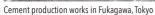
# History of the Taiheiyo Cement Group

Taiheiyo Cement Corporation was founded in October 1998 through the merger of Chichibu Onoda Cement Corporation and Nihon Cement Co., Ltd., both of which had operated for over 100 years. The Taiheiyo Cement Group continues to support infrastructure development by supplying high quality cement and construction materials and applying advanced technologies at nine cement plants in Japan and nine in the Pacific Rim region, including in the U.S., China and Southeast Asia. We will continue to strive to create a sustainable society by demonstrating the group's overall capabilities.

### **Nascent Period of Cement Production in Japan**

In 1873 the government constructed a cement production works in Fukagawa, Tokyo. Two years later the works successfully produced and launched sales of domestic cement comparable in quality to foreign products. Following this, Onoda Cement Co., Ltd., Asano Cement Co., Ltd. (predecessor of Nihon Cement Co., Ltd.) and Chichibu Cement Co., Ltd. were founded and underpinned the modernization of Japan.





Nihon

Co., Ltd.

Asano

Cement

1883



Japan's first rotary kiln (DB kiln)

#### **Launch of Taiheivo Cement**

Taiheiyo Cement Corporation was founded in 1998 via the merger of Chichibu Onoda Cement Corporation and Nihon Cement Co., Ltd. The company has supplied cement for various national construction projects in Japan. In 2000 we completed the construction of the Nghi Son Cement Corporation plant in Vietnam, and then in 2003 made Taiheivo Cement Philippines, Inc. a wholly owned subsidiary, further expanding the group's global network.

#### Commitment to **Environmental Issues**

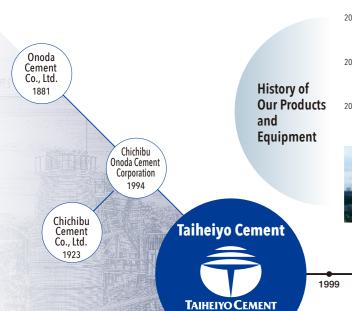
In 2006 we formulated the Taiheiyo Cement Environmentally-conscious Management Policy, which identified an active commitment to environmental issues as a key management challenge. Then, in 2007, we launched the Taiheiyo Brand Cement and Concrete Project and began taking action to boost the value of the group's technological strengths and solutions.

## A Period of Economic Downturn, **Earthquakes and Adversity**

The group marked its 10th anniversary amid a serious economic downturn in the wake of the 2008 global financial crisis. We then carried out business restructuring for the group in 2010. While the Ofunato Plant and eight of our service stations in the Tohoku region were out of action due to the Great East Japan Earthquake of 2011, our financial structure was bolstered by an increase in capital and we were able to navigate a way through this adversity.

### Making Progress by Fully **Deploying Our Capabilities**

We formulated our 23 Medium-Term Management Plan as the third step towards realizing our future vision and direction targeting the mid-2020s. All businesses in our group will function together comprehensively and integrally as we aim to become an outstanding leading company.



Acquired an exclusive license 2000 May from three French companies for the inorganic composite material Started operating a municipal waste incineration ash washing system (Ash Washing System) at the Kumagaya plant. 2002 January Expanded the scale of the coal ash treatment business following completion of the Kanto Ash

2002 November Started operating an AK system to recycle municipal waste as a raw material for cement at the Saitama Plant



2002 December Started operating a facility to recycle wood as a biomass esource at the Oita Plant.

2006 July Developed Silica Fume Premix Cement for ultrahigh-strength Commenced selling DENITE, a heavy metal Ductal was used in the pier slabs of Haneda Launched a phosphor material, ChiccaLight, Suspended operations at the Ofunato Plant due to damage from the Great East Japan Resumed full operations at the Ofunato



Harumi Onoda Remicon Co. Ltd. completed construction of an environmentally sound (indoor) plant

Water purification material Ceraclean obtained FTV mark certification from the

2019 May Developed AI technology for predicting

Started operating a municipal waste ncineration bottom ash washing system at the Kumagaya Plant.

Started commercial operations of a biomass power station at the Ofunato Plant.

Successfully developed Nanolitia, a cathode 2021 Februan

material for lithium-ion batteries.

Started construction of a production line at Taiheiyo Cement Philippines, Inc. (TCPI)





2015 May



2001 2002 2003 2004 2005 2006 2007 2008 2009 2012 2013 2014 2018 2019 2017 Formulated the CSR Objectives for 2025.

**Since 1998** History of Business **Activities** 

and Corporate **Events** 

Taiheivo Cement founded



1999 May Obtained ISO 14001 certification at six directly operated cement plants in Japan.

Acquired the management rights to Grand Cement Manufacturing Corporation in the Philippines rrently Taiheiyo Cemen Philippines, Inc.)

2000 November Completed construction of Nghi Son Cement Corporation (Vietnam).

Completed construction of Itoigawa Power Station and launched an electric power 2002 June Formulated the Mission of the Taiheiyo Cement Group. 2003 April

2003 April

2005 April

Grand Cement Manufacturing Corporation made a wholly owned subsidiary. Company name changed to Taiheiyo Cement Philippines, Inc. in June 2003.

construction soil as a raw material for cement. Launched an electric nower supply wholesale business at the

Launched a business to recycle

Tosa Power Station Formulated the Environmentally conscious Management Policy of the Taiheiyo Cement Group.

Marked the 10th anniversary of the company. Registered company-wide ISO 14001 integrated certification at six directly operated plants.

2010 March Announced business restructuring for the

Second production line of Nghi Son



Their Majesties the Emperor Akihito and Empress Michiko of Japan visited



2015 June Acquired the Oro Grande plant (California



2018 May Jointly established the Global Cement and Concrete Association (GCCA) with the



2018 October Marked the 20th anniversary of the company 2019 June Supported the Recommendations of the

Task Force on Climate-related Financial Disclosures (TCFD). Concluded the agreement on capital 2021 January

alliance with the Semen Indonesia (SI) Established technology developmen 2022 March

roadmap and 2030 Interim Targets for the Carbon Neutral Strategy 2050. 2022 May Signed the UN Global Compact

Acquired the Redding Plant and ready-2022 June mixed concrete business assets (California,

3

# **Taiheiyo Cement Group Business Network**

The Taiheiyo Cement Group deploys production and logistics sites in Japan and overseas, and establishes systems to ensure stable supplies of cement and mineral products.

In addition, we utilize our world-leading environmental cement production technologies to contribute to the creation of a recycling-based society and countermeasures to mitigate climate change.

TAIHEIYO CEMENT (CHINA) INVESTMENT

△ Nha Trang

Bangkok

Singapore ▲

Ho Chi Minh

TAIHEIYO SINGAPORE

Jakarta▲

TAIHEIYO CEMENT HEADQUARTERS

Taichung

## **Taiheiyo Cement Group Profile**

**Net sales** Consolidated: 708.2 billion yen

Non-consolidated: 287.5 billion yen

Number of employees Consolidated: 12,542

Non-consolidated: 1,874 (not including seconded staff)

176 (including 112 consolidated subsidiaries and 5 equity-method subsidiaries) Subsidiaries

101 (including 38 equity-method affiliates) **Affiliates** 

- Holding companyCement plant\*
- Clinker grinding plant\*
- \* Business locations where data for GCCA KPIs are collected (FY2022)

# Other areas



Net sales (FY2022 consolidated) 87.569 billion yen

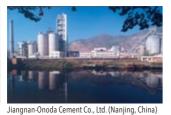


Number of employees (consolidated, as of March 31, 2022)



Clinker production capacity 6,920 thousand tonnes





Dalian Onoda Cement Co., Ltd. Taiheiyo Cement Corporation Fujiwara Plant (Dalian, China)







CalPortland Company, Redding Plan (Redding, USA)



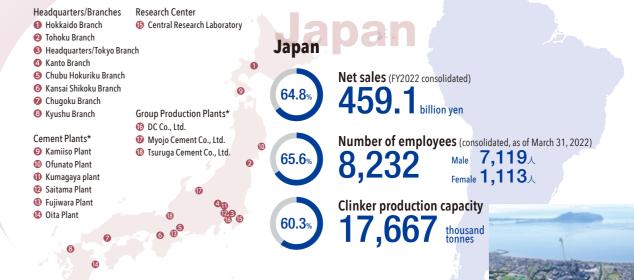
CalPortland Company, Mojave Plant





CalPortland Company, Rillito Plant (Rillito, USA)

















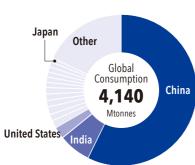
# **Cement Industry and Taiheiyo Cement**

# **Global Cement Industry**

#### 1 Trend in Global Cement Demand

Global cement demand in 2020 was impacted by the COVID-19 pandemic in the January-March quarter, but declined by only 0.2% year-on-year to 4.14 billion tonnes due to growth in housing demand and the economic stimulus measures implemented by governments around the world. Of this, China's demand stands out at 2.37 billion tonnes, accounting for about 57% of total global demand. This is followed by India at 280 million tonnes and the United States at 104 million tonnes.

and is expected to rise to 4.44 billion tonnes in 2022. However, the COVID-19 pandemic that has no end in sight, as well as the soaring coal and other energy prices caused by the war in Ukraine, leave uncertainty in the global demand trend.



Source: Global Cement Report, 14th Edition

#### 2 World Cement Production Volume

Global cement production in 2021 was 4.4 billion tonnes, an increase of 4% from the previous year, which is in line with the recovery of the global economy. By country, China leads with 2.5 billion tonnes, followed by India with 330 million tonnes, Vietnam with 100 million tonnes, the United States with 92 million tonnes, and Turkey in fifth place with 76 million tonnes.

#### **3** Cement Production Volume of the Taiheiyo Cement Group

The Taiheiyo Cement Group's domestic cement production volume for FY2021 was 19.3 million tonnes, down 2.5% year-on-year due to the impact of the COVID-19 pandemic. In FY2022, despite the impact of the prolonged pandemic, it will remain almost flat at 19.1 million tonnes (down 1% year-on-year). The Taiheiyo Cement Group's domestic production volume is the largest in Japan, accounting for approximately 36% of Japan's production volume.

On the other hand, the group's overseas production volume in FY2021 was 13 million tonnes (down 6.8% year-on-year) due to the transfer of a Chinese consolidated subsidiary, and in FY2022 it will remain almost the same as the previous fiscal year at 12.9 million tonnes (down 0.5% year-on-year). Going forward, we aim to further expand our overseas business by proceeding with the rebuilding of our overseas business portfolio and seeking to expand into countries and regions we have not yet entered where economic development is strong and demand for cement is expected to grow on the one hand, while increasing our production and supply capabilities in countries where we already have a presence.

# ■ Top 15 Countries by Cement Consumption (2020)

Rank	Country	Volume	
1	China	2,377.3	
2	India	288.7	
3	United States	104.2	
4	Iran	63.3	
5	Indonesia	62.7	
6	Vietnam	62.1	
7	Brazil	60.5	
8	Turkey	58.4	
9	Russia	56.0	
10	Saudi Arabia	51.1	
11	Korea	47.0	
12	Egypt	46.0	
13	Pakistan	43.2	
14	Mexico	40.3	
15	Japan	39.2	
	Other	740.0	
	Global Consumption	4,140.0	

#### ■ Top 5 Countries by Cement Production (2020)

(Unit: M tonnes)					
Rank	Country	Volume			
1	China	2,500			
2	India	330			
3	Vietnam	100			
4	United States	92			
5	Turkey	76			
÷					
11	Japan	52			
Global Production Volume		4,400			

Source: US Geological Survey, Mineral Commodity Summaries, January 2022

#### Taiheiyo Cement Group Cement Production Volume (past three years)

				(Unit: M tonnes)
Volume		FY2020	FY2021	FY2022
Total		33.8	32.3	32.0
	Domestic	19.8	19.3	19.1
	Overseas	14.0	13.0	12.9

# Japanese Cement Industry

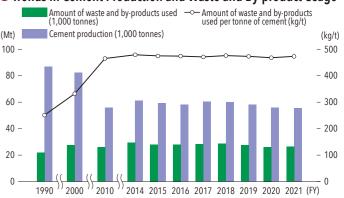
#### 1) Trend in Domestic Cement Demand

Following its peak at 86 million tonnes in FY1991, domestic cement demand continued a declining trend until FY2011, which was caused by various adverse factors such as the global financial crisis. Demand subsequently turned upward for three consecutive years from FY2012 due to the reconstruction demand and national resilience policy following the Great East Japan Earthquake. FY2020 demand remained at more than 40 million tonnes, but has since fallen for two consecutive years to about 38 million tonnes due to the outbreak of the COVID-19 pandemic in FY2021 and the effects of the delta strain of the virus in FY2022.

#### 2 Changes in Waste Usage in the Cement Industry

The cement industry employs various environmental technologies cultivated through cement production to reuse a wide variety of waste and by-products as raw materials and fuel for cement. In Japan, approximately 540 million tonnes of waste is generated annually, of which 238 million tonnes is reused; of this, the cement industry reuses approximately 26 million tonnes, equivalent to 11% of the total. Cement production has continued to decline since its peak in the latter half of FY1991, but the amount of waste and by-products used per tonne of cement production has increased, reaching 468 kg in FY2021.

### ● Trends in Cement Production and Waste and By-product Usage

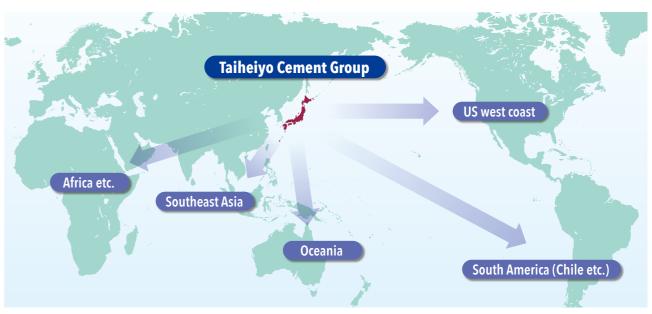


Source: Cement Handbook 2022 (The Japan Cement Association)

#### 3 Overseas Expansion of the Taiheiyo Cement Group

Since the latter half of the 1980s, we have expanded into the United States and China where we manufacture and sell cement locally, and since the 2000s we have expanded our area of operations to Southeast Asian countries such as Vietnam and the Philippines where there is strong economic development. Furthermore, we entered Indonesia in FY2021 where we are working to establish a business foundation.

In addition, there are three pillars to our trading business: the export of cement and clinker through direct trade that does not involve a trading company, trilateral trade mainly to meet the demand of our overseas group companies, and our bulk materials business in materials such as gypsum and slag. We aim to build a new logistics network that includes Indonesia in the future.



Expanded Areas of the Taiheiyo Cement Group

6 7