

# ICF NEWS

The ICF logo consists of a stylized blue 'i' and 'c' that form a continuous shape, with a blue 'f' to its right. Below the 'i' and 'c' is the text 'ICF' in a blue, sans-serif font.

Issue 54 | January 2006

A large, intricate orange dragon illustration is the central focus of the cover. The dragon is depicted in a traditional Chinese style, with detailed scales, whiskers, and a long, flowing tail. It is positioned diagonally across the page, facing towards the right. The background is a solid red color, which makes the orange dragon stand out prominently.

## FOREIGN CABLE- MAKING INVESTMENTS IN CHINA

### STATISTICS

# ICF NEWS

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### FOREIGN CABLE-MAKING INVESTMENTS IN CHINA

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### STATISTICS

## TOKYO CONGRESS 2005

134 participants found their way to Tokyo to attend the 2005 Congress and our social events, a very encouraging increase in attendance. All Congress proceedings have been mailed to members and remain of course available for download in the member section of our website.

## ICF CONGRESS 2006 IN CHICAGO

Work has already started to develop and prepare the program for the Chicago Congress which will be held from 18 to 22 October 2006. The Business Sessions currently being worked on by the ICF Standing Commission are:

- Electricity Generation – Drivers & Trends  
An overview of how electricity generation is likely to evolve over the next decade.
- Raw Materials  
A review of trends and developments covering major materials used by the cable industry, including the effects of legislation on raw materials.
- Transmission & Distribution Networks  
A look at trends, drivers and evolutions in various regions of the world
- Wires & Cables in Wireless  
An overview of trends, demands and drivers of change.

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# FOREIGN CABLE-MAKING INVESTMENTS IN CHINA

## KEY DRIVERS & SUCCESS FACTORS

### Significance of China's Cable Market

#### A Very Big »C« in BRICS

World total cable consumption in 2004 was US\$84 billion. 61% of this total (US\$51 billion) was in more developed countries with relatively mature cable markets (including the US, Canada, Western Europe, Japan, Korea, Taiwan and Australasia), while the balance, US\$33 billion, was in developing countries. In analysing the more attractive and more substantial opportunities that may be offered by various markets around the world, many companies use the BRICS acronym (Brazil, Russia, India, China and South Africa) as shorthand to identify those countries with the largest potential.

For cable markets this approach is too superficial, as it groups together countries whose significance varies greatly. In particular, it understates the huge importance of the Chinese cable market (and it also omits some other interesting areas, notably major countries in the Middle East.)

#### China Cable Market US\$12 billion

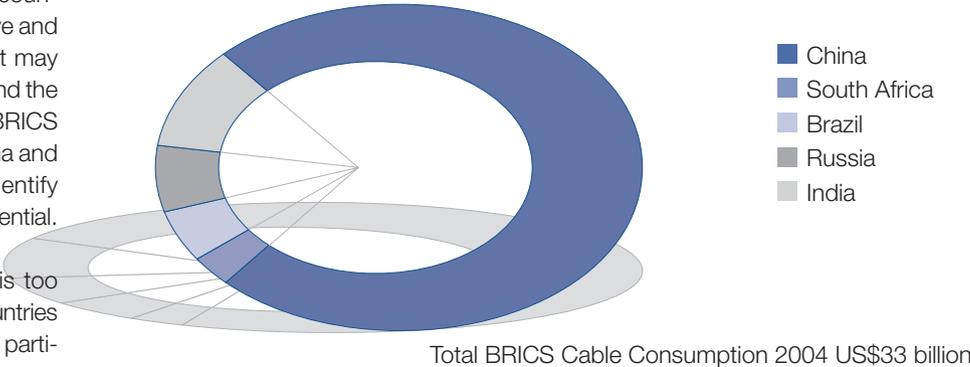
For example, the total cable market in all the countries of Central and Eastern Europe amounts to US\$3.6 billion, of which Russia accounts for approximately 40%, whereas China's cable consumption in 2004 was US\$12.4 billion. Similarly, the total cable market for all countries in Africa was only US\$2.0 billion, of which South Africa accounted for 30%. The Brazilian cable market in 2004 was only US\$1.0 billion, approximately

20% of the total for Latin America (Mexican cable demand was US\$2.1 billion, twice as large as Brazil's). Cable consumption in India, the only one of the BRICS countries that is comparable to China in terms of population, was a modest US\$2.0 billion. Thus the size of the cable markets in each of these other developing countries is much smaller than China's market. China alone accounts for 72% of the total cable demand for the BRICS countries!

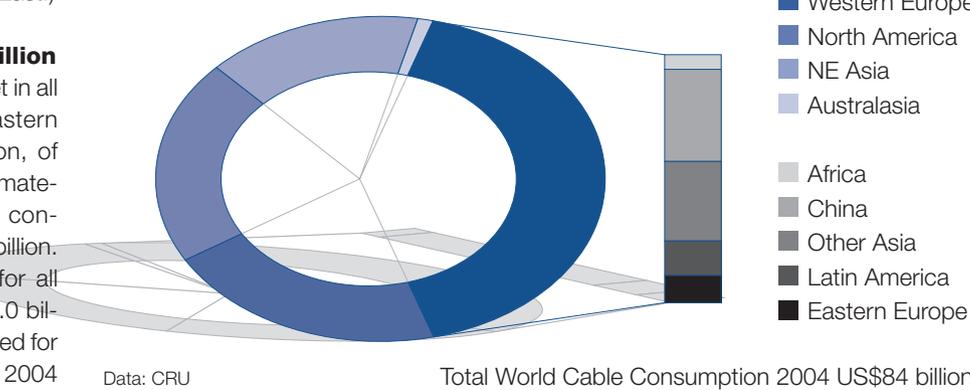
#### Sustained Growth in China

In addition to the large absolute size of the Chinese cable market, growth rates in China have been consistently high over a period of 15 years or more. Cable market growth is currently strong in some other developing countries but none has a track record of consistent growth comparable to China. Chinese cable consumption volume has grown from 1.0 million conductor tonnes in 1995 to 2.3 million tonnes in 2004, an average

### CHINA'S MARKET MUCH LARGER THAN OTHER »BRICS« COUNTRIES



### CHINA LARGEST CABLE MARKET AMONG DEVELOPING COUNTRIES



Data: CRU

Total World Cable Consumption 2004 US\$84 billion

growth rate of 10% per year. The average annual growth for the Indian market over this period is 2.5%, though growth has accelerated over the last two years.

**China Main Focus for Investors**

As a result of the high demand growth, over the last 5 years China has been the main focus of attention for most cable groups with aspirations to develop a global business. Furthermore, many international cable-makers supplying to OEMs have not been able to ignore the Chinese market as their existing customer base has relocated manufacturing operations to China.

- Strong Chinese market growth due to infrastructure development (e.g. power cables, telecom cables);
- Strong market growth due to high construction activity (e.g. building wire, power cables, datacom cables);
- Strong Chinese market growth due to shift in global production by OEMs (e.g. auto cables, magnet wire);
- Opportunity to develop a low cost manufacturing base for export to markets outside China.

**Rapid Infrastructure Development**

After lagging behind the growth rate in real GDP during the late 1990s, growth in electricity demand has been faster than real GDP growth in recent years. Development of Chinese electricity infrastructure (power generation facilities and transmission / distribution networks) has been accelerating in recent years to keep pace with this demand growth. In the communications sector there has been very strong growth in telephone lines in China, (as shown in the graphs included in the October 2005 issue of ICF News), though much of the expansion in the last three years has been associated with mobile phones and wireless local loop lines. Expansion of the fixed line tele-

phone network via traditional copper pairs has continued, but the pace of expansion has slowed somewhat.

**Growth of OEM Production**

There has been a very strong increase in Chinese production of many electrical consumer goods. For example, Chinese production of air conditioners has grown from 0.7 million in 1995 to more than 5 million in 2004. Partly this growth has been driven by increased demand from consumers in China, but there has also been high growth in exports as production in other countries has been displaced by Chinese production.

**Low Cost Export Operations**

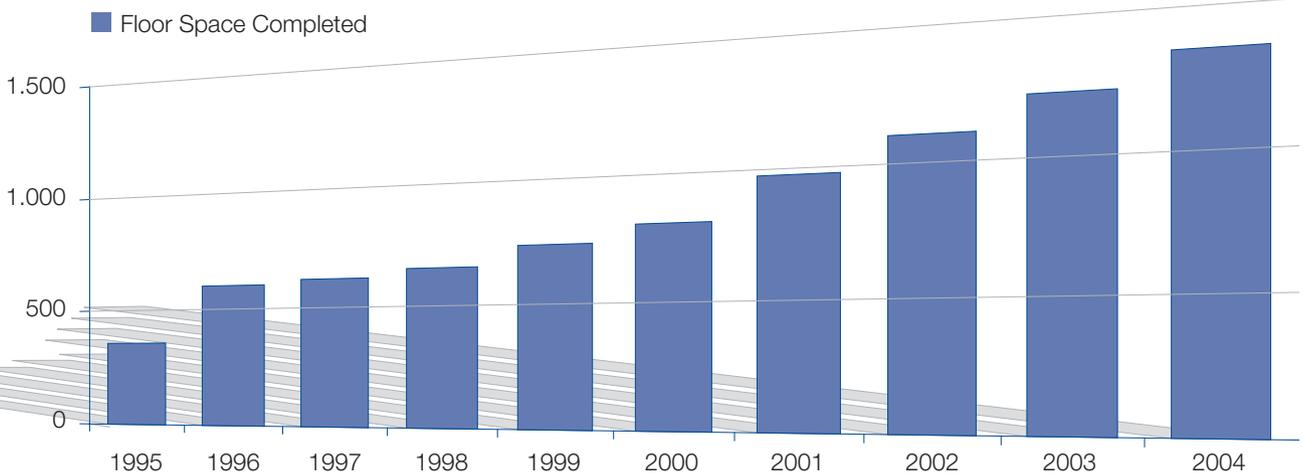
China's cable trade was discussed in detail in the July 2005 issue of ICF News. In China's exports the main feature is not primarily exports of cable, but exports of assemblies and harnesses where the labour cost saving through production in China is significant. The main exports include harnesses for autos or electrical equipment and cable assemblies, such as power cords and extension leads that incorporate flexible cables. For most types of cable the labour cost element is not so critical and the lead times for delivery to markets in Europe,

# What Drives Cable Groups To Invest in China?

**Key Drivers**

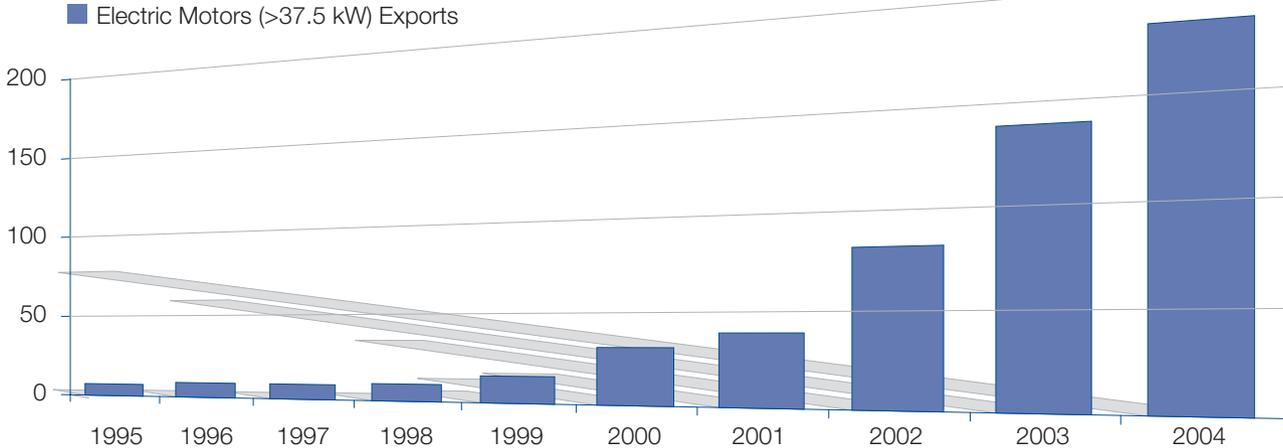
There are various reasons that would encourage a foreign company to invest in China, all of which are related to the strong growth in the cable market and in Chinese industrial production. The main drivers relevant to wire & cable markets are:

## CHINA CONSTRUCTION ACTIVITY



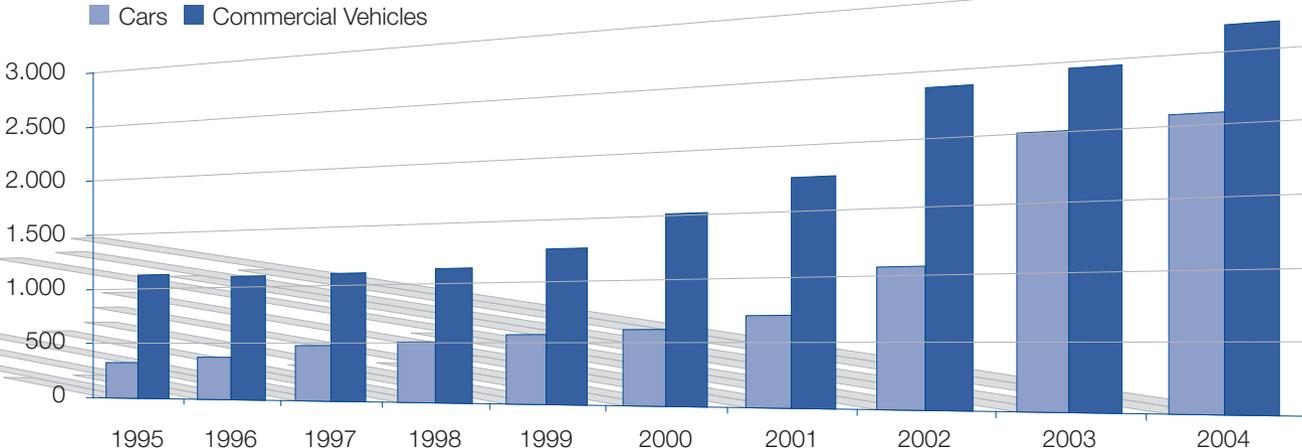
Data: China National Bureau of Statistics

### CHINA BECOMES MAJOR EXPORTER OF MOTORS



Data: Trade Statistics

### CHINA VEHICLE PRODUCTION



Data: China National Bureau of Statistics

for example, are too long for Chinese cable suppliers to be really competitive. However, there are exceptions where Chinese exports of cable are high, serving not only Hong Kong but also other markets in Asia.

## Strategic Options for Foreign Investors

#### Ownership Options

Where a foreign company wishes to buy a stake in a Chinese operation, the main alternatives are:

- Joint venture with the foreign partner having majority shareholding;
- Joint venture with a foreign partner having minority shareholding;
- Wholly owned by the foreign company (known as a wholly owned foreign enterprise or WOFE).

#### Need for Local Partner: HR

There are several reasons why a foreign investor would need a partner in a joint venture. Western companies with little experience in China are likely to be reluctant to take on the management of a large Chinese workforce. Apart from the obvious problems of language and culture that can occur in virtually any country, the level of social provision for workers in China is much higher than many foreign companies (e.g. including hous-

ing) would normally be used to providing. A local partner will generally be much better placed than the foreign investor to handle the human resources aspect of the business. On the other hand, the foreign partner would probably be keen to avoid adopting some of the working practices associated with some traditional Chinese businesses, for example:

- »Iron rice bowl«: a job for life;
- »Eating from the common pot«: equal pay regardless of merit;
- »Iron chair«: guaranteed promotion.

### **Need for Local Partner: Contacts**

In some market sectors the local partner will have essential contacts with potential customers. This is usually important where the main customers are large Chinese companies, especially ones that are state-owned. Without such contacts it would be very difficult, if not impossible, for a newly established foreign company to gain market share reasonably quickly. This is the main reason that most of the foreign investment in power cables, for example, has been in joint venture with local companies. Typically, the local company already has a market presence and wants to expand its product range with the support of a foreign partner. The need for a local partner may be encouraged by pressure from the government, for example through withholding approval of investment proposals.

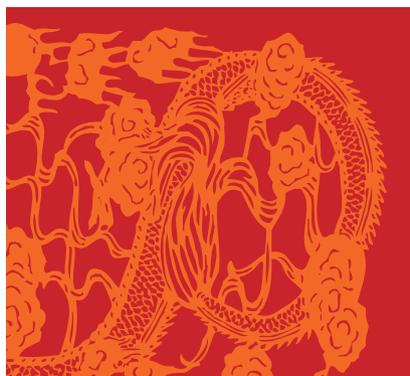
### **WOFE for OEM or Export**

If the Chinese operation that is to be set up by a foreign cable-maker addresses other foreign companies in China (e.g. OEMs), then the need for a local partner is limited. When the Chinese OEM is a subsidiary of a group with a global organisation, the foreign cable company will already have established relationships with the procurement department of the group. The key task for the Chinese cable operation will be to achieve the stringent quality and delivery requirement of the OEM in China, and a local partner is unlikely to make a major contribution to this. The same consideration applies even more strongly if the Chinese cable-making operation is aimed at export markets,

as in this case many of the customers will already be served by the cable-maker from operations outside China.

### **Minority Stake Carries Risks**

Buying a minority stake in a joint venture requires less commitment in terms of the investment required by the foreign company, but carries more risk in terms of the foreign investor's inability to control key decisions. Even if the objectives of the partners appear to be aligned when a joint venture is established, the interests of the parties may diverge as time goes on. A carefully constructed sharehold-



ers' agreement may reduce, but cannot eliminate, the risk. Even where foreign investors have majority ownership, they would probably feel nervous because the local partner has a strong influence on key areas of the business. Foreign commentators often state that the Chinese legal system cannot be relied upon to make unbiased judgements in case of disputes between Chinese and foreign companies; more realistically, if a dispute between joint venture partners escalates to the point where it reaches the courts for settlement, then the joint venture would in any case already be doomed to failure.

### **Gradual Approach**

There are some instances where the foreign partner has started with a relatively low share of a cable-making joint venture, then at a later date increased its share, either by buying out part or all of the shareholding owned by a local partner or through injecting more equity. This

step-by-step approach has the advantage of limiting risk at the early stages, when the success of the operation may be in doubt, but allows the foreign company to take a higher share (or even 100% ownership) once confidence has been gained that the business can operate successfully in the Chinese market.

### **Partnership with Customer**

In some cases cable-making joint ventures have been established that involve not only a local cable company but also a potential customer. Instances of this approach have occurred when electricity utilities have become a shareholder in power cable joint ventures. The motivation for this approach is more likely to be from the Chinese side than from the foreign investor, as it echoes the earlier times when there would have been a network of state-owned enterprises, closely integrated at a provincial level. This approach is not common elsewhere in the world, though there are some other examples (e.g. Malaysia and Vietnam) where power utilities are involved in manufacture of electrical equipment.

### **Equity Contribution from Plant**

With markets outside China at times affected by deep recessions, one option that has sometimes been available for foreign companies has been to reduce surplus production capacity elsewhere by transferring cable-making equipment to China. The value of the second-hand plant may form part of the equity contributed by the foreign company into a joint venture, if this can be agreed with the Chinese partner. Chinese partners may, however, be reluctant to accept second-hand imported plant, as they will generally prefer to buy in the best technology, which usually means new equipment. Furthermore, new equipment is often available much more cheaply from Chinese producers than plant made by international equipment suppliers.

### **Location Critical ...**

As much of the recent economic development has taken place in the east-

ern provinces of China, most foreign cable companies have set up operations in these areas. Location close to customers is clearly important for producers who need to supply OEM customers on short delivery timescales. Consequently, manufacturers of products such as auto cables and winding wire are located close to their customers, and these are mostly based in a few major cities in the eastern part of China. To minimise delivery times and reduce transport costs, cable-making businesses with a strong export orientation are also likely to locate in areas close to the major ports of eastern China.

**... Or Not So Critical?**

There is not such a strong need for cable manufacturers whose main market is infrastructure development projects to be very close to their customers, but it is clearly still an advantage to be reasonably close. As transport systems in China have improved greatly in recent years, especially with construction of major new highways, it is possible for cable-makers to supply power cables, for example, to utility customers in distant provinces.

**Location also Affects People**

A foreign company locating in China also has to consider the impact that location has on the ease of managing the business. It would be difficult to recruit foreign managers to work in remoter or less developed locations unless the duration of contracts is short or very high incentives are offered. This issue is less of a problem now than it was a few years ago, as second tier cities in China have developed, with much improved amenities. In addition, the increasing availability of good Chinese managers has reduced the need for foreign expatriates.

**Supply Partnership Agreements**

There may be alternatives to buying into an existing Chinese cable manufacturing operation or establishing a new one. In some circumstances, where the main objective of the foreign company is to have a cheap source of cables or accessories, it may be sufficient to have a supply agreement with an existing cable manufacturer. There is no investment risk in this approach, but the downside is that the supply chain needs to be very tightly managed. If this type of relationship can be sustained, with benefits to both

sides, it may not be necessary for the foreign company to have an equity stake in the Chinese operation.

**Technical Assistance Agreements**

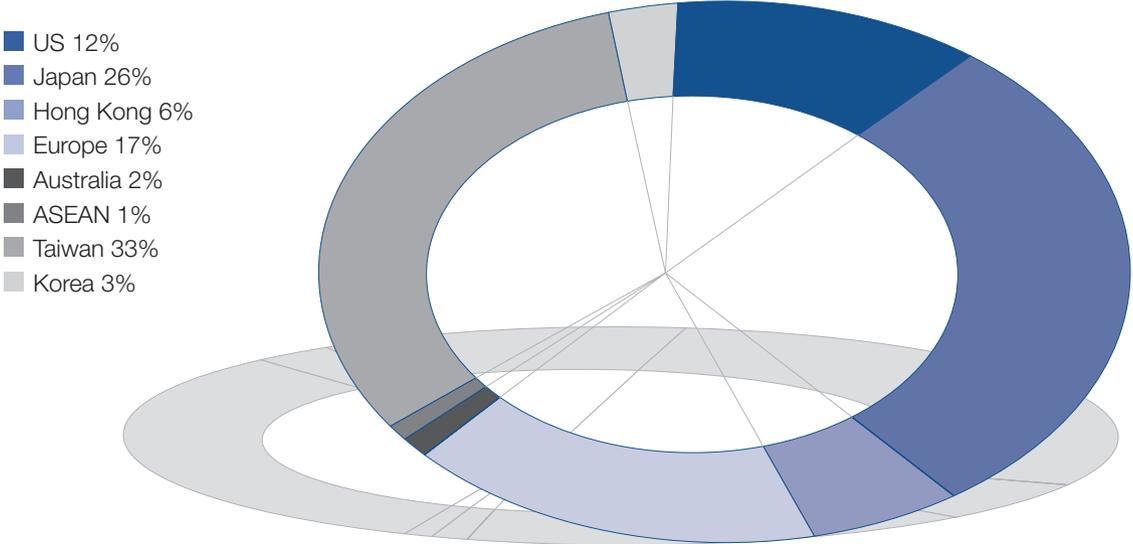
International groups may choose to set up technical assistance agreements with Chinese companies without necessarily taking on any commitment in terms of investment. The foreign company would get the benefit of technique fees, while the Chinese company would receive technical know-how and sometimes also management support in improving its business. As one of the aims of the technique transfer is to improve product quality, the foreign partner also has the potential to develop a supply partnership the Chinese company with some confidence that the latter will be able to avoid major quality lapses.

## Why Seek a Foreign Partner?

**Motivation of Chinese Partner**

Just as important as the reasons that drive a foreign cable company to invest

### FOREIGN INVESTMENTS IN CHINESE WIRE & CABLE BY COUNTRY



Data: CRU



in China is the other side of the equation: Why would a Chinese company feel any need to get involved with a foreign investor? A joint venture between a Chinese company and a foreign partner is only likely to be successful if there are really good reasons on both sides for establishing the joint venture, and if there is a good complementary fit between the strategic objectives of the parties involved.

**Need for Technical Assistance ...**

In product sectors where technology is not a major problem, a Chinese cable company would usually prefer to act independently and would not want to get

involved with a foreign partner. In some product sectors, however, where technical know-how is required, Chinese companies would benefit from the experience of a foreign partner. The technical know-how of an experienced partner may be needed to establish successful manufacturing or it may be a competitive advantage in convincing customers that the manufacturer has sufficient technical competence.

**... in HV Power Cables, for example**

In HV XLPE power cables, for example, in the mid-1990s several Chinese cable groups set up joint ventures with major international players. Even at that time, this approach was by no means universal, as, to give one example, Shanghai Cable actually developed its own capability in HV cables. In more recent years several other Chinese cable companies have acquired equipment for production of HV power cables. The need for a foreign partner with technical experience has become less compelling over the last ten years. Some Chinese cable companies now have confidence that, after installing plant, they will, with some support from suppliers of

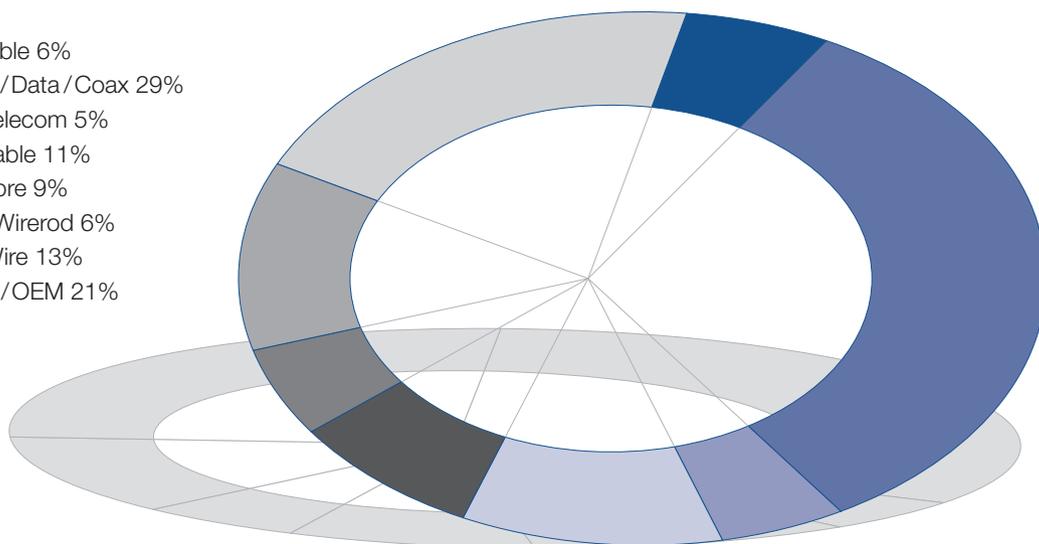
equipment and materials, be able to produce HV cables that will meet the required standards. One factor that supports this view is that there tends to be more sharing of technical experience between companies in China than would be normal in Europe, the US or Japan, where competitors in the cable industry would carefully guard their technical expertise. But most of the successful companies in the Chinese HV power cable market are joint ventures involving foreign partners. While the expertise of the foreign partner might not be absolutely essential, it certainly allows a much faster market entry, by greatly reducing the time needed to gain sufficient experience to produce good quality HV cable consistently.

**Availability of Capital**

In some cases Chinese cable companies have sought foreign investors in joint ventures simply as a source of capital when their own funds have been in short supply. If the Chinese company is short of cash due to rapid expansion of its own business, this tactic is credible. If, however, the reason for seeking outside investment is that the Chinese company is short of cash due to weak perform-

**FOREIGN INVESTMENTS IN CHINESE WIRE & CABLE BY PRODUCT**

- Power Cable 6%
- Electronic/Data/Coax 29%
- Copper Telecom 5%
- Optical Cable 11%
- Optical Fibre 9%
- Cu Wire/Wirerod 6%
- Magnet Wire 13%
- LV Energy/OEM 21%



Data: CRU

ance of the existing business, any potential foreign investor is likely to hear alarm bells ringing.

### Access to Export Markets

Another common reason for a Chinese cable company to seek a foreign partner is the hope that this can give the joint venture better access to export markets. Even though China is itself a very large market, a Chinese company may quite reasonably perceive that the majority of the world's demand for cables is outside China! This view is likely to conflict with the aims of a foreign investor whose main reason for establishing a joint venture in China is to gain a place in the growing

Chinese market! As there continues to be production over-capacity in many of the mature markets, a global cable player will not want to add to the problem by switching on yet more capacity in China. Where foreign companies are setting up an operation whose main aim is to target export markets, it is likely that they will not need to involve a Chinese partner in the business.

## Nationality of Investors and Product Focus

### 160 in Total

There are approximately 160 wire & cable operations in China involving foreign shareholders. This total refers only to wire & cable, including producers of optical fibre and copper wire and wirerod, but excluding harness-makers (of which there are another 70 involving foreign investors). The country with the largest number of wire & cable interests in China is Taiwan, which accounts for approximately one third of the total, closely followed by Japan.

### Taiwanese Seek Lower Cost

The development of Taiwanese investment in mainland China is particularly

## MAIN FOREIGN INTERESTS IN CHINESE CABLE MAKING OPERATIONS TAIWAN, HONG KONG

Group	HQ Location	Copper Wire /Wirerod	Magnet Wire	LV Energy /OEM /Auto	Power Cable	Copper Telecom Cable	Electronic /Datacom /Coax	Optical Cable	Optical Fibre
Copartner Tech	Taiwan						•		
Evernew	Taiwan						•		
Evertop	Taiwan		•				•		
Floodlit Enterprise	Taiwan		•						
I-Sheng	Taiwan						•		
Jiuh Feng	Taiwan	•	•						
Jung Shing	Taiwan		•						
Jye Kyano	Taiwan						•		
Liou Yuane	Taiwan						•		
Longwell	Taiwan	•		•			•		
Nice Fountain	Taiwan								
Pacific Electric (APWC)	Taiwan		•		•	•		•	•
Rei Hsing	Taiwan						•		
Space Shuttle Hi Tech	Taiwan						•		
Sunf Pu Technology	Taiwan						•		
Ta Ya	Taiwan	•	•	•					
Tai-I	Taiwan	•	•						
Tatung	Taiwan						•		
Ta-Win	Taiwan		•						
Walsin Lihwa	Taiwan	•			•	•	•	•	•
Wonderful Hi Tech	Taiwan						•		
YFC Boneagle	Taiwan						•		
Gold Peak Industries	Hong Kong				•			•	•
Keystone Wire & Cable	Hong Kong				•	•			

Data: ITU, CRU

interesting. Though there is a great deal of political tension between the two states, which at times has erupted into hostile posturing by politicians, in practice there is increasing economic interdependence of the two countries. Investment by Taiwanese in mainland China has been growing rapidly in recent years, up from US\$2.5 billion in 2000 to US\$7.5 billion in 2003. Many Taiwanese companies have been seeking lower labour costs through shifting operations from Taiwan to mainland China. Fujian province has been particularly attractive for Taiwanese companies as it is located close to Taiwan, across the Formosa Strait. As well as being close to Taiwan there are many ties in terms of history, culture and family links between Taiwan and Fujian, so Taiwanese businessmen do not have such high barriers to climb as other foreign investors when they try to understand China's markets. In addition to the many Taiwanese cable companies, large and small, that have »satel-

lite« operations in Fujian, the larger Taiwanese cable groups have more extensive interests in other parts of China. Much of the Taiwanese activity is in products used by OEMs, e.g. LV energy cable and electronic cables for assemblies, or magnet wire.

**Hong Kong Invest in Guangdong**

There are similarities between Hong Kong and Taiwan in terms of their economic relationships with mainland China. Hong Kong has the advantage over Taiwan of having much better political relations with the PRC. Even before control of Hong Kong reverted to China, the territory acted as a major gateway for trade with China. Since incomes and costs in Hong Kong are comparable with Europe or the US, for many years Hong Kong companies have sought lower cost manufacturing bases by shifting operations into Guangdong, which lies adjacent to Hong Kong, but Hong Kong companies now also have operations elsewhere in China.

**Major Japanese Investments in China**

Japanese cable companies have a major presence in China. All the major Japanese cable groups and several other Japanese wire & cable companies have Chinese operations, though much of the activity has been in harness operations, rather than wire & cable. In addition to exporting cable and assemblies back to Japan, the cable-makers in China also supply to the many Japanese OEMs that have set up manufacturing in the country.

**Modest Korean Presence**

Despite the close proximity of the two countries, Korea's cable-makers have not generally been very active in China, with the major exception that the largest Korean group, LS Cable, has several operations in China. In fact, Korean cable companies have been as active in setting up joint ventures in Vietnam as they have in China.

**MAIN FOREIGN INTERESTS IN CHINESE CABLE MAKING OPERATIONS  
JAPAN, KOREA, ASEAN**

Group	HQ Location	Copper Wire /Wirerod	Magnet Wire	LV Energy /OEM /Auto	Power Cable	Copper Telecom Cable	Electronic /Datacom /Coax	Optical Cable	Optical Fibre
Fuji Denko	Japan			•			•		
Fuji Magnet Wire	Japan		•						
Fujikura	Japan			•		•		•	•
Furukawa Electric	Japan	•		•	•			•	•
Hitachi Cable	Japan		•	•			•	•	
Nippon Mining & Metals	Japan	•							
Riken	Japan		•						
SEI	Japan		•	•	•		•	•	•
Showa	Japan	•	•			•	•	•	•
Tokyo Electric	Japan			•			•		
Totoku	Japan		•						
Yukita	Japan			•					
LS Cable	Korea		•	•					
Samsung	Korea							•	•
Leader Universal	ASEAN				•				

Data: ITU, CRU

## MAIN FOREIGN INTERESTS IN CHINESE CABLE MAKING OPERATIONS EUROPE, US, AUSTRALIA

Group	HQ Location	Copper Wire /Wirerod	Magnet Wire	LV Energy /OEM /Auto	Power Cable	Copper Telecom Cable	Electronic /Datacom /Coax	Optical Cable	Optical Fibre
Acome	Europe			•			•		
Datwyler	Europe						•		
Draka	Europe			•	•				
Draka / Alcatel	Europe							•	•
Elektrisola	Europe		•						
Invex	Europe		•						
Leoni	Europe	•		•			•		
Nexans	Europe		•			•	•		
NKT	Europe				•				
Prysmian	Europe				•	•	•	•	
TKH	Europe					•		•	•
Amphenol	US						•		
Andrew	US						•		
CommScope	US						•		
Corning	US							•	•
Phelps Dodge	US		•		•				
Rea	US		•						
Tyco	US			•			•		
Redfern Photonics	Australia								•
Olex	Australia					•	•		

Data: ITU, CRU

### European and US Investments

There has been stronger investment activity from European cable companies than from North American ones, judging from the number of companies that have been established. For example, several European companies are involved in power cables and copper telecom cable joint ventures in China.

Each of the largest European cable groups has several operations in China, covering different product ranges. A number of the major US cable groups do have investments in China, but not all the big names in the US industry have a manufacturing presence. The main US producers of magnet wire have established operations in China, a necessity in view of the shift in global

production of motors and transformers for appliances.

### Product Focus of Investments

The power cable sector, especially HV power cables, has attracted a lot of investment attention from international cable groups, Japanese as well as European. The main focus of foreign investment in LV energy cables is in OEM products and auto cables, not general market products such as building wire, where there are many small-scale Chinese producers. There has been some investment by foreign companies in joint ventures that produce copper telecom cables, but this product sector has not attracted anywhere near as much interest as fibre optic cable, where many foreign groups are involved, in fibre as well as cable. Several

foreign companies have established coaxial cable operations in China, attracted by the growth in the Chinese telecom market. Apart from the Taiwanese, only a few foreign cable groups have LAN cable operations in China, but some Chinese producers of LAN cables have grown in importance as they supply cable on an OEM basis for international brands.

