

A rapidly increasing demand for wires, cables, tubes and pipes wire & Tube China 2024 open their gates from September 25-28, 2024 in Shanghai

China is the world's second-largest economic power behind the USA. Although its economic growth has slowed compared to previous years, China with its 1.4 bn inhabitants remains a huge market where wires, wire products such as cables, fasteners, springs, and ropes as well as tubes and pipes play an important role. Wires and cables, e.g., are essential for the transmission of electric power and electronic data while tubes and pipes are needed for conveying liquids, gases and free-flowing substances or for mechanical structures.

Wires and cables

The market research company *BIS Research* estimates that the revenue of China's wire and cable market was more than US\$45 bn in 2022 and expects that it will grow at an average annual growth rate (CAGR) of 7.4% to reach nearly US\$97 bn by 2032.

Many application areas are related to electricity. In 2023, China consumed around 9,220 TWh of electric power, 6.5% more than in the previous year. In the first four months of 2024 the demand grew by 7.4% in the year-over-year comparison.

In 2023, China's power plants generated nearly 9,460 TWh of electric power (Fig. 1). To keep pace with the rising demand, China is pushing ahead the expansion of electricity generation. In the period from January to July 2024 the total installed generation capacity of power plants was increased by 14% to 3.1 TW, mainly by the construction of wind and solar power plants.

As of the end of July 2024, nuclear power plants with a total capacity of around 58 GW were in operation in China. In August 2024, *China's State Council* approved five new nuclear power projects with a total of 11 reactors.

The electricity transmission grid requires huge amounts of wires and cables. In 2022, China invested nearly US\$166 bn in its expansion and



Messe Düsseldorf GmbH
Postfach 10 10 06
40001 Düsseldorf
Messeplatz
40474 Düsseldorf
Deutschland

Telefon +49 211 4560 01
Telefax +49 211 4560 668
www.messe-duesseldorf.de
info@messe-duesseldorf.de


Geschäftsführung:
Wolfram N. Diener (Vorsitzender)
Marius Berlemann
Bernhard J. Stempfle
Vorsitzender des Aufsichtsrats:
Dr. Stephan Keller

Amtsgericht Düsseldorf HRB 63
USt-IdNr. DE 119 360 948
St.Nr. 105/5830/0663

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maintenance, while all other countries collectively spent for their grids US\$118 bn (Fig. 2). In the next six years, an investment of more than US\$800 bn is foreseen to overcome strains on the energy system as the country makes a rapid shift to renewable sources. Grid operations also have to become smarter to merge the fluctuating demand with decentralised power generation systems like wind turbines and solar panels.

Another important consumer of wires, cables and other wire products like fasteners and springs is the automobile sector. Cars need cables which supply numerous components with electrical energy, transmit control signals and transfer information.

Moreover, all cars also need tubes for the frame, the chassis and the powertrain. As tubes are lighter and stiffer than solid rods, they help reduce the weight of cars and – in the case of electric vehicles (EVs) – to compensate for the weight of heavy batteries.

In 2023, more than 26 million passenger cars, almost one third of the world's passenger cars production, were produced in China by national and foreign manufacturers. It is expected that China's automobile industry will see another strong growth in 2024.



Tubes and pipes

Tubular products are as important as wires and cables. Tubes and pipes made from different steel grades are used in the oil and gas industry for different applications in upstream operations (as so-called Oil Country Tubular Goods – OCTG), midstream operations such as transmission and distribution of oil, gas, fluids, acids, steam, and slurries, and downstream operations such as refining processes. According to the *Baker Institute*, China operated in 2023 more than 100 crude oil pipelines with a total length of nearly 26,000 km, refined product pipelines with a total network length of nearly 26,000 km and more than 410 natural gas pipelines with a total length of more than 110,000 km. Increasing investments in the oil, gas, and chemical industries are propelling the growth of the tubes and pipes market as well as spending on infrastructure including water and irrigation infrastructure, water and sewage treatment.

Also worth mentioning are the activities in the field of hydrogen production and use, the construction of buildings, and the replacement of aging pipes. Coal and gas power plants, which continue to play an important role in China's electricity generation, and nuclear power plants need water piping systems for operation and cooling processes.

Because of cost-efficiency, durability, corrosion resistance and a relatively light weight plastic pipes such as PE and, in particular PVC pipes become more and more important. The marketing research company *Bonafide Research* valued the Chinese plastic pipes market at US\$14.2 bn in 2022 and expects that it will grow at CAGR of 4.2% to reach US\$19 bn in 2028.

Outlook

To comply with the challenging requirements, Chinese manufacturers of wires, cables and tubular products need cutting-edge processing equipment. The wire China and Tube China trade fairs provide a unique opportunity for production equipment manufacturers to present their products and services while professional visitors get access to information about the latest developments.

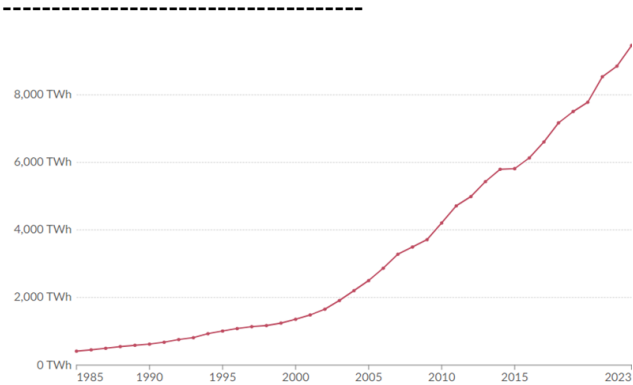


Fig. 1. Development of China's electricity generation.

Source: Hannah Ritchie and Max Roser: China: Energy Country Profile. Our World in Data, Oxford.

y-Achse: Electricity generation (in TWh)
x-Achse: Period of time

Please add at x-Achse: Value of year 2023: 9,459.59

Graphic Source:

<https://ourworldindata.org/energy/country/china>



Fig. 2. Spending on electricity transmission in 2022 by country (in US\$ bn). Source: Nick Ferris: Weekly data: grid investment in China more than every other country combined. In: Power Technology, March 15, 2024.



Graphic Source:

<https://www.power-technology.com/news/weekly-data-grid-investment-in-china-more-than-every-other-country-combined/?cf-view>

Your Press Contact in Germany:

Petra Hartmann-Bresgen M.A.

Ulrike Osahon

Tel.: +49 (0)211/4560-541/992

Fax: +49 (0)211/4560-87 541

E-Mail: HartmannP@messe-duesseldorf.de