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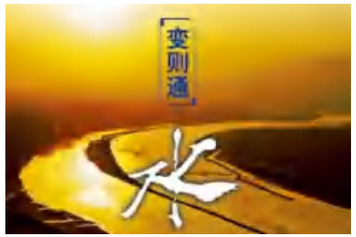
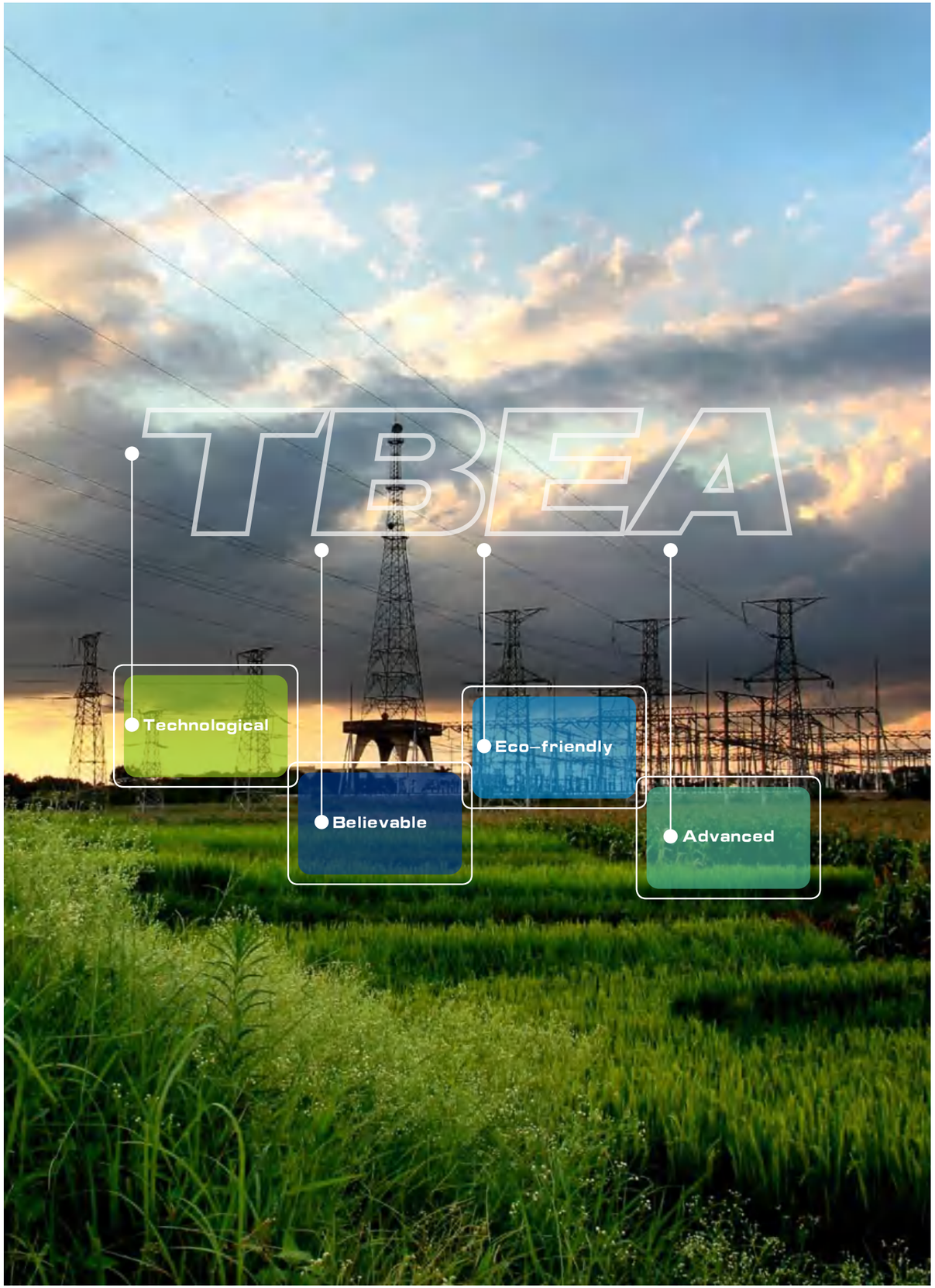
TBEA 特变电工

TBEA 特变电工
Equip China Powering the world

特变电工山东鲁能泰山电缆有限公司
TBEA SHANDONG LUNENG TAISHAN CABLE CO.,LTD.

Five World Outlooks of TBEA





TBEA

TBEA , a service provider of system integration solutions for global energy industry, high-tech industrial manufacturing enterprise as well as a large-scale energy equipment manufacturing enterprise in China, bases on the energy, undertakes China's three national strategic emerging industries, namely, Power Transmission and Distribution High-end Manufacturing Industry, New Energy Industry and New Material Industry which are shortly called as "One High-end & Two News". Now, the cooperation has cultivated three listed companies, namely, TBEA (with stock code: 600089) , Xinjiang Jointworld (with stock code 600888) and Xinte Energy (with stock code HK1799) . TBEA has become a global leading enterprise in power transmission and distribution industry, a R&D and export base of large-scale aluminum electronics and poly-silicon in new-material industry and a large-scale solar photovoltaic ,wind power system integrator in China. TBEA's annual output of transformer has reached 26 million kVA , ranking the first in the world, Photovoltaic EPC is the world's largest.TBEA ranks the 228th among World Top 500 Machinery Industries, 277th among China Top 500 Industries, and 9th among China Top 100 Machinery Industries. The brand value of TBEA is worth more than 50 billion RMB, ranking 47th among China's Top 500 Most Valuable Brands.

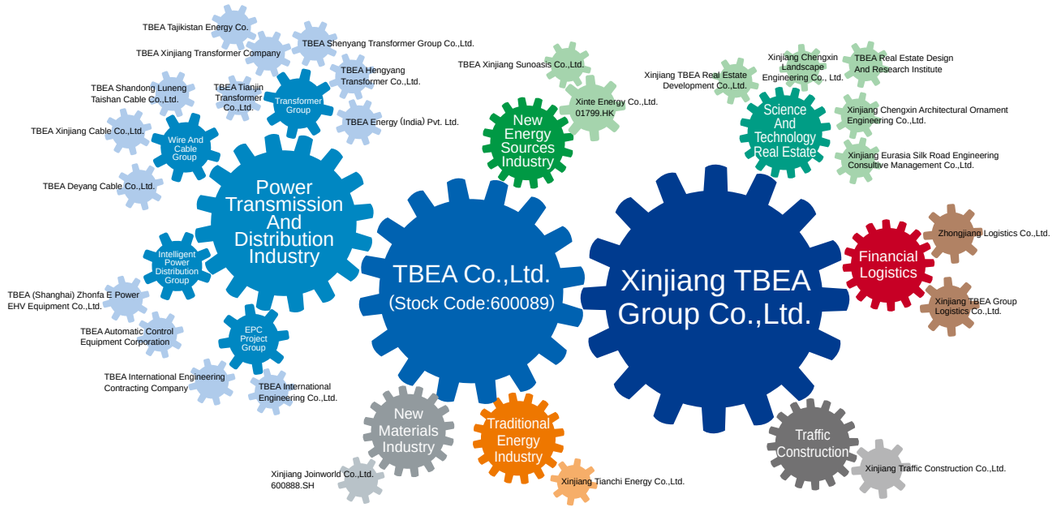
228th among World Top **500** Machinery Industries

277th among China Top **500** Industries

9th among China Top **100** Machinery Industries

47th among China's Top **500** Most Valuable Brands (50.216 billion RMB)

七大产业·协同发展



Kind Attention From Chinese Government

TBEA has obtained continuous attentions and supports from Chinese Government and CPC(Communist Party of China) leaders. Government leaders such as Xi Jinping, Li Keqiang, Zhang Dejiang, Yu Zhengsheng, Liu Yunshan , Zhang Gaoli, have frequently visited TBEA, giving their high appraisal and earnest expectations.

Xi Jinping, Head of the Central Committee of Communist Party, President of China and Chairman of the Central Military Commission, visited TBEA industries two times. On June 20th, 2009, after visiting TBEA new energy and new material industrial areas, President Xi expected eagerly, "Transfer coal and resource of Xinjiang to hi-tech advantage, you made it. I hope that you can become fresh troops to climb commanding height, promote the occupation to upgrade and make a special contribution to national economical construction."

Li Keqiang, Permanent Member of CPC, Central Committee Political Bureau and Premier of State Council visited TBEA seven times. On April 16th, 2010, when inspecting the TBEA Northeast Power Transmission and Transformation Industrial Park Zone:"TBEA need to further transform the way of economic development, accelerate the construction of system integration capacity, establish the ambition of building a world-class enterprise, and build the most internationally competitive enterprise group."

Zhang Dejiang, Permanent Member of CPC, Central Committee Political Bureau and Chairman of standing committee of NPC (National People's Congress) commented on TBEA as follows when he paid a visit to the TBEA Northeast Power Transmission and Transformation Industrial Park Zone: "TBEA vigorously carries out the going-out strategy and expands the overseas markets, extends the upstream and downstream industries positively at the same time, which forms the powerful ability to undertake the power transmission and transformation of complete sets of products and International complete set of engineering project. TBEA goes bigger and stronger, is the pride of China's equipment manufacturing industry." (February 24th,2012)

When Permanent Member of CPC, Central Committee Political Bureau and Chairman of CPPCC (Chines People's Political Consultative Conference) Yu Zhengsheng visited TBEA New Energy Industrial Park Zone, he said: "The resource of water, soil, light and heat of Xinjiang are abundant, which have great development potential. You need to take advantage of Xinjiang' s rich resources and high-tech products, vigorously promote the industrial development of renewable resources. (October 25th, 2008)

When Permanent Member of CPC, Central Committee Political Bureau Liu Yunshan visited the TBEA Xinjiang Power Transmission and Transformation Industrial Park Zone, he required:"You need to speed up the independent innovation ability construction, accelerate the implementation of the going-out strategy, revitalize the national equipment manufacturing industry and promote the development of new industrialization of Xinjiang" (January 13th, 2006)

Zhang Gaoli, Permanent Member of CPC, Central Committee Political Bureau and Vise-Premier of State Council visited TBEA five times. On April 7th, 2013, when inspecting TBEA New Material Industrial Park Zone, he earnestly desired:" TBEA needs to actively implement the transformation strategy of advantageous resources, reinforce the independent innovation ability construction, strive to foster strategic emerging industries, speed up to go out ,benefit the people of Xinjiang, and also make greater contributions for the country."

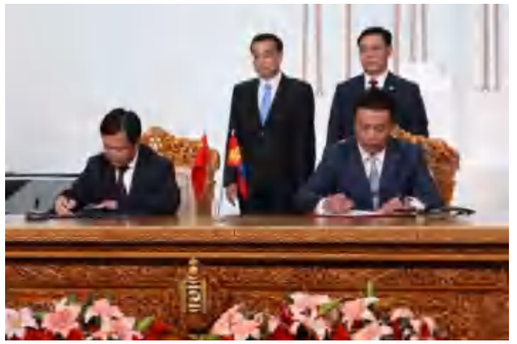
Kind Attention From Chinese Government

Move round the "One Belt & One Road" national major strategy, TBEA group devotes to share the Chinese advanced experience in electric power construction and standard with the whole world , provides green science and technology, intelligent and environmental protection, reliable and efficient energy equipment for more than 60 countries and regions, provides from the survey to the design, construction, installation, commissioning, to training, operation, maintenance, integrated Turnkey engineering and system solutions, promotes the green, efficient power grid construction, benefits the people of different countries, promotes the local social and economic development.

On September 13th, 2014, Chinese President Xi Jinping, who was visiting Tajikistan, together with Tajik President Emomali Rahmeng attended the completion of the first phase of the Dushanbe No.2 Thermal Power Plant, which was commissioned by TBEA, Project groundbreaking ceremony. Ritual scene, the two heads of state pressed the button- the completion symbol of the 1st phase thermal power plant.

On April 20th, 2015 in Islamabad, President Xi Jinping and Pakistani Prime Minister Sharif unveiled the nameplate for Bahwalpur Jinnah 100MW photovoltaic solar energy industrial park power plant in Pakistan and other eight projects, which constructed by TBEA.

On October 14th, 2016, in the common witness of National President Xi Jinping and Bangladesh Prime Minister Hasina, TBEA signed a power transmission project contract with Bangladesh.



On July 14th, 2016, in the common witness of the State Council Premier Li Keqiang and Mongolian Prime Minister Zagre Tulga • Erdeng Bart , TBEA signed 330kV Ulan Bator-Mandalay Gobipower transmission and transformation project with Mongolian Ministry of Energy.

On August 28th, 2015, Kyrgyzstan 500kV North-South power artery Dartka-Kemingpower transmission and transformation project which constructed by TBEA was completed, Kyrgyzstan President Athembayev, Energy Minister Tilda Bayerv, China Xinjiang Uygur Autonomous Region Vice Chairman Shi Dagang, TBEA chairman Zhang Xin jointly cut the ribbon for the completion of the project.

On December 8th, 2016, Tajikistan President Emomalili Rahmon, Chinese Ambassador to Tajikistan Yue Bin, TBEA company party sectary & chairman Zhang Xin jointly pressed the ignition button in the main control room for the completion and commissioning of the Dushanbe capital thermal power plant.

On October 23rd, 2014, President of the United Republic of Tanzania Jakaya Mrishna Kikwete met with Zhang Xin, Chairman of TBEA, at the Diaoyutai State Guesthouse and exchanged in-depth views on the topics related to bilateral cooperation.

On May 16th, 2015, during his visit to China, Indian Prime Minister Moody's held the"25 Chinese Entrepreneurs Roundtable Meeting", and Zhang Xin, Chairman of TBEA, was invited to attend.

Industry Base

Based on the energy, TBEA has cultivated the three strategic new industries including "high-end manufacturing, new energy and new materials", which has become the vanguard of the world's power transmission & transformation industry, developed as the research and export base of Aluminum electronics, polysilicon new materials, the system integrator of large-scale solar photovoltaic, wind power system. Besides TBEA has 14 manufacturing industrial parks, two overseas base. With "green technology, intelligent eco-friendly, reliable and efficient" high-tech, high value-added products and services, TBEA not only equips China, equips the world, but also leads the direction of the world green energy-saving power transmission and transformation technology development, contributes to the progress of human civilization.

14 domestic bases


TBEA Headquarters Science and Technology Research and Development Base


The North-east Industrial Park Zone(Liaoning Shenyang)


The South China Industrial Park Zone(Hunan Hengyang)


The North-west Industrial Park Zone (Xinjiang Changji)


The North China Industrial Park Zone (Tianjin)


The East China Industrial Park Zone (Shandong Xintai)


The South-west Industrial Park Zone (Sichuan Deyang)


Shanghai EHV Electric Science and Technology Industrial Park Zone (Shanghai)


Beijing Turnkey Project Contracting Company (Beijing)


Polycrystalline Silicon Material Industrial Park Zone (Xinjiang)


Xinjiang New Energy Industrial Park Zone (Xingjiang)


Xi'an Electrical Science and Technology Industrial Park Zone (Shanxi)


Xinjiang Zhonghe New Material Industrial Park Zone (Xinjiang)


Zhundong Coal Power Energy Base (Xinjiang)

2 overseas bases


Indian 750kV EHV Transmission and Transformation Industry Base


Tajikistan Energy Company

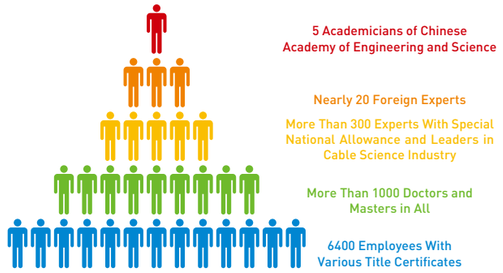
Technology and Talents

TBEA Shandong Luneng Taishan Cable Co., Ltd. Is one of the earliest enterprises engaged in wire and cable technology research and development in China, which has a team of doctorate and postgraduate for scientific research, design, draft, production and after-sale services. The company established a produce-study- research plat form through a comprehensive co-operation with Shanghai Electric Cable Research Institute, State Grid Electric Power Research Institute, and Xi'an Jiaotong University. The company owns 34 patent rights, 5 invention patents and 29 utility model patents and established the first Post-Doctoral Research Center and National Enterprise Technology Center in the industry. The industry-leading professional talents and the first-class innovation platform continually promote the company's competitiveness.

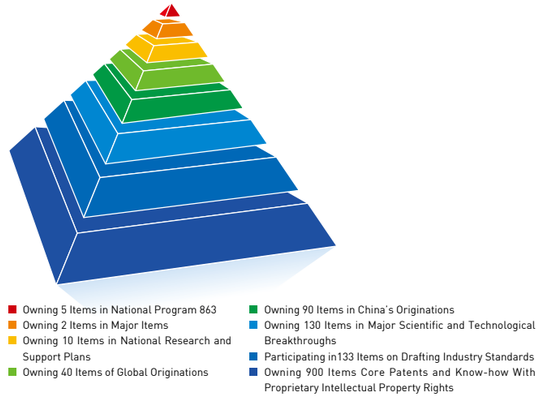
Global Marketing and Services

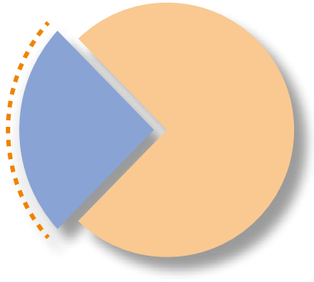
- UAE
- Kuwait
- Indonesia
- Kazakhstan
- Pakistan
- Sri Lanka
- Laos
- Bangladesh
- Ghana
- South Africa
- Togo
- Mali
- Tanzania
- Uzbekistan
- Nepal
- Ethiopia
- America
- Australia
- Ivory Coast
- Turkey
- Iran
- Azerbaijan
- Peru
- Mexico
- Canada
- India
- Philippines
- Mongolia
- Russia
- Venezuela
- Brazil
- Uruguay
- Zambia
- Angola
- Rwanda
- Sierra Leone
- Ecuador
- Saudi Arabia
- Egypt
- Nigeria
- Niger
- Mozambique
- Sudan
- Kyrgyzstan
- Tajikistan
- Kenya
- Uganda
- Zimbabwe
- Cameroon
- Chad
- Vietnam
- Thailand
- Burma
- Malaysia
- Belarus
- Ukraine
- Hong Kong
- Germany

TBEA Owns a Outstanding Talented Team in Cable Industry



TBEA leads Electricity Industry With High-end Technology



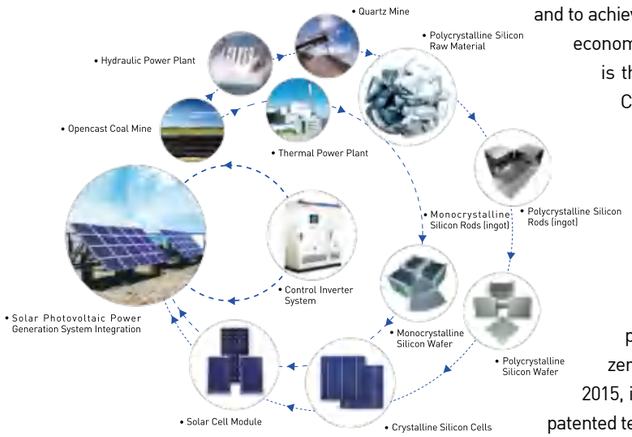


TBEA services both domestic and international markets, 76 Permanent establishment abroad all over the world, provide the security of energy-saving high-end equipment and green clean energy for the development of more than 60 countries and regions of five continents.

Energy Conservation Leader of Power Transmission and Transformation

High-end equipment manufacturing of electrical transmission and distribution is a comprehensive reflection of the national manufacturing capacity, an important symbol of national industrialization and comprehensive national strength and the pillar of sustainable development of national economy. TBEA's capability of developing and manufacturing electrical transmission and distribution equipment ranks the first in China and the capacity of producing transformer lines the first in the world. Our company insists on innovation drive and enjoys the highest level of innovation in the world, covering five major industrial groups as transformers, wires and cables, high voltage switch gears, supporting components and power project contracting. We also have patented technology of more than 1,000 items. TBEA participated in the standard development of 49 items, IEC standard 2 items and won the National Science and Technology Progress Award special award once, first prize 4 times, second prize once; China Machinery Industry Science and Technology Progress Award special award and first prize; more than 200 items provincial and ministerial awards.

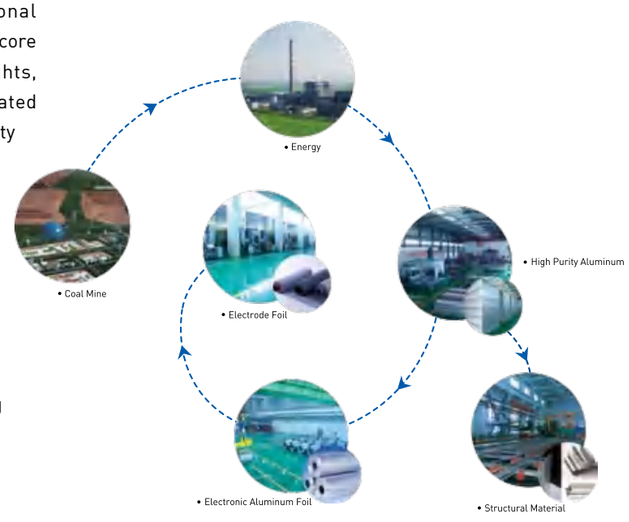
The Pioneers of Green Energy



PV new energy industry is the fundamental guarantee to solve the energy crisis and to achieve the harmonious development of man and nature. It is the new economic growth point that the world takes efforts to cultivate. TBEA is the only enterprise with all the solar energy industry chain in China with a research and development capability of polysilicon production of 20,000 tons / year. At present, more than 5,000 wind power plants and PV projects are installed, and the installed capacity is more than 5GW. We built the most PV projects in China. System integration services has been formed, containing investment and financing of polysilicon, large-scale grid-connected inverter, light, wind and other power projects; R & D and production of core components; EPC projects, operation, commissioning and maintenance. The target, zero emissions, zero pollution has been achieved. As of the end of 2015, in polysilicon purification and green manufacturing industry, 313 patented technologies have been applied, l piece of international PCT.

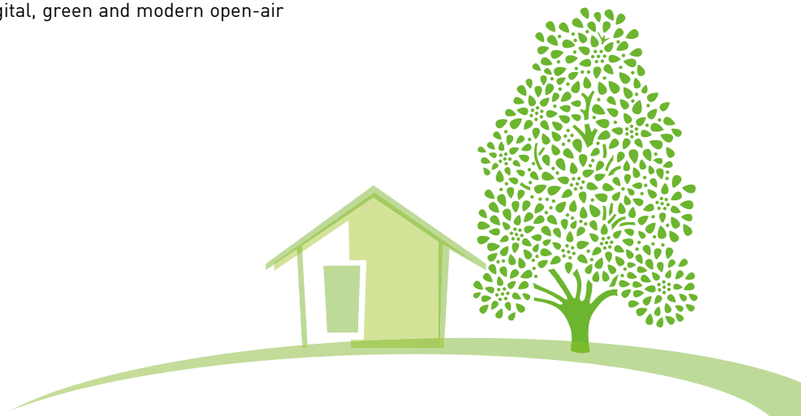
The Supplier of Aluminum Electronic New Material

The new material is the basic guarantee of national scientific and technological innovation. By mastering core technology of proprietary intellectual property rights, Xinjiang Joinworld Co., Ltd. has formed the integrated industry chain of circular economy of "coal-high purity aluminum-electronic foil-electrode foil". Its main products, high purity aluminum, electronic foil and electrode foil are widely used in the fields of major equipment manufacturing, electronic information field, aerospace, national defense and military fields, and are exported to developed countries and regions such as Japan, USA, Europe, etc. We are committed to become the material supplier of Chinese high-purity metal, aluminum deep processing and product upgrading in new material industry.



The Supporter of Socioeconomic Development

The Xinjiang Tianchi Energy Sources Co., Ltd. is a Xinjiang large local enterprise of coal, coal power and coal chemical . It is an important part of the strategy of Xinjiang's advantageous resource transformation, Xinjiang Electric Forwarding and Xinjiang coal transportation. Based in Xinjiang, the company cultivates industry chain of circular economy of coal-fired polysilicon, combined new energy and coal-aluminum, new electronic materials and converts the advantages of coal resources into competitive advantage in high-tech products in the markets home and abroad . Located in the Zhundong Wucai Bay, TBEA Tianchi Energy south opencast coal mine is included among the 23 key projects in western development of the new construction. The fist stage has built a digital, green and modern open-air mine with 10 million tons / year in scale.



TBEA Shandong Luneng Taishan Cable Co., Ltd.,

The East China Industrial Park Zone (Shandong Xintai)

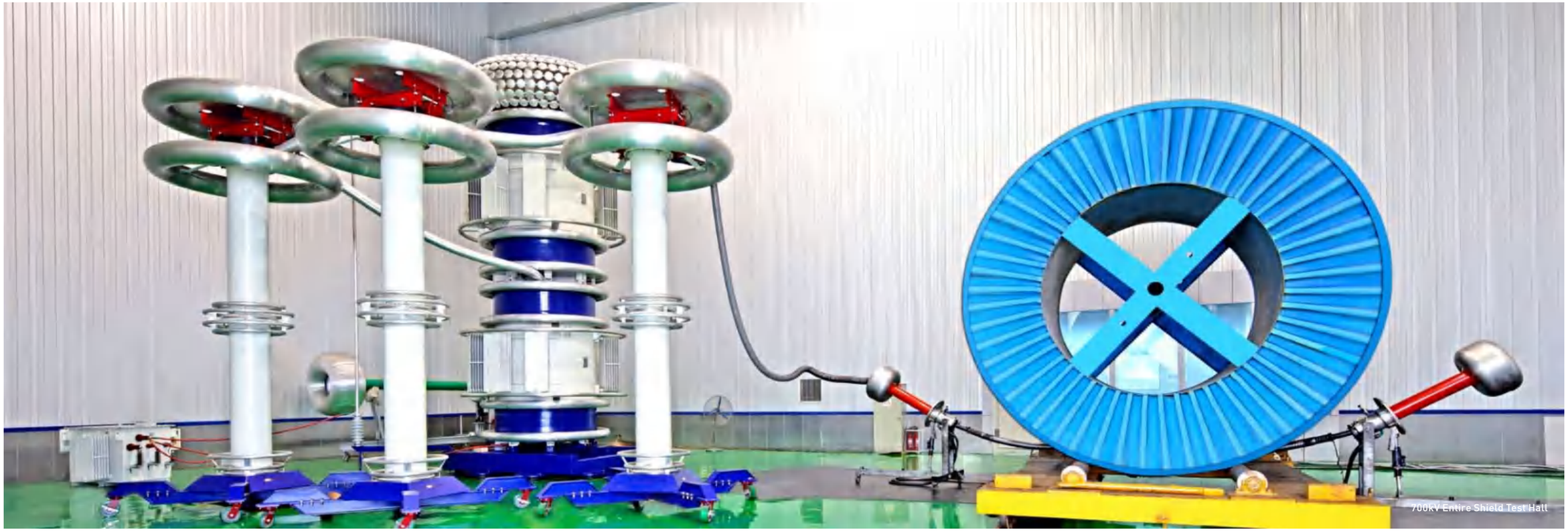
TBEA Shandong Luneng Taishan Cable Co., Ltd., formerly known as Shandong Cable Factory which was certificated by the State Council as one of the first batch of the key state-owned factories, was established in 2003 through powerful combination between TBEA and Shandong Luneng. Now the company had become the largest R&D and export base of HV, EHV XLPE cables, special cables, large cross-section diameter-extension conductors & bus bar and cable accessories in China. The company has gained the national brand of China in high-level cable field and titled with national hi-tech enterprise. As one of the earliest enterprises specialized in HV and EHV products(110kV, 220kV, 500kV) with a history of 60 years' professional cable service, the company has been supported and trusted by clients at home and abroad with products ranking the top three in market share of 110kV and above HV XLPE cable among the industry. The company now is the key supplier of State Grid Corporation of China and China Southern Power Grid Company. The products have been widely applied in national major programs and key projects, such as Beijing Tian'an Men Square Reconstruction, Three Gorges Project, Qinghai-Tibet Railway, Beijing Olympic Games, Shanghai World Expo, Guangzhou Asian Games and regions such as France, India, Brazil, Russia, Australia, Singapore, Nigeria and Hong Kong etc.

In order to adapt to the need of green economic development, promote the development of intelligent and energy-efficient power transmission, and meet the demand of world economy restructuring and sustainable development, TBEA has established a hi-tech cable industrial park with an investment of 3.5Billion RMB, which combines the highest voltage class, the largest production capacity and marketing scale of EHV power cables, special cables and cable accessories. The industry park has newly built a 180-meter VCV tower, the highest in the world, equipped with six imported and the world's most advanced and automatic 750kV, 500kV and 220kV EHV VCV production lines, which is a major breakthrough of EHV, HV XLPE integrated technology development history in the world. Meanwhile, the highest voltage class and the largest cross-section power cable, at present in China or worldwide, i.e. 500kV-3500mm^2 XLPE cable has been officially produced, which indicates a new breakthrough of localized major equipments.

By the end of "the 12th Five-Year Plan" (from 2011 to 2015), the company's main business revenue will reach 5 billion Yuan. And During "the 13th Five-Year" Period (from 2016-2020), the company's main business revenue will exceed 10 billion RMB and more than 3,000 new jobs will be created. The company will become a domestic and international high-tech cable enterprise groups who is reliable, energy-saving, high efficiency, strong system integration technology and intelligent ability in EHV and special cable field. TBEA is going to be one of the national major equipment manufacturing enterprises.

Development History

- In 2015, we had successfully accomplished first 500kV XLPE cable system EPC projects in China.
- In 2014, TBEA successfully passed the Prequalification Test of 500kV Single Core 2500mm^2 XLPE Cables.
- In 2013, TBEA successfully obtained accreditation certificate and Type Test Report of Aluminum Alloy Energy-saving Conductor.
- In 2012, TBEA successfully achieved Carbon Fiber Composite Core (ACCC) accreditation certificate and Type Test Report.
- In 2011, TBEA East China Power Transmission and Transformation Industrial Park Zone was founded.
- In 2009, SHOWA-TBEA (Shandong) Cable Accessories Co., Ltd. was Founded.
- In 2007, TBEA successfully completed the research and development of intelligent HV XLPE power cables.
- In 2005, TBEA developed and produced the first 750kV diameter extension conductor and bus bar.
- In 2003, TBEA Shandong Luneng Taishan Cable Co., Ltd. was established.
- In 2001, we developed the first 500kV XLPE cable sample.
- In 1999, we developed the first 220kV XLPE cable in China, which realized localization.
- In 1998, Shandong Luneng Taishan Cable Co., Ltd. was established.
- In 1990, we were the first to produce 110kV XLPE cable in China.
- In 1986, power cables with extruded XLPE insulation, rated voltage 35kV and below had been put into batch production.
- In 1966, Qingdao Cable factory was renamed as Shandong Cable factory.
- In 1950, Qingdao Cable factory was founded.



700kV Entire Shield Test Hall

Testing Capability

The company has first class inspection and testing capability, equipped with 750kV& 700kV series resonance power frequency testing system and instrument digital for partial discharge introduced from HAEFELY, Switzerland and HARPER, America respectively; 2800kV impulse voltage test device; ±1800kV DC voltage test equipment; 2801 schering bridge from Tettes, Switzerland; computer control heat N-cycle voltage testing facility and other available world advanced testing equipment for electric wire and cables. Among them, 700kV-70A series resonance voltage test equipment and latest type DDX912b partial discharge tester are nowadays first rate, most advanced and fully-imported PD withstand voltage testing equipment with maximum testing capacity, and they have PD testing unique function under AC & DC operating conditions and extended to realize 1050kV EHV power frequency voltage testing capability. We can not only carry out Type Test, Routine Test and Sample Test, but evaluate the reliability of new product development and HV intelligent cables & relevant accessories system project; having the integration testing capability on HV cable system, our company have been chosen as Major Engineering Laboratory of Shandong Province with socialization inspection and testing service capability.

700kV Series Resonance Measure Partial Discharge Test System From America

Centre Test Room

Combustion Test Room

Spectrum Analyzer From America

High Voltage Schering Bridge From Switzerland

High Insulation Resistance Measuring Instrument

Torque Rheometer From Germany

Digital Diascope/Microcomputer Control Electronic Universal Testing Machine

Aging Test Room

Eco-friendly · Energy-saving · Safe · Reliable

In order to make contributions to global energy-industries and human progresses, TBEA makes every effort to be an eco-friendly, energy-saving, safe and reliable manufacturer, making herself a paragon among energy-efficient and environmental-friendly enterprises, and making unremitting efforts to readjust the set-up of her products.

HV & EHV Power Cable

Medium & Low Power Cable

Special Cable

Energy-saving Conductor

Cable Accessories

HV & EHV Power Cable

Our company owns 186 sets of cable & wire producing facilities imported from France, Finland, Germany, Japan, USA, Austria, etc., among which 220kV, 500kV and 750kV EHV XLPE cable production lines are from Germany and Finland, frame stranders from CEECO, Canada, reel standers from SKET, Germany, double-layer sheath plastic extruder from TROESTER, Germany, aluminum sheath extruder from UK, and seven Milliken conductors stranding production equipments, which is controlled by computers and through which conductors of 3500mm^2 cross-section can be manufactured.

External Workshop Sight of Six VCV Production Lines of HV &EHV Cross-linked Cable.

Frame Stranders From Italy (left) and Canada (right)

Reel Stranders From Germany

Take-up Machine of High Voltage Cross-linked Cable

Aluminum Sheath Extruder From England

Double-layer Sheath Plastic Extruder

Lead Extruder

Panorama of HV Cables Workshop

Hundred Grades Purification Room

500kV VCV Production Line From Switzerland

750kV VCV Production Line From Germany

110kV Copper Conductor XLPE Insulated Corrugated Aluminum Sheathed Low Smoke Low Halogen sheathed Power Cable

220kV Copper Conductor XLPE Insulated Corrugated Aluminum Sheathed Flame-retardant Sheathed Power Cable

110kV Aluminum Conductor Waterproof HV Cross-linked Power Cable

220kV Aluminum Conductor Copper Wire Screen HV Cross-linked Power Cable

Panorama of Degassing Room

China's First Large Length 220kV Optical Fiber Temperature Measurement XLPE Intelligent Power Cable

The First 500kV Cross-linked Power Cable to Realize Localization in China

500kV XLPE Insulation Lead Sheathed Power Cable

500kV XLPE Insulated Copper Wire Screen Aluminum Plastic Tape Power Cable

The Maximum Length Table for 110kV Power Cable

No.	Rated Voltage	Size mm^2	Length m
1	110kV	1x240 (Compacted Conductor)	2200
2		1x300 (Compacted Conductor)	2000
3		1x400 (Compacted Conductor)	1800
4		1x500 (Compacted Conductor)	1600
5		1x630 (Compacted Conductor)	1500
6		1x800 (Compacted Conductor)	1300
7		1x800 (Segmental Conductor)	1200
8		1x1000 (Segmental Conductor)	1100
9		1x1200 (Segmental Conductor)	1100
10		1x1400 (Segmental Conductor)	1000
11		1x1600 (Segmental Conductor)	1000

The Maximum Length Table for 220kV Power Cable

No.	Rated Voltage	Size mm^2	Length m
1	220kV	1x400 (Compacted Conductor)	2300
2		1x500 (Compacted Conductor)	2100
3		1x630 (Compacted Conductor)	2000
4		1x800 (Compacted Conductor)	1800
5		1x800 (Segmental Conductor)	1700
6		1x1000 (Segmental Conductor)	1600
7		1x1200 (Segmental Conductor)	1500
8		1x1400 (Segmental Conductor)	1400
9		1x1600 (Segmental Conductor)	1300
10		1x1800 (Segmental Conductor)	1300
11		1x2000 (Segmental Conductor)	1200
12		1x2200 (Segmental Conductor)	1200
13		1x2500 (Segmental Conductor)	1100

Products & Application

Our company has the producing ability of all kinds of 66kV-500kV XLPE cables. According to the various market demands, we produce corrugated aluminum sheath, lead sheath, copper sheath HV power cable, built-in optical fiber temperature measurement HV XLPE cable, copper wire screen HV cable, conductor waterproof cable and etc., in which 220kV copper wire screen cable has passed KEMA type test, 500kV cable has passed Prequalification Test and matched full range accessories are also developed by ourselves, which are widely used in overseas HV, EHV power transmission line and substation projects in Bangladesh, Malaysia, and etc..

500kV Substation in Datka, Kyrgyzstan

Medium & Low Power Cable

From conductor to completed product, there are 142 sets of production devices for medium & low voltage power cable, such as 2.5Mve accelerator, double layers plastic extruder, two obturation type rubber-mixing machines, seven CCV production lines (including two continuous vulcanization rubber cable production lines from TROESTER), seven sets of on-line derivometers from SIKORA, Germany, and six CCV production lines for MV cable, which two of them are from TROESTER, Germany.

Panorama of LV & MV Workshop

MV CCV Production Line

32 Ingots Metal Braiding Machine

Cage Stranding Machine

Irradiation Equipment

35kV Continuous Vulcanization Line From Germany

Products & Application

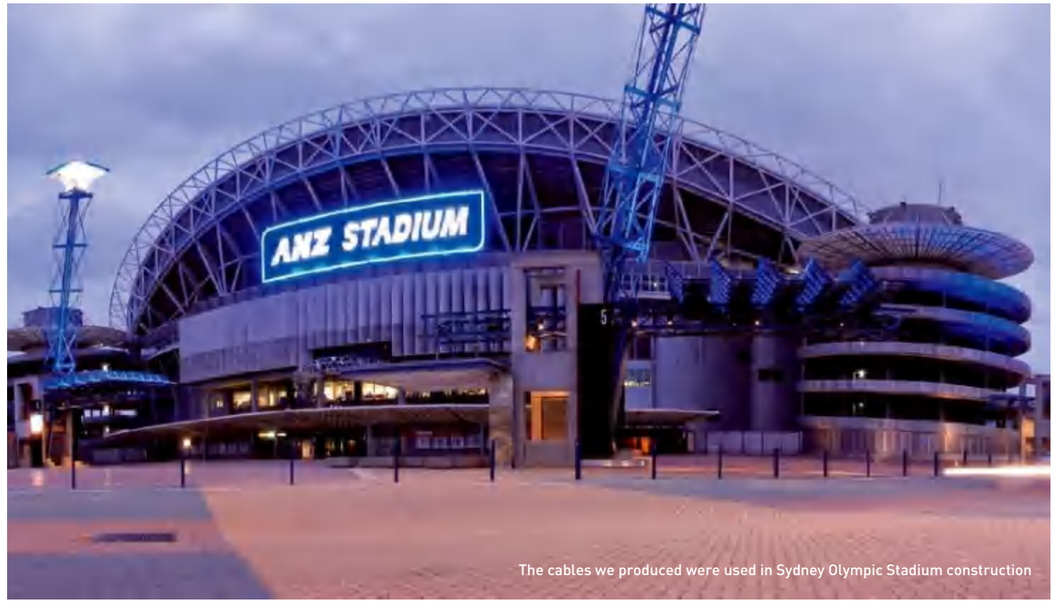
The cross-linked cables we produced were used in Shanghai World Expo transmission project undertaken by Shanghai Power Transmission and Distribution Company

The cross-linked cables we produced were widely used in EPC project for Power Grid Corporation of India

The cables we produced were used in Beijing-Shanghai, Wuhan-Guangzhou and Bejing-Shijiazhuang High-speed Railway project

The cables we produced were used in project for Power Grid Corporation of Argentina

The cables we produced were used in the construction of Beijing Olympic Stadium



The cables we produced were used in Sydney Olympic Stadium construction

Special Cable

TBEA now can manufacture special wires and cables of low and medium voltage, including cable used in nuclear power station, photovoltaic cable, wind power cable, rubber jacketed cable for coal mining, marine cable, computer cable, signal cable, control cable, plastic wire and so on. They are widely used in military project, electric power, oil, metallurgy, ships, construction, rail transportation, nuclear power station. The products were exported to more than 20 countries and areas involved in South-east Asia, Middle East, Africa and so on. By now the Shipboard cable we produced has been certified by the Classification Societies from Norway, England, America, Germany and France.

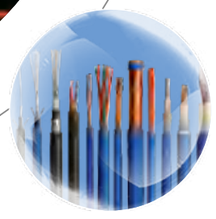
Products & Application

FDEF-40 450/750V Cold & Thermal-resistant and Distortion Resistant Cable for Wind Power Generation

The cables we produced were used in Beijing Tian'an Men Square reconstruction project

Cable for Nuclear Power Station

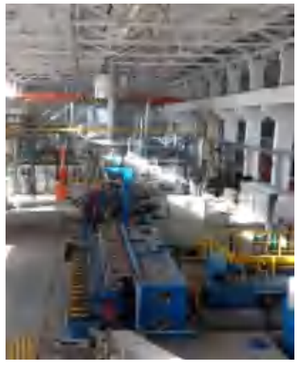
Class 1E Cable for Nuclear Power Station



Computer and Instrument Cable

The First 750kV Diameter Extension Conductor of China

The First 1000kV Diameter Extension Bus-bar of China



Aluminum Alloy continuous casting and rolling production line fully equipped with online refining, frequency heating devices is used to produce high strength aluminum alloy rods, thermal resistant aluminum alloy rods and 8030 aluminum alloy rods.

84Bϕ 710 Frame Strander

Energy-Saving Conductor Workshop

Aluminum Wire Drawing Machine

Energy-saving Conductor

Our Company has 23 sets of drawing and stranding machines, among which, 84-bobbin ϕ710 frame type strander with molded lines positioning device can strand special-shaped single wires, trolley-type aluminum wire heat treatment furnace can heat aluminum & aluminum alloy rods or wires, aluminum shaped-wire drawing machine can manufacture aluminum shaped wire and aluminum alloy single wire.

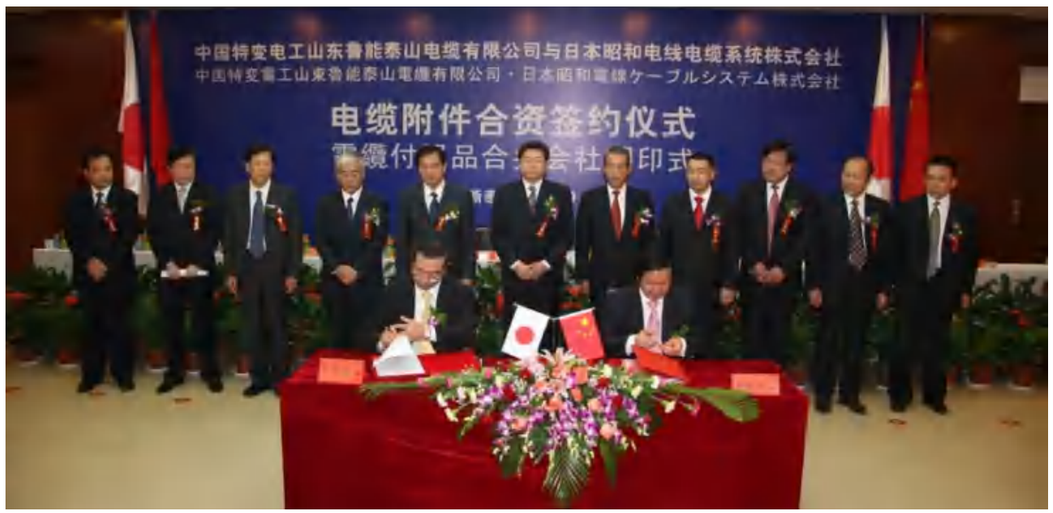
Products & Application

Our company has the ability to produce all kinds of conductors up to 1000kV for overhead transmission lines, including AAC, ACSR, ACSR/AC, Energy-saving Conductor, Heat-resistant AAAC, Magnesium Aluminum Silicon Alloy Conductor, Diameter Extension Conductor, Diameter Extension Bus-bar, Carbon fiber composite conductor, ACSS and so on. There are more than 10 types and 500 specifications for the overhead transmission lines and substation projects at home and aboard.

The Key Parts of EHV Electric Reactor, Winding Wires for 800kV Dry Type Reactor Which Applied in Coil of Large Capacity Long-distance Power Transmission

Large cross-section bare conductor of JL1/G3A-1250/70 had been used in the Changji - Guquan ±1100kV Transmission line Project

Carbon Fiber Composite Overhead Conductor, Applied in Capacity Expansiont and Reconstruction of City



The signing Ceremony for establishing Showa-TBEA (Shandong) Cable Accessories Joint Venture Company had been completed between TBEA Shandong Luneng Taishan Cable Co., Ltd. and Japanese SWCC Showa Cable Systems Co., Ltd. on September 22, 2009.

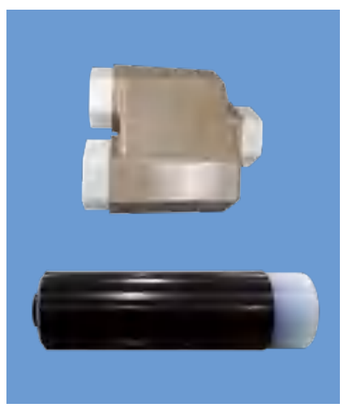
Cable Accessories

To do best and stronger cable industry, in 2009, combined with the Japanese SWCC SHOWA CABLE SYSTEMS CO., LTD., SHOWA-TBEA (SHANDONG) CABLE ACCESSORIES CO.,LTD. (STCA) was set up, which introduced Japan's Showa mature production, technology management system, focused on the technology research, manufacturing, sales, engineering, installation and after-sales service of 66-500kV outdoor termination, GIS / oil immersed termination, premoulded joint, prefabricated joint, T-joint and other cable accessories. SHOWA-TBEA imported advanced production and testing equipment from Japan, Switzerland, the United States, built a ten thousand ultra-clean dust-free workshop, 750kV high voltage shield test hall, achieved the independent development and production of 66-500kV cable accessories. The company has become the first company to achieve all series of products supporting system of 66-500kV HV, EHV cable and cable accessories in China.

Outdoor Termination (porcelain type)

Outdoor Termination (polymer type)

GIS Termination



T–branch Joint / Joint

Silicone Rubber Injection Moulding Equipment

Epoxy Resin Automatic Vacuum

EPDM Tape Extrusion Production Line

Thousand Grade Clean Room Dust Particle Online Monitoring System

X-ray Detector

220kV Ex-work Test Equipment

Products & Application

110kV Cable Accessories Applied in Jinshazhou Bridge Project of Guangzhou Power Supply Bureau

132kV Cable Accessories Applied in Kuwait MEW University City Power Transmission Project

220kV Cable Accessories Applied in Jingyang Plant Project of Beijing Electric Power Company

220kV Cable Accessories Applied in Yinshang Expansion and Renovation Project of Shanghai Electric Power Company

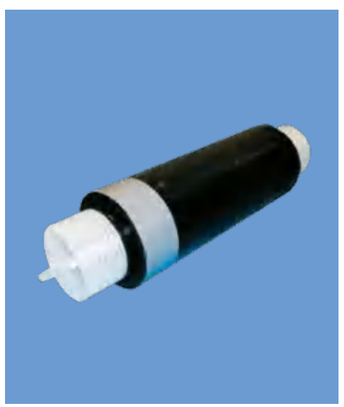
220kV Cable Accessories Applied in Fujian Fuqing Nuclear Power Station

220kV Vietnam Project

500kV Porcelain Type Outdoor Termination

500kV Polymer Type Outdoor Termination

500kV GIS Termination



500kV Joint

高压电缆系统集成

鲁缆公司专业的电缆设计、施工团队，拥有近二十年的施工经验，多次为国网、南网、五大电源及用户工程提供了电缆系统集成解决方案，收到了客户的好评，并发来感谢信，以示感谢。八十余名施工人员全部通过中国电力科学研究院（原武汉高压研究院）500kV及以下电缆附件施工技术培训，并取得了附件安装资质证书。已安全施工了五千余套110kV、220kV电缆附件，全部一次性送电成功，附件安装合格率为100%。2008年顺利完工了由公司研发的国内第一条220kV带光纤智能电缆送电线路工程； 2015年12月份顺利完成了国内首台套500kV电缆+敷设+施工+竣工实验的一体化工程（茌平信源铝业500kV项目）。高压电缆系统集成事业部拥有各种进口专用电缆敷设、附件安装工具、电缆竣工实验仪器及施工专用工程车，可承接国内外500kV及以下电缆敷设、附件安装、竣工实验、运行维护项目。


电缆敷设


电缆附件安装


竣工试验

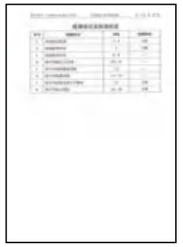
Type Test Inspection Report for 500kV EHV XLPE Cable

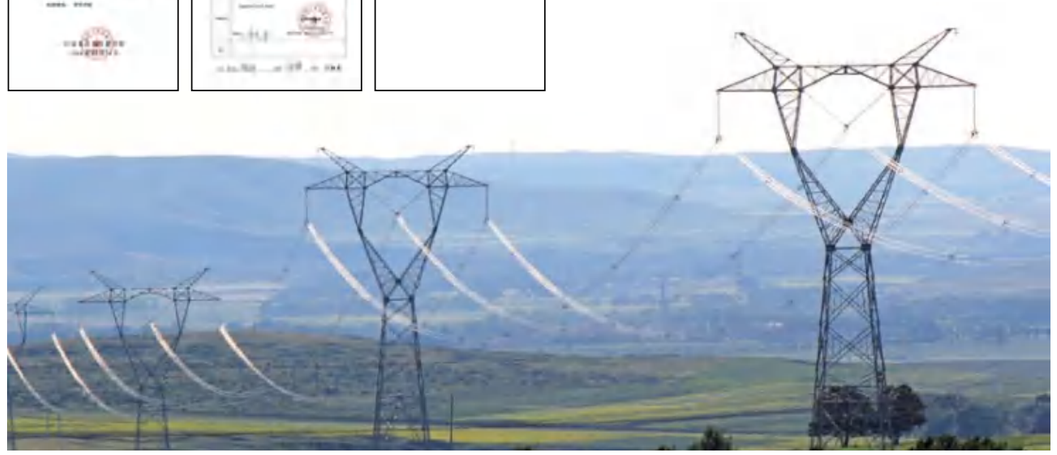
KEMA test Report for 500kV EHV XLPE Cable System

Prequalification Test Report for 500kV EHV XLPE Cable System

Type Test Inspection Report for High Tensile Aluminum Alloy Wire

Type Test Inspection Report for ACSR





Domestic and International Cooperation

Based on marvelous capabilities of R&D, manufacture, resource integration and finance, TBEA has completed a large batch of key projects in power transmission & transformation exports and overall contract fields, including overall contract of power equipment, turnkey projects, counsel, design and service of power turnkey projects. Up to now TBEA has participated in more than 10 turnkey projects, and has exported EHV transformers and cables to USA, India, Russia, etc. What' s more, TBEA can supply services for all transformer substations and transmission lines below 750kV, general contracting of 2X1050MW & 600MV thermal power station and 300MW hydropower station, and survey, design, engineering, installation, commissioning, operation, maintenance and training of turnkey projects.

Kuwait Project

India Project

Kenya Project

Package Project of 110kV - 220kV Power Transmission & Transformation Line in Sudan

Project of 220kV - 500kV Power Transmission & Transformation Line in Tajikistan

500kV Cable and Accessories Integration Project of Chiping Xinfa

Turnkey Project of ‖ - circuit ± 500kV HVDC Transmission Line From Guizhou to Guangdong

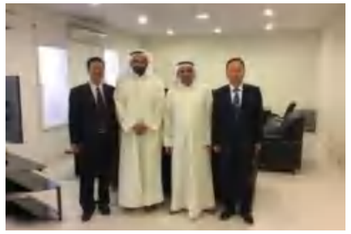
Project of Jindongnan - Nanyang - Jingmen 1000kV Transmission Line

Huainan- Zhebei-Shanghai 1000kV EHV AC Power Transmission Project

South Hami-Zhengzhou ± 800kV EHV DC Power Transmission Line Project

Performance Contract of 500kV

No.	Name of project	Country	Type of cable and accessories	Cable and accessories origin	Rated voltage
1	700MW Unit Project of Chiping Xinyuan Aluminum Co., Ltd. (5# & 6# unit)	China	Cu/XLPE/CAS/PE-500kV-1×800mm^2 500kV Outdoor Termination (Polymer type) 500kV GIS Termination	China	500kV
2	700MW Unit Project of Chiping Xinyuan Aluminum Co., Ltd. (4# unit)	China	Cu/XLPE/CAS/PE-500kV-1×800 500kV Outdoor Termination (Polymer type) 500kV GIS Termination	China	500kV
3	Power Grid Reconstruction Project of Dubai	UAE	Cu/XLPE/CWS/LAS/PE-500kV-1×1200mm^2	China	500kV
4	500kV cable and accessories equipment procurement of Karachi K-2 / K-3 project	Pakistan	Cu/XLPE/CAS/PE-290/500kV-1×2500mm^2	China	500kV
5	500kV Pumped Storage Power Station Infrastructure Project of Jixi, Anhui	China	Cu/XLPE/CAS/PVC-290/500kV-1×800mm^2	China	500kV
6	2×660MW unit low calorific value coal thermal power project auxiliary procurement project of Shanxi Gujiao (the twelfth batch)	China	Cu/XLPE/LAS/PE-300/500kV-1×1600mm^2 Cu/XLPE/LAS/PE-300/500kV-1×800mm^2	China	500kV
7	400kV Power Cable Procurement Project of Uganda Karuma Hydropower Station	Uganda	Cu/XLPE/CAS/PE-230/400kV-1×1200mm^2	China	400kV



Our company has signed the 132kV cable EPC project in Kuwait for three consecutive times since 2014. The contract amounts to $75 million. The EPC project covers line design, cable laying, accessories installation and commissioning test. It will provide reliable and stable power supply for University City project, NASM residential area, Jaber ahmand residential area and Salwa residential area, fully demonstrated the high-voltage system integration of our company's advantages. Our company formed a marketing network based on Kuwait, radiation Saudi Arabia, the United Arab Emirates, Iran, Iraq, Oman and other surrounding areas, a strong impetus to the formation of the Middle East gold market.

Kuwait Project

India Project

Our company signed the 220kV cable EPC project with the Indian Delhi Electric Power Bureau (DTL) in 2010. The project is divided into three engineering general contract which is from Shalimar substation to Wazirpur substation, from Wazirpur substation to Peeragarhi substation and from Mundka substation to Peeragarhi. The contract amounts to $52 million. High-voltage cable fiber optic temperature measurement system is the first time used in the Indian power systems. The project includes 220kV 1×1000mm^2 high voltage cable line design, civil construction, cable laying, accessories installation, commissioning test and so on.
The project is the first overseas large EPC projects for our company, with a demonstration significance.

In August of 2014,TBEA Shandong Luneng Taishan Cable Co., Ltd. undertook the HV cable & accessory supplying, cable laying guidance, installation and commission for Nairobi 220kV and 66kV network upgrading project of KPLC in Kenya, with contract amount of USD40,000,000, 220kV-1×1400mm^2 power cable was the highest voltage and the biggest cross-section has been applied in East-Africa area, which is also the symbol engineering for the factory to transform from cable manufacturer to system integrator and electric service provider.

Kenya Project

Package Project of 110kV–220kV Power Transmission & Transformation Line in Sudan

October 2004, TBEA fulfilled Sudan 73km 110kV transmission line project from Maiangan to Managi successfully.
October 2005, TBEA accomplished Sudan 260km 220kV transmission line project from Al Garry to Atbara Via Shendi.
June 2008, TBEA undertook the project of Khartum substation and other projects for substations and in September signed another contract for 5 200kV substations and 316km double-circuit & double-Bundle transmission line.

Project of 220kV–500kV Power Transmission & Transformation Line in Tajikistan

In 2006, within the framework of SCO, TBEA took the contract to build the package project of 200kV-500kV power transmission & transformation line in Tajikistan with the preferential buyer's credit form the government of P.R. China. With the professional, highly-qualified and efficient capabilities of system integration services, TBEA accomplished the project in November, 2009 which was one year ahead of the schedule. Through green, energy-saving, eco-friendly, and latest transmission & transformation technology was adopted, the project is highly praised by Chinese and Tajikistan people.

500kV Substation in Khudzhand Tajikistan

500kV Cable and Accessories Integration Project of Chiping Xinfa

In April of 2015, TBEA Shandong Luneng Taishan Cable Co., Ltd. was appointed by Xinfa Group for design, supply, installation and site commission test of 500kV power cable & accessory integrated service under the 6×660MW power generation project, the contract value was USD3,000,000,furthermore, on Dec. 5-10th of 2016, the operation and maintenance testing was conducted after the operation has been put into one year by State Grid and TBEA Shandong Luneng Taishan Cable Co., Ltd., all circuits passed the site test.

This project was designed by SDEPCI of State Nuclear Power Technology Corporation, and TBEA Shandong Luneng Taishan Cable Co., Ltd. successfully completed the first 500kv power cable & accessory integrated service symbol project among China. The precise technical scheme, timely delivery and full course trace service performed was highly appraised both by the client and the SDEPCI. It's recognized with great significance for the EHV power cable & accessory to be produced at domestic.

Turnkey Project of Ⅱ-circuit ±500kV HVDC Transmission Line From Guizhou to Guangdong

In early 2008, TBEA successfully fulfilled the project of Ⅱ-circuit ±500kV HVDC Transmission Line from Guizhou to Guangdong. All the products were put into operation successfully, and the quality and the performance parameters reached the international leading level.

Project of Jindongnan–Nanyang–Jingmen 1000kV Transmission Line

In 2009, TBEA provided 1000kV diameter extension bus bar and all the relative series products for the first commercial-running UHVAC project, filling the vacancy in the world.

1000kV Thermal-resistant Diameter Extension Bus Bar

In 2012, we supplied 1000kV EHV conductors for the national first double-circuit EHV AC power transmission project on the same tower. And it was perfectly compatible in the power grid for the first shot and officially put into operation.

Huainan–Zhebei–Shanghai 1000kV EHV AC Power Transmission Project

South Hami–Zhengzhou ±800kV EHV DC Power Transmission Line Project

In 2013, we supplied 1000mm^2 EHV conductor for the EHV DC power transmission line project with the world's highest voltage level, largest transmission capacity and longest transmission distance. And it was perfectly compatible in the power grid for the first shot and officially put into operation.

Group Wedding Ceremony

Happy Life With Endless Joy

Leaded by advanced culture, in order to keep the communication platform smooth, we have always been focused on improving life quality and strengthening cohesion and centripetal force of our employees. We have formed a unique working pattern of "Party Committee responsible for marketing, Labor Union responsible for public interests, Youth League Committee responsible for automation, intelligence and informationization". Through this integration of Party Committee, Labor Union and Youth League Committee, continuous efforts have been made to implement such activities of public interests as mutual help among each other, education funding for children of employees, assistance for employees in difficulties, group wedding, Golden Camel Cup quality project and entertainment contests, which make it possible for employees to share the fruit of our development and enjoy higher and higher happiness index. As a result, the sense of belonging and recognition within our employees to our company has been stronger and stronger, which highly promotes the construction of a harmonious company.

Interesting Sports Meeting of Staff

Youth League Committee Held the Fellowship Activity

The First Karaoke Contest of Officers Which was Named "Imagination of Youth"

Annually "Golden Camel Cup" Basketball Match

New College Students Celebrated the Mid-Autumn Festival Together

New Staffs Attended the Military Training

Field Development Activities

Culture Life

Colorful Variety Show of Staffs

FOR THE MORE ECO-FRIENDLY ENVIRONMENT
FOR THE MORE WONDERDUL LIFE
FOR THE MORE HARMONIOUS SOCIETY
TBEA CONSIDERS ITS SOCIAL RESPONSIBILITY AS THE ETERNAL BELIEF!

Social Responsibility

The development of an enterprise cannot leave the care and support from social public. At the same time, the developed enterprise' indispensable social responsibility is to return society and benefit the people. In the process of development, TBEA always returns the society with self-development. At the moment of realizing the sustainable development, TBEA also takes the responsibility of society and environment.

科技　可靠　节能　创新

Technological **B**elievable **E**co-friendly **A**dvanced

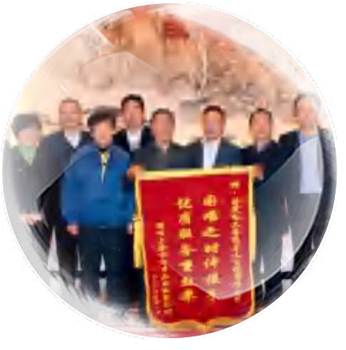
Emergency Maintenance for Electric Line at Disaster Site

Solar Central Heating and Enlightening Systems for National Comfortable Housing Demonstration Project

On May 14th, 2008, TBEA-Shandong Staff to Wenchuan "5.12" Earthquake Donation

Organize Employees to Participate in Voluntary Blood Donation

China – Netherland Silk Road Brightness Project, to Solve the Drinking Water and Lighting Problems of Remote Areas



November 22th, 2013, Shanghai Electric Power Company Supplies Department sent the Banner "At Difficult Time Reaching Out, Best Service and High Efficiency."