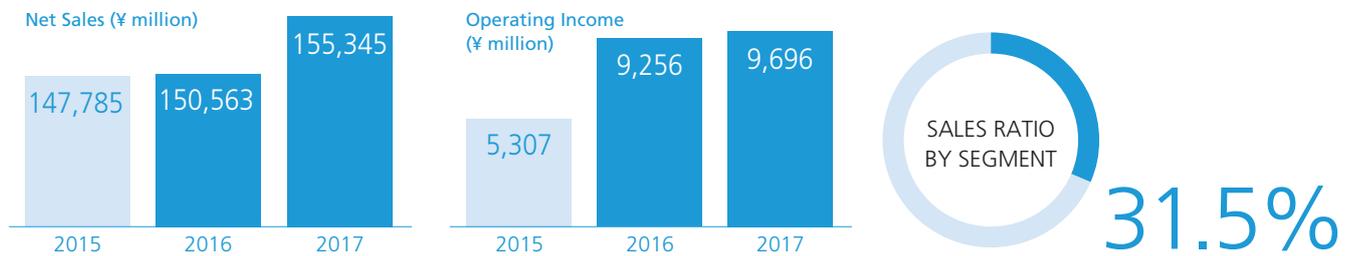


# Major Projects in 2016

We will introduce some examples of our construction work that are contributing to domestic and overseas social infrastructure and regional development.

## Domestic Civil Engineering



### Construction of the Slag Shipment Berth for Nippon Steel & Sumitomo Metal Corporation

Oita Prefecture

This steel factory possesses two of the world's biggest blast furnaces and is an important base for crude steel production sharing 10% of its domestic market. In this work, we constructed a dedicated loading berth for shipping granulated blast-furnace slag created as a by-product through the pig iron manufacturing process and a connecting bridge to the existing berths. The dedicated berth offers a ship loader and conveyor belt, which enables the shipment of granulated blast furnace slag effectively and continuously. Furthermore, since the shipment of granulated blast furnace slag, which had been conducted at the product wharf, is done at the new berth, the product wharf has spare capacity, which is expected to improve the ability to ship steel products.

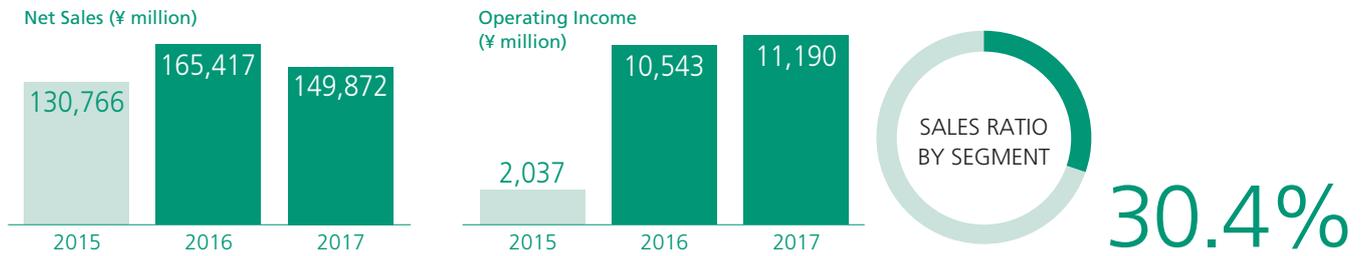


### Construction of Kita-Bessho Elevated Bridge for Kihoku-Nishi Road

Wakayama Prefecture

This work is to develop the Kihoku-nishi Road, which is the last section of Kinara Expressway Project in Wakayama Prefecture connecting Kyoto, Nara and Wakayama. We constructed the superstructure and substructure of Kita-Bessho elevated bridge with a length of 559m. Since we had to build five bridge piers with a maximum height of up to 70m, we went through extremely strict conditions, due to the restrictions regarding the adjacent Hanwa Expressway. Owing to its opening as one section of the Konawa Expressway in March 2017, the road contributes to less traffic congestion on general roads and local revitalization in various fields such as distribution, disaster prevention and tourism.

## Domestic Building Construction



### High Staff Hall (Kan-Onji City Center Hall)

Kagawa Prefecture

This hall was built as a new central culture and art facility of Kan-onji City, Kagawa Prefecture. It consists of a large hall with 1,200 seats surrounded by a wall made of Japanese cedar grown in Shikoku and cedar-plated decorative concrete, a small hall with 334 seats surrounded by Adi stone produced in Kagawa and a multi-purpose hall which was converted from the gym of a former elementary school. Moreover, each hall features the unique beauty of each material used and we can feel the wonder of the music hall to the accompaniment of timbre with high echo. The opening of the hall was highly praised by performers as well as audiences.

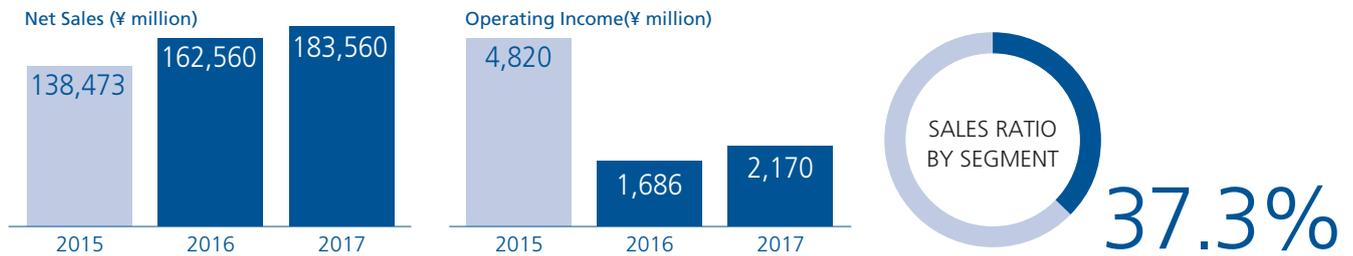


### The New Academic Commons "Meitokukan" of Hiroshima University of Economics

Hiroshima Prefecture

Japan's largest academic commons "Meitokukan" was constructed as a project to commemorate the 50th anniversary of the founding of the university. It is a 10-storey school building that majestically stands beside the front gate, which captures the full view of the city of Hiroshima. The building provides students with the ingenuity to learn positively and freely express themselves creatively. The building has orange tile walls that are the symbolic color of the university and piled steel-frame eaves which make its simple and monumental appearance stand out even in the campus. Since its opening, it has served as an "idea creating space," crowded with many students who motivate each other every day.

## Overseas



### Preparatory Works for Power Plant and Port Facilities Under Matarbari Ultra Super Critical Coal-Fire Power Project

Bangladesh

Infrastructure development in Bangladesh is one of the important issues for the government. This project is preparatory works for the construction of an ultra super critical coal-fired power plant in the Matarbari area, which is located about 70km south of the Chittagong Port, as one of the country's most important national projects.

Matarbari Island faces the open waters of the Bay of Bengal, which leads to significant changes in weather and sea conditions with frequent monsoons. Under such severe environment, we mobilized our "CASSIOPEIA V," one of the world's most modern self-propelled cutter suction dredgers, to dredge the temporary channel (approximately 2,750m long; 100m wide and 7m deep) and carried out reclamation work using dredged sand materials.

Note: Pictures are Inter-Changed



### Shatin to Central Link Contract 1121-NSL Cross Harbour Tunnels

Hong Kong

The Shatin to Central Link (SCL) currently under construction, is one of the 10 major infrastructure projects in Hong Kong. We are involved in the construction of an undersea tunnel of the Project, comprising of 11 Immersed Tube elements to extend the existing East Rail Line across the Victoria Harbour connecting Hung Hom in Kowloon and Causeway Bay, the northern part of Hong Kong Island. In June 2017, the Joint Venture, led by Penta-Ocean Construction Co. Ltd, completed the Sinking Operation of the 1st element, a milestone achievement.

Upon completion of this line, passengers travelling from North East side of the New Territories to Hong Kong Island would benefit significantly by saving in travelling time and a more convenient rail service. In addition, the new Line would act as catalyst for redevelopment and growth of older districts.

