

# CEMENT INDUSTRY



KYK Corporation Ltd. Osaka, Japan

# ABOUT CEMENT



Cement is a crystalline compound of calcium silicates and other calcium compounds having hydraulic properties.



## Types of Cement

1. Hydraulic Cement
2. Natural Cement

### Hydraulic Cement

Hydraulic Lime:

It is only used in specialized mortars and is made from calcination of clay rich limestones.

### Natural cement:

Natural cement is made from argillaceous limestone or interbedded limestone and clay shale, with few raw materials. Because they were found to be inferior to Portland, most plants switched.



# CEMENT INDUSTRY



Cement is the worlds' most important building material. Cement production plants use machines that utilize a large number of bearings.

Cement production process demands outstanding performance because of the exposure to elements outside and heavy particle contamination inside also High Vibration and shock loads at slow speed. It's a mix of conditions that can lead to bearing and machinery failure.



KYK bearings provide the cement industry with reliability, sustainability and toughness required to withstand the critical processing factors of water, dust and grit, extreme temperatures, vibration and huge loads.

Cement machinery must continually operate under these challenging conditions.

## SPHERICAL BEARINGS

### KYK Spherical Roller Bearing Features:

- High Load Carrying capacity.
- High Speed performance – high operating temperature.
- High Strength cage (Steel & Brass).
- Low Noise and Vibration.

### Area where Spherical Bearings used in Cement Plant:

**Quarrying & Extraction, Crushing, Grinding , Blending, Material Preparation, Pre-homogenization, Clinker Grinding Mill, Conveying and Packing.**



## ANGULAR CONTACT BALL BEARINGS

### KYK Angular Contact Ball Bearing Features:

- High Strength ball guided cage – available in steel, brass and polyamide .
- High load ratings.
- Super finished race ways (minimizes noise & improves lubrication distribution.
- High running accuracy.

### Area where Angular Contact Ball Bearings used in Cement Plant:

**Quarrying & Extraction, Crushing , Grinding, Blending, Material Preparation, Clinker Grinding Mill and Conveying.**



## CYLINDRICAL ROLLER BEARINGS

### KYK Cylindrical Roller Bearing Features:

- High radial load carrying capacity.
- High Strength brass cage – reduce wear and improves performance in vibration equipment.
- High strength press steel and polyamide cages.
- Low Noise and heat generation.

### Area where Cylindrical Roller Bearings used in Cement Plant:

**Crushing , Grinding , Blending, Material Preparation, Pre-homogenization and Clinker Grinding Mill.**



## DEEP GROOVE BALL BEARINGS

### KYK Deep Groove Ball Bearing Features:

- Increased dynamic load rating.
- Increased life in operation.
- Low noise and vibration (Z3V3)

### Area where Deep Groove Ball Bearings used in Cement Plant:

**Quarrying & Extraction, Crushing , Grinding , Blending, Material Preparation, Conveying and Packing.**





## TAPERED ROLLER BEARINGS

### KYK Tapered Roller Bearing Features:

- High load carrying capacity.
- High Strength cage.
- Low noise and good running smoothness.

### Area where Tapered Roller Bearings used in Cement Plant:

**Crushing , Grinding , Blending, Material Preparation,  
Clinker Grinding Mill, Conveying and Packing.**





## DOUBLE ROW TAPERED ROLLER BEARINGS

### KYK Tapered Roller Bearing Features:

- High load carrying capacity.
- Standard steel/carburized steel/HTF treatment.
- With heavy duty seals.

### Area where Tapered Roller Bearings used in Cement Plant:

**Crushing, Grinding, Blending, Material Preparation,  
Clinker Grinding Mill, Conveying and Packing.**



## NEEDLE ROLLER BEARINGS

### KYK Needle Roller Bearing Features:

- Compact and light weight.
- High durability even under heavy loads and misaligning operation condition.
- Reduce fatigue flaking and increase contamination resistance.

**Area where Needle Roller Bearings used in Cement Plant:**

**Crushing, Grinding, Blending and Clinker.**



# KYK CEMENT INDUSTRY BEARINGS

## BEARING UNITS

### KYK Bearing Unit Features:

- High Load Carrying capacity.
- Three lips seals (increases bearing life).
- Secure locking shaft for all speed, load and vibration condition.

### Area where Bearing Units used in Cement Plant:

**Crushing, Grinding, Blending, Storage, Conveying and Packing.**



## PLUMMER BLOCKS

### KYK Plummer Block Features:

- High Load Carrying capacity.
- Split housing allows easy mounting and dismounting.
- Various sealing options available.
- Multi lubrication points.





# KYK CEMENT INDUSTRY BEARINGS

KYK has developed special type of bearings designed for speed reducer of concrete mixer.

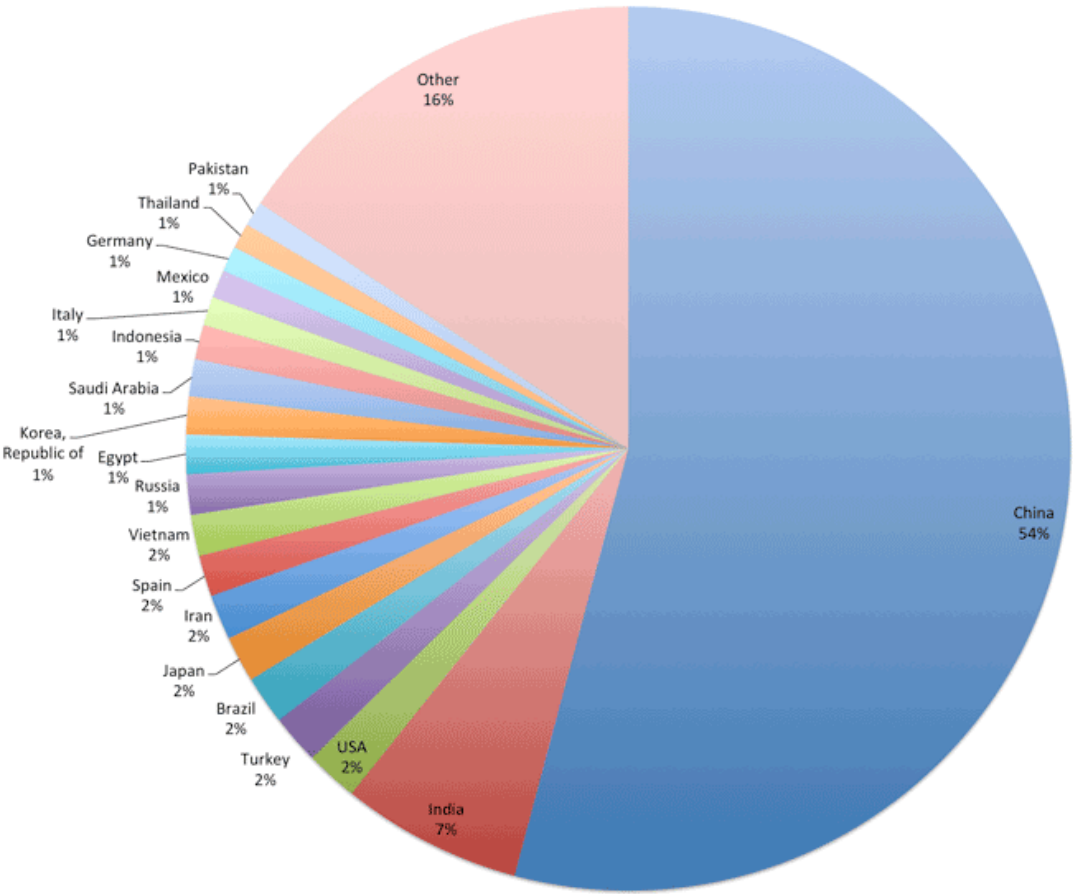


# BEARINGS LUBRICATION

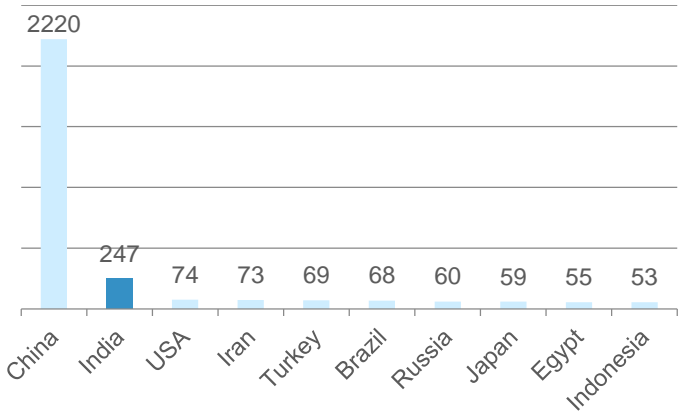


- Lubrication is very important for a bearing because of the high heat generated and longer running time of the pumps and KYK bearings are using high quality grease **Kyodo Yushi Raremax** in its products.
- This grease has a excellent heat resistance, oxidation resistance, low temperature fluidity, low noise characteristic and rust preventive property.
  - ❖ Temperature range
    - *Minimum: - 30°*
    - *Maximum: 160°C*
- Bearings with Special grease for very high temperature is available on request.

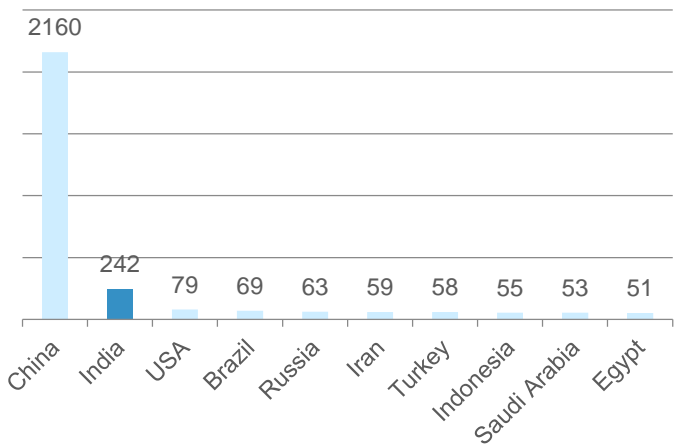
# CEMENT PLANTS WORLDWIDE



Top Cement Producers in 2012 (million tonnes)



Top Cement Consumers in 2012 (million tonnes)



# OUR NETWORK



**KYK**<sup>®</sup>  
BEARINGS  
KYK CORPORATION LTD., OSAKA, JAPAN

KYK Bearings are supplied to more than  
**50 Countries Worldwide.**

**To become a distributor** or to find your local  
dealer, please contact us.



**KYK Corporation Ltd. Osaka, Japan**





**KYK CORPORATION LTD.**  
**OSAKA, JAPAN**

# ABOUT US



**KYK Corporation Ltd.** (Formerly: Yamakai Bearing Ltd) is one of the oldest **Japanese Manufacturers** of ball and roller bearings, established in **1952**, in **Osaka, Japan**.

Our bearings are supplied to more than **50 countries worldwide** and approved in a wide variety of engineering industries.

KYK Bearings cater to the growing premium quality requirement of the market. Strict adherence to **Japanese Precision and Quality Standards** make KYK the preferred choice of product.

# GULF WORLDWIDE BEARINGS FZE

Official Distribution Partner for KYK Bearings



Precision Japanese Technology, Since 1953

## CONTACT :

**GULF WORLDWIDE BEARINGS FZE**

Plot S 20408, P.O. Box 261626

Jebel Ali Free Zone,

Dubai- U.A.E

Tel: +9714-8866199 / 8866036

Fax: +9714-8866037

Email: [info@gwbrg.com](mailto:info@gwbrg.com)

Website: [www.gwbrg.com](http://www.gwbrg.com)

Website: [www.kykbrg.com](http://www.kykbrg.com)