

# CHUDENKO BUSINESS INFORMATION 2023



# Innovative Change and Growth in the Chudenko Group "Change & Growth For All"

## Company Motto



- A heart of truthfulness

- A heart of honesty with no ill feelings



- A selfless heart



Chudenko Peace Boulevard Building

## Corporate Philosophy

### Corporate mission

As a general equipment engineering company, we contribute to the development of society through creating value added to everyday life and the business environment for our customers.

## ■ Business Mindset

- (1) Obtain trust from customers and shareholders and become the company of choice.
- (2) Be environmentally friendly while meeting strict quality standards.
- (3) Improve and enhance technical capability in general.
- (4) Be mindful of people and promote a working environment that is safe and energetic.
- (5) Maintain a strong business foundation by securing orders and promoting efficient management.

### Corporate Guidelines

- (1) Establish trust with customers with one's whole heart, and always be aware of customer satisfaction and results when taking
- (2) Be responsible and proactive when working, and aim for speedy decision making and accelerating business processes.
- (3) Don't stick to conventional methods; always be flexible and have that spirit of challenge.
- (4) Stick to social rules and be mindful of common sense in one's actions.

## Corporate Data

## ■ Company Name CHUDENKO CORPORATION

### ■ Head Office Location

6-12, Koamicho, Naka-ku, Hiroshima-shi, Hiroshima, 730-0855, Japan TEL: +81-82-291-7411 FAX: +81-82-233-1344

- Capital JPY 3,481,905,850
- **Established** September 29, 1944
- Stock Exchange Listing

Tokyo Stock Exchange (Prime Market)

### Construction Permit

Permission of the Minister of Land, Infrastructure Transport and Tourism (Special 29 General 29) No. 2097

### ■ First-class authorized architect office

Registered by the Hiroshima prefectural government 19(1) No. 5048

### ■ Number of Employees(as of March 31, 2023)

4,557 (Consolidated)

3,463 (Non-consolidated)

### ■ Sales (fiscal year 2022)

189.0 billion JPY (Consolidated)

148.2 billion JPY (Non-consolidated)

## **Air-Conditioning Piping Work**

## **Indoor Electrical Work**





Information Communication Equipment Work





Initiative to Create a Carbon-Free Society



Distribution Line Work





Underground Power Line Work for Power Transmission and Distribution

## Professional Qualifications at Chudenko Corporation

(as of March 31, 2023/person)

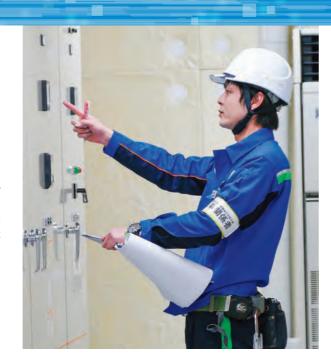
Professional Engineers · · · · 66	[Air Conditioning/Plumbing]
Associate Professional Engineers · · · · 184	Piping Works Execution Managing Engineers
[Electrical]	(1st Class, 2nd Class)
Chief Electrical Engineers (1st Class, 2nd Class, 3rd Class) · · · · · · · 243	SHASE Building Service Engineers · · · · · 8
Electric Works Execution Managing Engineers (1st Class, 2nd Class) · · 1,219	[Water]
Qualified Electricians (1st Class, 2nd Class)	Chief Water Service Installation Engineers · · · · · 13
[Communications]	[Instrumentation]
Chief Telecommunications Engineers, Chief Transmission and	Instrumentation Engineers (1st Class, 2nd Class) · · · · · · · · · 16
Switching Engineers, Chief Line Engineers · · · · · 32	[Firefighting]
Technical Radio Operators for On-The-Ground Services	Fire Defense Equipment Officers (Class A, Class B) · · · · · · · · · 74
(1st Class, 2nd Class)	[Environment/Health]
On-The-Ground Service Special Radio Operators (I-Category) 50	Manager in Charge of Pollution Control (Water Quality, Noise) $\cdots$ 1
Installation Technicians for Integrated Communications,	[Civil Engineering/Steel Structures]
AI/DD (Analog ISDN/Digital Data) Integrated Qualification, Analog/Digital Integrated Qualification	Civil Engineering Works Execution Managing Engineers
Installation Technicians for 1st Class Digital Communications/	(1st Class, 2nd Class)
DD (Digital Data) Type 1 Qualification	[Architectural]
CATV Comprehensive Management Professional Engineers 25	Architects (1st Class, 2nd Class) · · · · · · · · · · · · · · · · · ·
CATV Professional Engineers (1st Class)	Building Mechanical and Electrical Engineers

## **Indoor Electrical Work**

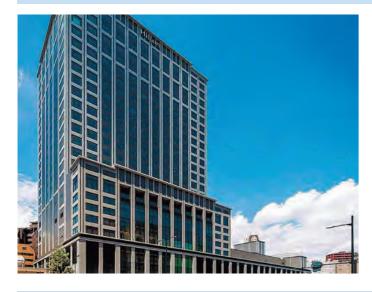
## Manufacturing with "Technology and Magokoro" Providing "Comfort" for our Clients, One at a Time.

We carry out a wide range of operations, including the design, construction, and maintenance of various electrical equipment for buildings, factories, hospitals, commercial facilities, and other buildings. In order to achieve our carbon-free targets, we work actively on environment-related projects such as renewable energy. We make full use of our accumulated technical capabilities to manage electric equipment efficiently while ensuring comfort and safety of our customers.

- Light/Outlet Equipment
- Audio/Visual/TV/Broadcasting Equipment
- Power Receiving/Transforming
- Plant Equipment (Includes Instrumentation/Explosion-proof Facilities)
- Solar Power Equipment, etc.



## New Construction of Electric Equipment for Fujimi-cho Project in Naka-ku, Hiroshima City (Hilton Hiroshima) (Hiroshima Prefecture)





## Type 1 Urban Redevelopment Project in Two Block Areas near Kameyama Station (Aichi Prefecture)





## **Air-Conditioning Piping Work**

# Utilizing Technology to Create the Optimal Living Space and Energy Environment in a Variety of Buildings.

We carry out a wide range of operations, including the design, construction, and maintenance of air-conditioning, water supply and drainage, disaster prevention, firefighting equipment, and freezing and refrigerating equipment for buildings, factories, hospitals, commercial facilities, logistics centers, and other buildings. We proactively make technical proposals for the promotion of ZEB standards and renewal plans that use the latest energy-saving systems, such as highly efficient equipment, management systems, and renewable energy, to provide our clients with comfortable and efficient business environments.

- Air-conditioning Equipment
- Plumbing and Sanitary Equipment
- Environmental Equipment
- Disaster Prevention/Firefighting Equipment
- Freezing and Refrigerating Equipment, etc.



## New Construction of Hiroshima JP Building (Hiroshima Prefecture)





## Relocation and New Construction (Air-Conditioning and Plumbing) of Tama Kyuryo Hospital (Tokyo)





## **Information Communication Equipment Work**

## Making a Contribution by Building the Foundation of a Society Based on Information and Communication Technology Creating Systems with a Vision for the Future.

We plan, design, build, and carry out maintenance on communication infrastructure with the goal of creating a society based on information and communication technology. In particular, we focus on creating proposals for network environments used in the construction of office buildings, schools, hospitals, and factories, while also building CATV field equipment and communication infrastructure for managing roads. We use our broad knowledge to meet the needs of our customers.

- Network Environment
   Construction of a Wi-Fi Network
- CATV Equipment
- Road/River Information Equipment
- Mobile Wireless Communication Equipment, etc.



Wi-Fi Equipment in Akiyoshido Cave (Yamaguchi Prefecture)



CCTV equipment used inside tunnel



You just need a power source to start using these cameras ecause they are equipped with an LTE router. The captured mages can be viewed with a smartphone or other device.

Camera selection according to the imaging object/locale (road, river, sightseeing spot, construction site) and a lineup matching the intended use

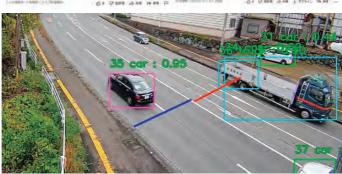


Detection and data analysis can be used by activating the AI that is a standard feature of the cameras.

⟨SD card and cloud recording⟩/⟨YouTube live streaming capability⟩







CaaS™ solution subscription service Image Sensing Business (cameras, AI, VIX servers)

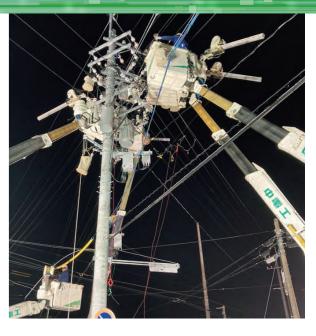
## **Distribution Line Work**

## Reliable Installation and Advanced Technology for a Stable Supply of Electricity.

As a member of the Chugoku Electric Power Group, we are committed to constructing new overhead distribution line facilities and rebuilding utility poles, regardless of time of day or weather conditions, in order to reliably supply electricity to our customers.

In the event of a natural disaster (typhoon/heavy rain/snow/earthquake), we immediately go to the affected area and start restoration work to restore lifelines as quickly as possible.

Overhead Distribution Line Work





## Overhead Distribution Line Work (Reducing Blackouts by Disconnecting Wires at a Certain Position between Electric

This method reduces power outages by cutting high-voltage overhead lines between spans when it is difficult to disconnect live lines due to complex pole arrangements



### Overhead Distribution Line Work (Installing High-Voltage Indirect Live Lines with Third Arm)

Since live line tools (hot sticks) are utilized for work on high-voltage indirect live lines, operators who need to hold bridle wires in place or stop the lines from swaying use the Third Arm in order to maintain their distance from any high-voltage parts, ensure safety, and work efficiently. This particular tool also won the 67th Shibusawa Award.



Short-Circuiting/Grounding Device for High-Voltage Drop Wires and Earth Clamp [Developed in cooperation with Daito Denzai] \* Patent number: 6913321

This device allows a technician to perform installation or removal work independently with live-line tools (hot sticks). We now use it at all of our worksites in order to improve efficiency and safety. This particular tool also won the 66th Shibusawa Award.



## Disaster and Blackout Recovery Work

During the heavy rain that occurred in western Japan in July 2018, we contributed to the quick restoration of power through the implementation of precise recovery measures immediately after the disaster

Also, when Typhoons No. 15 and No. 19 struck the Kanto region in September and October 2019, we provided support to help restore the power lines in that area.

## **Underground Power Line Work for Power Transmission and Distribution**

## Delivering a Stable Supply of **Electric Power: Essential Infrastructure** for Society.

We handle the design, installation, and maintenance of electric power transmission line and underground line equipment for Chugoku Electric Power Transmission & Distribution, of high-voltage power receiving equipment for private use, and of private transmission line equipment for renewable energy. We have a proven track record with more than 50 years of wide-ranging experience in electrical engineering, including construction and maintenance technologies for 500 kV basic power transmission equipment. In the event of an equipment-related accident, we are quick to respond and to make sure that the region retains a stable supply of electricity.

- Overhead Power Line Work
   Underground Power Line Work
- Substation Work

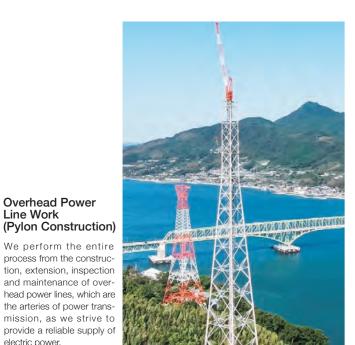
**Overhead Power** 

Line Work

electric power

Underground Distribution Line Work







### Underground Distribution Line Work (Manhole Construction)

We strive to create a pleasant local environment by utilizing our own installation technology for underground distribution lines, underground pipelines along power line routes, and underground cable laying work in urban areas, in order to promote the trend in recent years toward enhancing landscaping, tourism, safety, comfort, disaster prevention, and reliability of telecommunication networks by avoiding the use of



### Underground Power Line Work (Cable Work)

We implement new/expansion work and inspection/maintenance work on underground power lines, which supply power to the cities and plants that require large amounts of stable power.



### Substation Work (500 kV substation expansion work)

Our wide range of engineering activities include the construction of large transformer substations and receiving substations, as well as the maintenance of electric power

## **Initiative to Create a Carbon-Free Society**

We have set medium- to long-term goals (\*) for eliminating carbon by the year 2050.

In addition to our efforts to achieve carbon neutrality by 2050, we are going to create technical proposals for equipment that conserves energy or utilizes renewables, while focusing on operations such as research and development of technologies used in such equipment. This will allow us to assist our customers in their endeavors to eliminate carbon and contribute to the creation of a carbon-free society.

(*) Reducing CO2 emissions in	Goals	Achieving carbon neutrality by 2050
Chudenko Group	Medium-term goals	Reducing CO <sub>2</sub> emissions by at least 46% (compared to 2013) by 2030

## Initiative to Support Zero-Carbon Efforts [Solar Power Generation (PPA) with Zero Initial Investment]

A power purchase agreement (PPA) enables Chudenko (PPA provider) to rent out unused roofs and similar spaces owned by customers in order to build, operate, and maintain solar power generation systems in the rented locations at our expense. The customer and Chudenko sign an electricity sales contract stating that the electricity generated will be supplied to the customer. This enables customers to purchase environmentally friendly electricity with no initial investment.

## Example of PPA Application [ Halows Co., Ltd. ]

As part of its efforts to help achieve sustainability, Halows (a supermarket company) is implementing zero-carbon measures such as reducing CO2 emissions through the introduction of renewable energy electricity. Under the on-site PPA model to be implemented at Halows, Chudenko will act as the PPA provider and install a total of 9,720 kW of solar panels on the rooftops of 41 buildings, including Halows' stores and distribution centers, during fiscal years 2022 and 2023. Annual power generation is expected to be 10.35 million kWh, which will reduce CO2 emissions by approximately 5,159 tons per year.



## Initiative to Become a Zero-Carbon Company

As part of our initiative to eliminate carbon, we are promoting the use of solar power generation systems for self-consumption at more than 50 locations and dormitories that we own. In addition, we are going to apply the ZEB standards to any future renovations at our locations.



Solar Power Generation System for Self-Consumption (Kanagawa Distribution Center) with ZEB Certification

## **Action of Business ZEB**

ZEB (pronounced "zeb") is an abbreviation that stands for Net Zero Energy Building. It refers to buildings designed to keep the balance between the consumption and production of their primary energy at zero throughout the year while ensuring a comfortable indoor living environment.

- ZEB ····· Buildings with an energy-saving rate of 100% or more
- Nearly ZEB · · · · Buildings with an energy-saving rate of 75% or more
- ZEB Ready ···· Buildings with an energy-saving rate of 50% or more



\* Chudenko became a certified ZEB Planner in May 2019.

ZEB Planners are defined as operators who provide assistance services for a wide implementation of ZEB standards and offer support for business operations (construction design, equipment design, design and constructions. energy-saving design, consulting services. etc.), while also making those activities public.

## ☐ Implementation of ZEB Standards in the New Building of Kurashiki Chamber of Commerce and Industry (Okayama Prefecture) [Newly Constructed]

These operations related to the first-ever implementation of ZEB standards at a chamber of commerce and industry in the country are part of the plan to build national resilience in Kurashiki City. Our role as a ZEB Planner was to carry out a complete series of ZEB implementation processes from the planning to the execution stages. We wanted to design a building with a low CO<sub>2</sub> footprint that will serve as a role model for the implementation of the said plan.

In addition to obtaining the ZEB Ready certification by combining energy-saving construction methods and equipment, our project contributed to building resilience through the introduction of a solar power generation system linked to storage batteries. In case of a disaster, a portion of the building is designed to serve as a shelter that can accommodate both its occupants and evacuees from the neighborhood or other areas.





## **Equipment Installed**

- Modulated lights
- (LED lighting) Ultra efficient trans
- Solar power genera-
- ion system Storage battery equip

## ■ ZEB Conversion of "Sanyo Construction Corporation Head Office Building" (Hiroshima Prefecture) [New Construction]

Sanyo Construction formulated its "SDGs Declaration" in 2020 and endorsed the "Cool Choice" in 2022, and all employees are actively working on environmental issues. As a company rooted in the local community, Sanyo Construction had planned to first promote the benefits of its own company building being ZEB-compliant and then popularize ZEB. In response to the plan, we, as a ZEB Planner, assisted the customer in all stages from ZEB planning to design and construction to create an energy-conserving building that achieves Nearly ZEB.





### Equipment Installed

- Highly efficient air
- Energy recovery ven-
- Modulated lights
- Jitra efficient trans

## Main Chudenko Business Offices

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Head Office	6-12, Koamicho, Naka-ku, Hiroshima-shi, Hiroshima, 730-0855, Japan	[TEL]+81-82-291-7411 [FAX]+81-82-233-1344			
Hiroshima Supervising Branch	1-9-35 Minamimachi, Minami-ku, Hiroshima-shi, Hiroshima, 734-0007, Japan	[TEL]+81-82-253-7101 [FAX]+81-82-252-7857			
Central Hiroshima Branch	3-6-12 Saijo-chuo, Higashihiroshima-shi, Hiroshima, 739-0025, Japan	[TEL]+81-82-423-2163 [FAX]+81-82-423-8936			
Eastern Hiroshima Branch	4-2-28 Matsuhama-cho, Fukuyama-shi, Hiroshima, 720-0802, Japan	[TEL]+81-84-922-4850 [FAX]+81-84-924-0949			
Okayama Supervising Branch	4-2-7 Hamano, Minami-ku, Okayama-shi, Okayama, 700-0845, Japan	[TEL]+81-86-230-7316 [FAX]+81-86-902-5151			
Kurashiki Branch	1390-2 Nakashima, Kurashiki-shi, Okayama, 710-0803, Japan	[TEL]+81-86-466-6121 [FAX]+81-86-460-0071			
Yamaguchi Supervising Branch	6-8-1 Ouchi-senbo, Yamaguchi-shi, Yamaguchi, 753-0251, Japan	[TEL]+81-83-925-1960 [FAX]+81-83-922-6401			
Eastern Yamaguchi Branch	2-118-75 Kokai, Shunan-shi, Yamaguchi, 745-0814, Japan	[TEL]+81-834-36-3300 [FAX]+81-834-36-1313			
Shimane Supervising Branch	4-8-47 Nishitsuda, Matsue-shi, Shimane, 690-0017, Japan	[TEL]+81-852-23-2260 [FAX]+81-852-28-8017			
Tottori Supervising Branch	816-1 Tashima Maenoni, Nishihonji, Tottori-shi, Tottori, 680-0811, Japan	[TEL]+81-857-23-4621 [FAX]+81-857-26-9143			
Tokyo Headquarters	6F Shinjuku First Tower, 5-1-1 Nishi-shinjuku, Shinjuku-ku, Tokyo, 160-0023, Japan	[TEL]+81-3-6300-0680 [FAX]+81-3-6300-0337			
Osaka Headquarters	2nd Floor, Minamimorimachi Yachiyo Building, 2-2-9 Minamimorimachi, Kita-ku, Osaka-shi, Osaka, 530-0054, Japan	[TEL]+81-6-6362-8651 [FAX]+81-6-6361-7994			
Nagoya Branch	3-22-8 Tsurumai, Showa-ku, Nagoya-shi, Aichi, 466-0064, Japan	[TEL]+81-52-732-5205 [FAX]+81-52-735-0059			
Kyushu Branch	3-6-20 Yakuin, Chuo-ku, Fukuoka-shi, Fukuoka, 810-0022, Japan	[TEL]+81-92-531-3661 [FAX]+81-92-524-1655			
Electric Power Construction Office	1-5-4 Nakano, Aki-ku, Hiroshima-shi, Hiroshima, 739-0321, Japan	[TEL]+81-82-893-4111 [FAX]+81-82-893-4115			

## **Chudenko Corporation Group**

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Sanshin Electric Materials Co., Ltd.	1-5-18 Sendamachi, Naka-ku, Hiroshima-shi, Hiroshima, 730-0052, Japan Sale of electrical equipment and construction material	[TEL]+81-82-241-1231 [WEB]www.sanshin-eem.co.jp/			
CHUKO KAIHATU Co., Ltd.	24-1 Funairisaiwai-cho, Naka-ku, Hiroshima-shi, Hiroshima, 730-0844, Japan Insurance agency/leasing	[TEL]+81-82-233-7061 [WEB]www.chudenko.co.jp/chuhatu/			
Eapec Hiroshima Co., Ltd.	24-1 Funairisaiwai-cho, Naka-ku, Hiroshima-shi, Hiroshima, 730-0844, Japan Design and cost estimation for electrical work, air conditioning piping work, etc.	[TEL]+81-82-532-6167			
Chudenko Techno Co., Ltd.	2-3-25 Minamiyoshijima, Naka-ku, Hiroshima-shi, Hiroshima, 730-0826, Japan Implementation of distribution line work	[TEL]+81-82-544-5587 [WEB]www.chudenko.co.jp/techno/			
Chudenko Eletech Hiroshima/Shimane Co., Ltd.	1-1-29 Kusatsu-higashi, Nishi-ku, Hiroshima-shi, Hiroshima, 733-0861, Japan Design and implementation of electrical work, etc.	[TEL]+81-82-273-0330 [WEB]www.chudenko.co.jp/hiroshima-eletech/			
Chudenko Eletech Okayama/Tottori Co., Ltd.	1164-2 Hirai, Naka-ku, Okayama-shi, Okayama, 703-8282, Japan Design and implementation of electrical work, etc.	[TEL]+81-86-274-4456 [WEB]www.chudenko.co.jp/eletech-okayama-tottori/			
Chudenko Eletech Yamaguchi Co., Ltd.	789-7 Kurashita, Shimogo, Ogoori, Yamaguchi-shi 754-0002 Design and implementation of electrical work, etc.	[TEL]+81-83-976-0350 [WEB]www.chudenko.co.jp/eletech-yamaguchi/			
Sugiyamakankousetubi Co., Ltd.	Kaiji Building 4th floor, 1-3 Kaigan-dori, Naka-ku, Yokohama 231-0002, Japan Design and installation of air conditioning piping work, etc.	[TEL]+81-45-228-8300 [WEB]www.sugisetu.com/			
Hayamizudenki Co., Ltd.	2-5-11 Kaiun-cho, Nagata-ku, Kobe, 653-0052, Japan Design and implementation of electrical work, etc.	[TEL]+81-78-731-9301 [WEB]www.hayamizudenki.co.jp/			
Showa Corporation	5-1-2 Shiba, Minato-ku, Tokyo 108-0014, Japan Design, construction, and supervision of heat insulation work, manufacture and sales of heat insulation pipe support fittings	[TEL]+81-3-6809-5081 [WEB]www.showa-cp.jp/			
CHUDENKO(Malaysia) Sdn.Bhd.	Unit A-9-7,Level 9,Tower A Menara UOA Bangsar,No.5, Jalan Bangsar Utama 1,59000 Kuala Lumpur,Malaysia Design and implementation of electrical work, etc.	[TEL]+60-(0)3-2284-0225			
CHUDENKO ASIA Pte.Ltd.	10 Anson Road, #14-06, International Plaza, Singapore 079903 Operation and management of RYB Engineering Pte. Ltd.				
RYB Engineering Pte.Ltd.	10 Admiralty Street #06-79,Northlink Building,Singapore 757695 Design and implementation of electrical work, etc.	[TEL]+65-6481-7382			
Berryne Co., Ltd.	I-735, Shichijo, Kanagi-cho, Hamada-shi, 697-0123, Japan Business related to agriculture	[TEL]+81-855-42-2515 [WEB]www.berryne.co.jp			
Chudenko World Farm Co., Ltd.	6-12, Koamicho, Naka-ku, Hiroshima-shi, Hiroshima, 730-0855, Japan (Chudenko Corporation, Business Creation Department) Business related to agriculture	[TEL]+81-82-233-3137 [TEL]+81-847-37-7090 [Sera Sales Office]			

CHUDENKO CORPORATION Sales & Planning Department, Sales Division Inquiries

6-12, Koamicho, Naka-ku, Hiroshima-shi, Hiroshima, 730-0855, Japan

TEL +81-82-291-7435 mail eigyokikaku@chudenko.co.jp

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