sustainable elements such as sky gardens, a rainwater recycling system and a series of enclosed wind turbines.

In addition, China is working on joint ventures with other governments to build a series of eco-cities, sustainable cities designed to be environmentally friendly, resource-conserving and socially harmonious. The Sino-Singapore Tianjin Eco-city and Dongtan on Chongming Island near Shanghai are examples of eco-cities currently being developed.

However, while "building green" has been a big buzzword in the industry, many developers are still reluctant to rush into building structures that meet environmental accreditation standards because of the costs associated with it. "You might have a 10 or 15-year payback on some of these [LEED-accredited] projects," says Branham. "The way I look at it, the payback isn't money. The payback is in public relations and in your relationship with the government and your customers. It may have cost you a lot

of money to build a green facility and there might not be payback on it for a long time, but people will buy your product because they know it comes from a green facility and your payback will be in increased business."

Industry Challenges

Even as China's construction industry maintains double-digit growth and the coun-



China State Construction Engineering Corp., the largest contractor in China, recently won a USD100m subway ventilation project in New York City.

... we discovered
his references were false

SIP SEES MORE

Our experienced project teams undertake extensive contractor pre-qualification, procurement assessment and interviewing prior to recommending your best construction partner.

CONTACT US:

+86 13681825581
+86 21 64 65 09 77
a.woodward@sipgroup.com
www.sipgroup.com





- Design Review
- Due Diligence
(Environmental & Technical)
- Project Management
- Regulatory Construction
Quality Supervision "Jianli"
- Fire & Electrical System Testing



BUREAU VERITAS
Building & Facilities Services

try's rising urbanisation continues to present market opportunities, players in the sector continue to face significant challenges. Issues such as unclear regulations, rising costs, construction quality, and cultural differences have hampered the construction industry.

Many developers have been deterred by the lack of transparency and oversight present in some industry regulations, including licensing, accountancy and legislation issues, say industry experts. Oftentimes, health and safety practices in China lag behind international standards, and foreign contractors may find it difficult to align the practices they are used to in their home country with Chinese partners who do not share the same health and safety culture.

While many view the rapid pace of development as opportunity, there are also risks involved. "Project schedules are tight and delivery time is often half that of other markets," says MacBean. "China has always been quick to catch on to new practices and the construction industry is no exception, but building a project takes a well-orchestrated team of architects, engineers and contractors, and communication can be a pitfall."

Another big challenge for industry players is staying competitive with pricing. "In an economy such as this one, many companies are dropping their fees in order to stay busy, but there is danger in this approach – it means less staffing and resources for a project, which can often lead to setbacks down the road," says MacBean.

At the same time, the cost of labour in China is rising, and like other industries across China, the construction and engineering sector faces the daunting task of finding enough qualified talent. "In some respects, the challenges we face today are the same challenges we've always faced: the hunt for good people and the means to keep those people," says Kwok.

Looking Outwards

While China's domestic construction market continues to boom and competition from both foreign and domestic firms heats up, China's domestic contractors are beginning to look outside the country and assert their influence on the world stage. "One of the strategic shifts that is happening is the move out of China. The best Chinese contractors are highly competent. As they learn to do

business outside China and learn how to use western contracts, they're going to be a very formidable international commercial force," says Mills.

To date, Chinese construction enterprises have landed contracts in over 180 countries and regions, with accumulated contractual value amounting to USD434.1bn. In 2008, 51 Chinese project contractors were ranked among the world's top 225 international contractors. Chinese firms have been involved in major infrastructure projects in places including Africa, the Middle East, and North and South America. In the United States, China State Construction Engineering Corp., the largest contractor in China, recently won a USD100m subway ventilation project in New York City, following on the heels of two other major U.S. deals: a USD410m contract to renovate the Alexander Hamilton Bridge in New York and a USD1.7bn contract to construct a casino resort in Atlantic City, New Jersey. In the United States alone, China State Construction bagged more than USD2bn worth of contracts in 2009.

As Chinese enterprises move outwards and grow in international scale and scope, the experience they bring back to China will in turn further boost the domestic industry. The focus of construction will gradually begin to shift away from China's big cities to secondary and tertiary cities that are less developed. However, in Shanghai, momentous undertakings such as the Expo 2010, construction of the landmark Shanghai Tower and planned development of a Disneyland theme park will keep the city ringing with the sounds of drilling and hammering for some time to come.

"USD46bn was spent on construction around the city for the Expo. After the Expo is over, it needs to be torn down. After that, there will be more developments planned and they will start building the site back up again. There will always be something going on," says Branham.

Consequently, most foreign construction and engineering companies are here for the long haul, and many express hopeful projections for the industry in the coming year.

"There's a buzz of energy and activity about this place that you don't find anywhere else," says Gleeds' Chisnall. "You feel like you're a part of something." **SBR**