

With creative products development in mind, we are challenging to create "safe" and "earth-friendly" social environment.

Sugie Seito Co., Ltd. invented CERA-DUCT, bolt-tightening ceramic multiple ducts for cable protection, in 1951 based on the corporate philosophy of **creative product development**.

Since then, we have consistently focused our efforts on businesses that contribute to the creation of a **safe and secure** social environment.

Ceramics has been deeply related to human activities since ancient times, and even today, when considering the **global environment**, it is attracting attention as an excellent **earth-friendly** material that allows resource recycling.

As a company that can contribute to society through ceramics, we are aiming to become a **Good Company** that adapts to modern society by establishing a system that can stably provide unique products at lower prices under the motto of **Positive Spirit** and **Coexistence**.

We look forward to your continued understanding and patronage in the years to come.

Advantages of CERA-DUCT

Ceramics, which have a history of 900 years, is the foundation of CERA-DUCT production.



- ●Safe in case of tunnel fires
 (such as Nihonzaka tunnel fire accident)
- Sturdy and flexible duct material that can withstand earthquakes such as Hanshin-Awaji earthquake, East-Japan earthquake, etc.



- Earth-friendly recycled products
- Possible to reuse ducts (implementation on Jyoetsu Highway and in Happusan tunnel)



- Protection for cables without deformation for a long time (Use result for over half a century in Kanmon tunnel)
- Abundant delivery results from Hokkaido to Okinawa (Suitable for any location, regardless of the natural environment or soil)

Fire resistance

Made of ceramics sintered at 1,200 $^{\circ}$ C, it is resistant to fire and earthquakes and enables quick restoration of "lifelines".

Environmental performance

Made of ceramics, it is an excellent material that can be recycled as a resource. It also reuses waste materials such as sludge.

Economy

It has a robust, noncombustible bulkhead and a compact cross-section. Therefore, the higher the number of openings, the more economical it is.

Compressive strength

Numerous results have been achieved in areas where heavy loads frequently pass through, such as national highway crossings and under airport runways. (Specified in JISC3653 Annex 2 Multi-duct earthenware pipes)

Chemical stability

Has excellent acid and alkali resistance, and can be used in a variety of regions, soils, and soil types.

Durability

With a long history of manufacturing ceramic duct (since 1951) and a large number of deliveries, we have been protecting cables for a long time.



Airport

Simple construction method

Anyone can install it securely and quickly.

Container yard

Excellent compressive strength

Allows immediate and direct backfilling without reinforced concrete.





Power plant

Compact cross-section

Smaller excavation cross sections are possible.

Ceramic Duct Cable Protection

CERA-DUCT GLOBAL



Outline

Company name

President

Location

Contact information

Foundation

Establishment

Capital

Description of business

Sugie Seito Co., Ltd.

Shogo Sugie

1-76, Kamiyama, Taketoyo-cho, Chita-gun, Aichi Pref., 470-2387, Japan

TEL: +81-569-35-2360 FAX: +81-569-35-4087 E-mail: ceraduct-a@sugie.co.jp

February, 1896

October, 1948

¥56,840,000

Production and sales of Ceramic perforated ducts for buried cable protection, ceramic troughs, manholes and handholes, etc. and also production and sales of exterior and floor tiles *Exterior and floor tiles are made to order

Number of employees

Head quarter · Factory

East Japan sales department

• West Japan sales department

Major trading banks

Affiliated company

105 persons

1-76, Kamiyama, Taketoyo-cho, Chita-gun, Aichi Pref., Japan (site area 46,000m², production capacity about 1,800t/per month)

VORT Gotanda 6th Floor, 1-27-5, Nishi Gotanda,

Shinagawa-ku, Tokyo, Japan 1-3-1, Miyuki-cho, Miyakojima-ku, Osaka-shi,

Osaka, Japan

THE CHITA SHINKIN BANK and MUFG Bank, Ltd.

Sugie Co., Ltd. (June, 1984 established) Goichi Co., Ltd. (December, 1990 established)



 $\mbox{Head quarter} \cdot \mbox{Factory} \qquad \qquad \mbox{1-76, Kamiyama, Taketoyo-cho, Chita-gun, Aichi Pref., Japan}$

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CO₂ Emissions Comparison Data

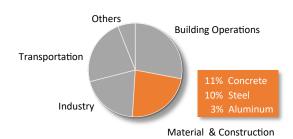
Environmentally Friendly Product CERA-DUCT

Global CO₂ Emissions Fact

Concrete, steel and aluminum contributes 23% of the annual global CO₂ emissions.

Concrete is said to produce approximately 270kg-CO₂/m³.

Annual Global CO₂ Emissions



Source: Global ABC Global Status Report 2018 EIA, via architecture2030.org

CERA-DUCT CO₂ Emissions Comparison Data

Concrete reinforcement is unnecessary for CERA-DUCT installation, reducing CO₂ emissions approximately 70% compared to other pipe installations.

- Materials per 100m using 125ø x 8 openings
- ** CO₂ emission intensity of CERA-DUCT refers to the data emitted from our factories (electricity and gas)
- CO₂ emission intensity for other pipe materials based on standard reference data.

CO₂ Emissions (kg-CO₂/kg)

