

The Edobashi Junction is the Metropolitan Expressway's first junction, which was opened for operation on December 21, 1963.

Commemorative Issue

Celebrating the 115th Anniversary of Our Founding and the 20th Anniversary of Our Establishment

MIYAJI ENGINEERING GROUP, INC.





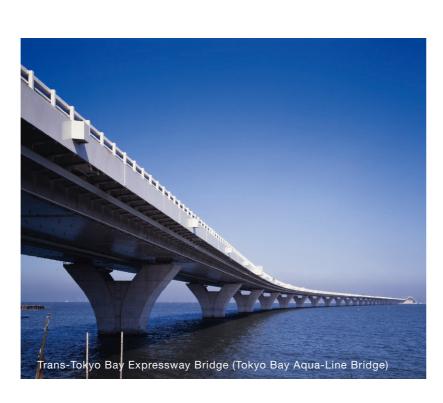


The determination to create Japan's infrastructure

Since the dawn of the 20th century, we have played an important role in the construction of the infrastructure that has been vital to Japan's development.

We began in the era of social modernization and, in the intervening years, we have successfully carried out numerous large, highly difficult construction projects, such as recovery projects following the war and several natural disasters, and helped to protect Japan's infrastructure.

We will apply our state-of-the-art technologies and the unswerving determination that we have had since our founding to expand our business with the aim of building the society of the future.





"Contributing to the enrichment of our nation and the creation of a brighter society through the construction, maintenance, and repair of societal infrastructure such as bridges, buildings, and coastal structures"















Our pride and passion that support our nation's history

Through the changes of the times, technologies and theories have made steady advances. However, the pride of the people who have created our country's history and the passion they have for successfully completing difficult construction projects have remained unchanged. Our state-of-the-art construction methods and large-scale, cutting-edge equipment constantly brim with the unswerving pride and passion of our employees.









MIYAJI ENGINEERING GROUP, INC.

On the 115th anniversary of its founding and the 20th anniversary of its establishment



Yozo Fujino

President, Josai University
Professor Emeritus, The University of Tokyo
Professor Emeritus, Yokohama National University
Former Technical Consultant, MIYAJI ENGINEERING CO., LTD.

The Three Es Required of Bridges

While my career has taken various turns, I have specialized in the field of bridges for over 40 years. When people ask me what my specialty is, I answer, "bridges." Then, the conversation becomes lively, as people have many memories connected to bridges. This shows how much bridges are familiar to many people. I am very glad to have chosen to specialize in bridges.

In 1989, Professor D. P. Billington, an expert in structural morphology at Princeton University, was invited to The University of Tokyo to give a lecture. He spoke about the three Es that must be satisfied by structures such as bridges and towers that are seen by many people. These three Es were "Efficiency," "Economical," and "Elegant." These three Es made a strong and lasting impression on me.

MIYAJI IRON WORKS CO., LTD. was involved in the construction of numerous famous historical bridges, such as the Gofuku Bridge, Shirahige Bridge, and Ochanomizu Bridge. MIYAJI ENGINEERING GROUP, INC. (MEG), which carried on the legacy of MIYAJI IRON WORKS CO., LTD., satisfies the three Es in all of its bridges. I am happy to celebrate the 115th anniversary of the founding of MEG and the 20th anniversary of its establishment, and I look forward to see it continuing constructing and erecting bridges that satisfy the three Es going forward.





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Creating a group that contributes to society and plays a central role in the construction industry as a company that thrives and grows together with its partner companies and business companies through our pioneering efforts, driven by our pride and passion for our work

Introduction

MIYAJI ENGINEERING GROUP, INC. (MEG) is celebrating the 115th anniversary since Eijiro Miyaji began operations in 1908, and the 20th anniversary since MIYAJI ENGINEERING GROUP, INC. was established as a holding company. As the Group's representative, I would like to say a few words about our Group.

First, I must report with a heavy heart that Hiroyuki Sawai, a special friend of the Company, passed away in May this year. Mr. Sawai was the fifth President of MIYAJI IRON WORKS CO., LTD. He presided over the unification of construction departments of MIYAJI IRON WORKS CO., LTD. and

MIYAJI CONSTRUCTION & ENGINEERING CO., LTD, the purchasing of a head office building, the company's overseas business efforts, such as the opening of the Manila Branch, and the establishment of the industry's first holding company. He was a keen manager who helped build the foundation of our Group's tremendous growth.

The strategic alliance with MM BRIDGE CO., LTD. (MMB) would not have been possible without our establishment of a holding company. Even after retiring, Mr. Sawai kept in touch, anxious about our company's future. I would like to take this opportunity to express my gratitude for Mr. Sawai's contributions and my great sadness about his loss.

Top Message

The history of the Group and the difficulties it faced leading up to the alliance

When I joined the Miyaji Group (MIYAJI IRON WORKS CO., LTD.) in 1970, it was the dawn of suspension bridge-building in Japan. Miyaji, Mitsubishi, and Yokogawa, working as a joint venture, were contracted to construct the Kanmon Bridge. We were a leading company in the bridge industry, in terms of both sales and technology. We went on to lead the industry as a representative of many longspan bridge joint ventures, working on projects such as Akashi-Kaikvo Bridge.

Meanwhile, MMB began as Nagasaki Ironworks, which built Japan's first iron bridge, Kurogane Bridge, in 1868. It then became the bridge division of Mitsubishi Heavy Industries, Ltd., working on many suspension bridges and cable-stayed bridges in Japan and overseas. It was one of the top companies in the bridge industry. MIYAJI IRON WORKS CO., LTD. and MMB made tremendous contributions to the construction of Japan's social infrastructure, providing the Japanese people with safety and security.

In the 115 years of MEG's history, including those of its predecessor, MIYAJI IRON WORKS CO., LTD., it has faced and overcome numerous major crises that exceeded what could be handled by management efforts alone.

The first of these crises came in 1974, after it had begun construction of a new plant with a quay in Fukuyama City, Hiroshima Prefecture, in preparation for the construction of the Honshu-Shikoku Bridge. However, due to the first oil shock, the plan to build the bridge was postponed indefinitely, and it had to scrap its plans to build the new plant. We were forced to carry out a restructuring that swept away roughly 500 of our 1,500 employees, a decision that is indelibly engraved in our memories.

The second crisis was when, under the government's slogan of "People, not concrete," the public project budget was reduced significantly from almost ¥10 trillion to less than ¥5 trillion. The number of members of the Japan Bridge Association, which at the time had 76 members, plummeted 45 companies due to withdrawal from the industry or bankruptcy to only 31 members. The changes to the business environment went far beyond anything the company could deal with through the efforts of management alone.

Our Group was no exception, finding itself in several difficult situations. In response to the significant decline in order volume, in 2007, the Group sold off the head office building of MIYAJI IRON WORKS CO., LTD. It continued with its structural reforms, including shutting down the Matsumoto

Works, which had a 60-year history. These tough experiences remain fresh in my memory.

MMB also faced similar difficulties in the course of its history. During its time as Mitsubishi Heavy Industries Bridge & Steel Structures Engineering Co., Ltd., it had struggled with plant operations. During the three years immediately preceding its agreement to the alliance with the Miyaji Group, it had recorded major losses each fiscal year. It had closed its core plant, the Hiroshima Works, and was even considering withdrawing from the bridge business.

Our history of management reforms aimed at sustainable growth

In the face of this harsh business environment, we began working to improve the efficiency of our management by centralizing our management resources. Our goals were to increase the Group's corporate value and achieve sustainable growth. In 2003, we established MIYAJI ENGINEERING GROUP, INC., the industry's first holding company, and then in 2011, we led the industry by merging fabricator MIYAJI IRON WORKS CO., LTD. with engineering company MIYAJI CONSTRUCTION & ENGINEERING CO., LTD. to establish MIYAJI ENGINEERING CO., LTD. (MEC).

Furthermore, in 2015, we acquired 51% of the shares of Mitsubishi Heavy Industries Bridge & Steel Structures Engineering Co., Ltd., a fully-owned subsidiary of Mitsubishi Heavy Industries, Ltd. We renamed it MM BRIDGE CO., LTD. and made it part

The companies in the alliance mutually complemented each other and established a division of roles, which dramatically enhanced MMB's management structure. Operating profit rose steadily, from roughly \(\frac{\pma}{2}\)0.2 billion in the financial results immediately after the alliance, ¥0.5 billion the following fiscal year, and on to \$1.0 billion to \$2.5billion in subsequent years. As you all know, this has helped our employees live happier lives.

Meanwhile, creating an alliance between MEC and MMB with mutual complementation and a division of roles based on mutual understanding has produced a system that was capable of achieving appropriate levels of production. However, there remains a mountain of issues in relation to the effectiveness of this system. Now is the time for both companies, and each of the employees, to realize the value of the alliance and recognize that they would not have the happiness they have now without the alliance. Let us return to the essential nature and roots of this alliance, as I discussed in my message at the celebration of MMB's establishment: "Let us use the mutual complementation and a division of roles

between the companies, rooted in their mutual understanding, to become the top company in the industry."

Benefits of mergers and alliances -Employee happiness and gratitude

MEG has steadily improved its business results through the merger of MIYAJI IRON WORKS CO., LTD. and MIYAJI CONSTRUCTION & ENGINEERING CO., LTD., and by making MMB part of our Group. When MIYAJI IRON WORKS CO., LTD. and MIYAJI CONSTRUCTION & ENGINEERING CO., LTD. merged in 2011, their condition was critical. MEC had net sales of \(\frac{1}{2}17.9\) billion, operating profit of \(\frac{1}{2}0.4\) billion, and an order backlog of \(\frac{1}{2}23.1\) billion. The company achieved startling growth, reaching \(\frac{1}{2}58.0\) billion in net sales and \(\frac{1}{2}5.8\) billion in operating profit in the fiscal year ended March 31, 2022. As of March 31, 2023, the order backlog reached a record high of over \(\frac{1}{2}10.0\) billion.

This stunning growth is the result of the dedicated efforts of everyone in the Group and its partner companies. On the occasion of this anniversary, I would like to express my heartfelt gratitude. We must not forget the many employees for whom hard decisions were made during countless structural reforms carried out in MEC in the past.

I would also like to convey my profound gratitude to former Vice President Kimura at Mitsubishi Heavy Industries, Ltd., which chose the specialist Miyaji from all of the other choices available to it. It would be no exaggeration to say that without Vice President Kimura's bold decision, MMB's employees would not have the happiness they have now.

If it were not for the alliance, MEC would also be one of the minor players in the industry. Let us take this opportunity to realize that the alliance is the reason we enjoy the happiness that we do for both MEC and MMB, and to share an understanding, throughout the entire Group, that the alliance is what ensures MEG's sustainable growth.

Members of MEC! Members of MMB!

Let us thrive and grow together with MEG. Let me also take this occasion to express my deep gratitude to former MMB President Itsumi, who guided the company during the turbulent years following its establishment, to MEC President Uehara and MMB President Ikeura, who have provided their guidance without ever losing sight of the essential nature and roots of the alliance, as well as to other executives and officers and each and every employee.

MEG has been able to achieve what it has because of the numerous management reforms that have been carried out while overcoming many crises. Among these, we must not forget that the alliance, carried out with unflagging resolve, has driven startling growth for both MEC and MMB and has created the foundation for MEG's sustainable growth. If this solid alliance structure, with its mutual complementation and a division of roles based on mutual understanding between MEC and MMB, had not been created, we would eventually fall back to the position we were in before, with soaring fixed costs in both companies and a precipitous decline in their profit levels.

Group employees!

To ensure the ongoing happiness of Group employees, and to avoid slipping back to where we were, it is vital that we further deepen and develop the alliance between MEC and MMB, a perfect combination unparalleled within the industry. Let us further enhance the effectiveness of the alliance, the source of our happiness, so that it continues long into the future.

Capital market surrounding MEG -Our efforts to maintain an appropriate stock price

With respect to the evaluation of MEG by the capital market, following our resumption of dividend payments in FY2013 with a payment of ¥20, we have increased our dividend payments to ¥40, ¥60, ¥80, and ¥140. We plan to pay ¥180, including our commemorative dividend (dividend payout ratio: 35%), for FY2023. MEG has grown to be able to receive a certain level of recognition from our stakeholders.

With respect to equity capital, we must build capital that will enable us to weather large accidents or declines in order volume due to sudden changes in social situations, a risk that we face due to our business consisting of work done within the boundaries of the budget set by the government. Over the past ten years, we have worked to reach an equity ratio of 55%.

However, in the environment surrounding listed companies, we are moving into an era where management reforms are required in line with the request by the Tokyo Stock Exchange issued on March 31, 2023, "Action to Implement Management that is Conscious of Cost of Capital and Stock Price." In the current business environment, management is required to be even more conscious of share prices.

Specifically, in the Prime Market, having a return on equity (ROE) of 8% or greater and a price-to-book ratio (PBR) of 1 or greater, both objective management indicators, have been set as important evaluation criteria. MEG's ROE as of March 31, 2023 was 8.9% and its PBR was 0.72, so management will have to become even more conscious of capital costs and share prices.

I would like to present four pieces of concrete evidence that MEG is fully capable of solving these management issues. The evidence represents that there is a path for MEG becoming a company that can maintain share prices that earn recognition from shareholders while also becoming a company that can provide returns on profits to all of its employees.

The first is our business environment.

MEG finds itself presented with the perfect opportunity to greatly increase both sales and profits. In the current social situations, it is difficult to see even 10 years into the future. Every industry is struggling as a result of the declining birth rate and the aging of the population. However, in our industry, based on the revised Act on Special Measures concerning Road Construction and Improvement, we do not expect to see any market contractions, as large-scale renovation projects and the like will be funded by the charges that will be applied to highway use until the year 2115. We forecast a certain level of construction work to continue to be carried out for

The second is the height of the barriers to entry to the bridge industry.

vears to come.

Our industry has extremely high entry barriers. It is not an industry that is easy to join. Specific entry barriers include the project bidding system, in which the experience and construction track record of assigned engineers are paramount, and the need for comprehensive capabilities with high levels of management resource quality and quantity, such as detailed design capabilities, erection proposal capabilities, strategic equipment holdings, and collaborations with partner companies. As our track record of orders shows, there are only a few companies with the same scale of management resources as our Group possesses.

The third is the progress of company differentiation.

Gaps are becoming apparent in the revenue earning capabilities of competing companies within the same industry. MEG's consolidated operating profit margin in FY2022 was 8.5%. There are few companies that can compete with MEG. In other words, there are few specialist companies that can maintain profit margins at a level where they can focus on capital costs while meeting the expectations of investors in the main business.

The fourth is our alliance.

As a result of MEG's alliance, MEC and MMB each have sales effects in their respective markets of specialization, presenting MEG with sales strengths that competitors lack. In addition, in terms of production, we have an efficient asset structure unparalleled by other companies. I believe that this alliance will be a powerful engine for generating

profits for the Group.

MEG's order backlog is higher than ever before, at roughly \$100.0 billion, and net sales of \$100.0 billion are within reach. The future business environment looks bright, and will be one in which we can achieve tremendous success. Let us work to expand our market share by aligning the vectors of everyone within the Group, driven by our pride and passion for our work.

Well-balanced distribution of profits to shareholders, employees, and growth investments

As I stated earlier, our industry is not an easy one to enter. MEG is also financially exceptional. This is because we provide a high level of added value and generate appropriate profits for our sales. How we allocate those profits is extremely important to our ability to achieve sustainable growth. I believe that the following items are the four most important areas to which we allocate our profits.

The first is the enrichment of our equity capital. MEG faces certain risks due to its business being bound by governmental budgets. In the past, we have had painful experiences with large-scale reductions in public works spending. Furthermore, even in recent years, other companies have had tragic accidents while erecting bridge girders. Although, of course, these kinds of accidents must be avoided at all costs, I believe that it is essential to enrich our equity capital in preparation for risks such as these if we are to continue to operate while satisfying our social responsibilities. MEG has set a target equity ratio of roughly 55%. We will continue to maintain this level while implementing well-balanced capital policies.

The second area in which we allocate profits is measures for maintaining appropriate share prices.

I believe that enhancing our shareholder returns will be vital to ensuring appropriate evaluations by the capital market and maintaining a corresponding share price. If our shares are traded at a lower price than they should, it will cause the relationship of trust we have with our shareholders to fray, running the risk of destabilizing our corporate management. To maintain and improve appropriate share prices, I believe we must strive to provide sufficient shareholder returns.

The third is investing in and providing returns to our human resources.

As I said, our Group can provide a high level of added value. Then, what is the source of MEG's added value? It is its people. Investing in human resources and returning more profits to its people is also a logical strategy for achieving MEG's sustained growth.

In our next Medium-Term Business Plan, we aim

to create a plan with an eye toward reaching \(\frac{\pmathbf{100.0}}{100.0}\) billion in net sales. To do so, we need to focus on securing and developing our human resources starting from this fiscal year. For example, for our assigned engineers, we need to utilize officers and officer level personnel, transfer personnel from non-production divisions to production divisions, assign multiple engineers to worksites in order to acquire CORINS certifications, strengthen our mid-career hiring, and implement other measures to leverage human resources based on ideas that are developed from the ground up, not only an extension of ideas we have had in the past.

The fourth is investment in growth.

We will continue our policy of actively investing in growth, such as essential capital investment and investing in M&As that contribute to the expansion of MEG's corporate value. Meanwhile, within these investments, large scale investments will not occur frequently. Therefore, MEG's capital policy, excluding these growth investments, is to "expand sales while maintaining an equity ratio of roughly 55% and providing returns to shareholders and employees."

Specifically, at the MEG Board of Directors meeting held on August 9, 2023, we discussed in depth regarding "Action to Implement Management that is Conscious of Cost of Capital and Stock Price," and we resolved and disclosed our decisions to raise the total return ratio from 35% to 60% and to raise our dividend per share from \$180 to \$320 on a prestock split basis.

As a result, on the following day, August 10, our share price hit limit-up of \$5,160, an increase of \$705, and PBR improved to 0.98. After the weekend, on August 14, the stock price rose another \$530 to \$5,690, and PBR passed the 1 mark to 1.07.

On September 1, our stock price passed \$6,000, reaching a record-high \$6,100.

Furthermore, with respect to returns to employees, we issued childcare and livelihood support payments at the end of FY2022, and we are considering issuing special payments as expressions of our gratitude as we celebrate the 20th anniversary of MEG's founding. We will continue to think about how we can provide returns to our employees, using the achievement of our business plans as one of our standards.

The ideal Group MEG aims for

In this way, MEG will grow as a group that provides returns to its employees while maintaining a balance between equity capital and shareholder returns.

MEG's ideal is to be a group that can provide returns on its profits and enjoys high evaluations not only from shareholders, but also from employees and society as a whole.

We want MEG to be a group in which employees are happy to work, in which they are proud to be members, and in which they feel passion in their daily work.

Earning the trust of the capital market
-Steadfastly accomplishing
our Medium-Term Business Plan
and taking on the challenge
of further enhancing our corporate value
-New Medium-Term Business Plan

In MEG's timely disclosure on August 9, 2023, we committed to achieving both a total return ratio of 60% and a pre-stock split dividend per share of \$320 in the Medium-Term Business Plan period. This commitment had a strong impact on the stock market, making a favorable impression. As a result, our stock price rose.

Normally, if a company intends to distribute profits in a balanced manner, it would be sufficient for it to disclose a target total return ratio of 60%. However, to remove shareholders' concerns about whether we can achieve our Medium-Term Business Plan targets and whether our profits grow as planned, we indicated our dividend amounts and our commitment to working even harder to reach these targets to earn the trust of our shareholders.

What MEG must do is to achieve its Medium-Term Business Plan targets for the final fiscal year (FY2026) of ¥75.0 billion in net sales, ¥7.5 billion in operating profit, and ¥4.0 billion in profit attributable to owners of parent, thereby earning the trust of the capital market. This is why we must enhance our IR system and present a future vision of how MEG will achieve sustained growth. We must definitely achieve these objectives, working as one to increase MEG's corporate value.

The next Medium-Term Business Plan (FY2027 to FY2031) will provide specific guidelines for how to do this. The concept of this plan, which will be carried out by our next generation of management, will be to achieve ¥100.0 billion in net sales, based on an order backlog of over ¥100.0 billion, and to take on the challenges of diversifying our business portfolio.

We believe that this will be possible due to the business environment, in which we expect to receive orders of large-scale expressway renovation project with a scale of roughly ¥7 trillion, the major project of the Wangan (Osaka Bay) Route, the cable-stayed bridge of Meishin-Hanshin Wangan Route Access Bridge project, the No. 2 Kanmon Bridge project, and other large-scale new bridge projects. These are all highly difficult large-scale projects which require high levels of management resource quality and

volume. This is an excellent business environment for our Group to make a further leap forward.

To bring even greater happiness to each and every employee of the Group, we will leverage all of our Group's strengths to enhance our ability to handle these construction projects. We will balance our allocation of management resources to new bridge construction, large-scale renovation projects, and private-sector construction. At the same time, we will speedily implement our growth investment from \$18.0 billion to \$20.0 billion, focusing on plants and equipment centers, as disclosed in the Medium-Term Business Plan.

The need for a stronger IR system -Enhancement of our ability to communicate with society

MEG has positioned IR activities as a key strategy in its efforts to maintain and improve corporate value, and we are working to enhance our IR system. I believe that clearly communicating MEG's initiatives, such as our stance toward growth strategies, shareholder returns, and returning profits to employees, and fostering greater understanding among investors and other stakeholders will contribute to a more appropriate evaluation of MEG by the capital market.

As indicated in our timely disclosures, we hold management plan briefings and financial results briefings since FY2022 as part of our active IR activities. In FY2022, we conducted 25 dialogues with institutional investors, and in FY2023, we conducted 10 dialogues. In April 2023, we completely redesigned our website and issued MEG Integrated Report 2023, the first of our integrated reports.

Our Board of Directors, the majority of which consists of Outside Directors, welcomed Mayumi Hirase, an athlete who achieved success in the competitive world of professional sports, and we have improved our guidance and supervision systems in areas such as the promotion of active participation by women and the promotion of support for the development of next generations. To maintain and enhance our corporate value and corporate brand, I believe that it is vital for society at large, not only investors, to learn about our Group. That is why our business company, MEC signed a sponsorship contract with professional golfer Yuri Okuyama of the Cherry Hills Golf Club in January 2023. Furthermore, in mid-October, on the 115th anniversary of MEG's founding and the 20th anniversary of its establishment, we ran a full-page advertisement in the Nihon Keizai Shimbun.

We will continue to enhance our IR system, actively communicating MEG's contributions to

society, our strengths, and our direction, while at the same time carrying out management reforms that are conscious of capital costs and share prices and managing our group without forgetting where our alliance began.

The management, employees, and future recruits that will form the next generation of our Group

If we can earn the trust of the capital market by steadfastly accomplishing the current Medium-Term Business Plan, actively and effectively leveraging our IR strategies while raising expectations for the blueprint in our next Medium-Term Business Plan, in other words, if we can gain firm expectations for MEG's medium- to long-term growth, we will be able to appropriately maintain our stock price and make our approach to shareholder returns more balanced and easier to understand, such as by only disclosing our total return ratio. Until we accomplish this, we must keep the flames of reform burning bright.

For MEG to enjoy sustained growth and to continue providing happiness to employees for perpetuity, I believe that each and every employee of Group companies and partner companies must recognize the importance of the concept of thriving and growing together. They must think and act autonomously to create our Group.

Our new concepts for achieving sustainable growth are becoming a ¥100.0 billion company and creating a new business portfolio. To take on these challenges, let us contribute to society as a group that thrives and grows together with Group companies and partner companies through our pioneering efforts, driven by our pride and overflowing passion for our work.

Let us create a group that plays a central role in the construction industry!

Achieving this will rely on the efforts of every one of the employees of our Group companies and partner companies. It is my devout desire that you make your own health and safety within plants and workplaces your highest priorities. With this, I congratulate you once again on the 115th anniversary of MIYAJI ENGINEERING GROUP's founding and the 20th anniversary of its establishment.

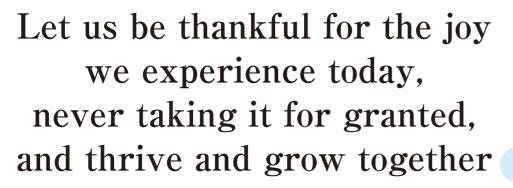
(October 1, 2023)

Shigetoshi Aota

President and Representative Director MIYAJI ENGINEERING GROUP, INC.







Tadashi Uehara

President and Representative Director MIYAJI ENGINEERING CO., LTD.

Even today, I cannot forget the words whispered by a victim of the Great East Japan Earthquake, who lost so much in the disaster. "Ordinary life was true happiness." Every day, we live our ordinary lives, waking up in the morning, spending an uneventful day with our families, managers, and colleagues, and going to sleep at night. Should we take this for granted? To answer this question, we must delve into the history of our company, which has not always enjoyed smooth sailing.

The root of MIYAJI ENGINEERING CO., LTD. (MEC) is the same as that of MIYAJI ENGINEERING GROUP, INC. (MEG), which was MIYAJI IRON WORKS CO., LTD. established in 1908. 115 years have passed since then to create MEC of today, and during those years, we have experienced numerous crises that have gone beyond the limits of what we could handle with management efforts alone. These crises include the freezing of Honshu-Shikoku Bridge construction plans due to the first oil shock, the

cornering of our stock by the Seibi Group, the steel bridge upper construction collusion scandal, and drastic reductions in the public project budget. However, our pioneering leaders made management decisions based on their keen ideas, and made hard calls such as piercing structural reforms. The employees at that time who positioned the survival of our company as the highest priority and left our company with their spirit of self-sacrifice, as well as our partner companies have provided us tremendous support. Furthermore, the powerful alliance with MM BRIDGE CO., LTD. (MMB), another company in the Group, in 2015 has enabled us to survive and recover. We are now one of the industry's top comprehensive engineering companies, led by our fabrication and engineering capabilities. Hiroyuki Sawai, MEG's first President and a special friend of the Group, saw the future of our industry and led the creation of a holding company structure, a first for our industry. His contributions were immense. Without Mr. Sawai, MEC and MMB would not even exist today.

This is why, as members of MEG, we must never take the fact that we can live our ordinary lives for granted. We owe this to the keen ideas of the pioneering leaders, who pooled their knowledge, helped us through tight spots, and passed the baton of this wonderful company to us who followed them.

In particular, we have had a miraculous recovery in revenue over the past ten years (fiscal year ended March 31, 2014 to fiscal year ended March 31, 2023). Order volume has risen 1.8-fold, from \(\frac{2}{2}\)1.8 billion to \(\frac{2}{3}\)3.2 billion, net sales have risen 1.7-fold, from \(\frac{2}{2}\)1.8 billion to \(\frac{2}{3}\)3.1 billion, and operating profit has risen 2.2-fold, from \(\frac{2}{1}\)1.4 billion to \(\frac{2}{3}\)1.1 billion. Of special note is that this miraculous improvement in revenue began the year after the alliance with MMB (2016), and that while MMB had previously been struggling with losses, its business results recovered dramatically after joining the Miyaji Group. This is why we must

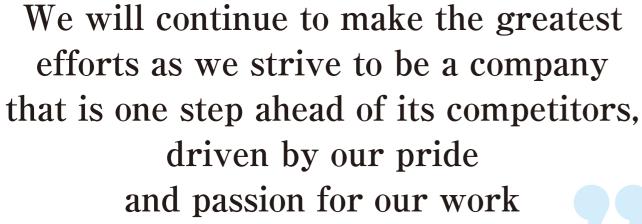
always remember that we owe the current state of our Group to the alliance, and the alliance will shape our future. This is why we must always feel a deep sense of gratitude. At the commemorative ceremony on October 1, 2023, MEG's business companies (MEC, MMB, and other affiliated companies) came together in the same venue. This ceremony had a highly significant meaning, providing another opportunity to recognize the great benefits provided by the alliance.

MEC and MMB will continue to support MEG, contributing to the creation of social capital as business companies that ensure the safety and security of the people in Japan. However, the methods they use cannot be simply extensions of their current approaches. Instead, they must rapidly respond to dramatic changes of the times, including responding to Japan's declining birthrate and aging population, promoting ICT and DX, utilizing generative AI such as ChatGPT, create unprecedented new value, and help MEG achieve sustained growth as a company that differentiates itself from its competitors. With this resolve, we are deliberating regarding specific measures as we formulate MEG's next Medium-Term Business Plan (FY2027 to FY2031). This will be vital in taking on the challenge of reaching \(\frac{1}{2}\)100.0 billion

MEG's concept is to contribute to society as a company that thrives and grows together with its stakeholders through our pioneering efforts, driven by our pride and passion for our work. Ultimately, this will be achieved not by AI but by people. Therefore, as members of MEG, MEC, MMB, and other affiliated companies will dedicate themselves to securing and developing human resources that can overturn the status quo by approaching everything without preconceptions.

In closing, on this day of celebration, please ask yourselves what would be like if this alliance had not existed.





Masahiro Ikeura

President and Director MM BRIDGE CO., LTD.

I would like to take the occasion of the 115th anniversary of the founding of MIYAJI ENGINEERING GROUP, INC. and the 20th anniversary of its establishment to express my profound respect for the hard work and contributions of its founder and pioneering leaders. It is thanks to

them that we have been able to create MMB of today.

On this special day, I would also like to share my gratitude to all of our employees and partner companies. Your hard work and dedication have enabled us to overcome numerous crises and continue growing. Your creativity, effort, wisdom, and passion



support our company. The recently issued Integrated Report discusses the management crises and trials we have undergone countless times. We have been able to overcome these crises thanks to the keen leadership of our former management and the solidarity of our employees and partner companies.

MMB once faced a crisis that threatened its continued existence. However, thanks to its becoming part of MEG in 2015, it has managed to steer its course toward recovery. We now play a role within MEG, and we have engaged in business with high shared targets, making the maximization of Group profits and corporate value our highest priority. Through our efforts, we have significantly strengthened our management system and made major changes to the mindset of employees. We have gotten beyond this crisis. Without the alliance, there would not exist MMB today. We owe our existence to the support of MEG, the heart of the Group, the leadership it has provided based on its keen ideas, and our alliance with MEC. I would like to express my profound gratitude to the alliance.

Going forward, MEG's challenges will be implementing management that is conscious of capital costs and share prices in the TSE Prime Market, as well as increasing its corporate value. We will aim for a price-to-book ratio (PBR) of 1.0 or greater and a return on equity (ROE) of 10% or higher. We will share more information on our Group's capital policies, focused on our capital strategies, growth strategies, and IR strategies, contributing to improvements to our corporate value as a member of the Group. We will also use the achievement of our current Medium-Term Business Plan as a foothold and help the Group

achieve the core target of the next Medium-Term Business Plan, which is to grow into a ¥100.0 billion Group, an extension of the Group's current plan. In recent years, stakeholders have had rising expectations not only for sales profit but also contributions to society in a variety of areas. We will maintain a sense of urgency as we flesh out the future vision of the Group and live up to the expectations of stakeholders and society as a whole.

We find ourselves presented with a large, appealing, and highly fluid market. Funding for infrastructure improvements and maintenance have been secured through the Act on Special Measures concerning Road Construction and Improvement and through plans to improve Japan's national resilience. The barrier to entry into the bridge industry is a high one, and MEG has two major bridge companies capable of performing long-span bridge construction and large-scale, high difficulty technical construction: MEC and MMB. The prospects of taking the industry's leading position beckon to us. We also have greater management resources than our competitors. Our key challenges going forward will be to take off the ladder ourselves and plot a vision for the future, unfettered by conventional wisdom and past practices, so that we can create a brighter future and a new Medium-Term Business Plan.

MMB will continue to remember that what is common sense for us defies common sense for the rest of the world. We will thrive and grow together with our stakeholders through our pioneering efforts, driven by our pride and passion for our work, for decades to come. We will protect MEG, sparing no effort to contribute to its further development and growth.



The Colleagues We Work Alongside



Shinsuke Kurosaki
Chairman, MEC Disaster Prevention Association
President and Representative Director,
Kurosaki Build Co., Ltd.

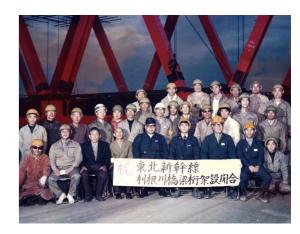
Congratulations to MEG on the 115th anniversary of its founding and the 20th anniversary of its establishment.

Our company's bond with MEG goes back over 80 years, to when my grandfather, Seita, worked with Chosen Miyaji before the war. Over the intervening years, MEG has been confronted with numerous crises, and has overcome every one of them. As a company with close ties to Miyaji, we have also been largely affected, and we have also experienced hard times repeatedly. However, through all of this, we have remained loyal to Miyaji, without ever straying. We are proud to have been able to continue putting into practice the

spirit that President Aota always discusses of thriving and growing together.

Thanks to MEG, we have been able to take part in many large projects such as Tokyo Tower and Akashi-Kaikyo Bridge. There is no doubt that we owe what we are now to MEG, and we are overwhelmed with gratitude.

In this modern age of diversity, I feel that MEG is taking a further step ahead. We will do whatever we can to help MEG achieve sustainable growth and a further leap forward.





Junzo Ueda

Deputy Chairman, MMB Health, Safety, and Quality Council
Chairman and Director,
Ueda Construction Co., Ltd.

My congratulations to MEG on the occasion of the 115th anniversary of its founding and the 20th anniversary of its establishment. MEG has contributed to the enrichment of our nation and the creation of a brighter society through the construction, maintenance, and repair of societal infrastructure for over 100 years. We wish your group's continued success.

Our company has been a partner company since the days of Mitsubishi Heavy Industries Construction Co., Ltd., MMB's predecessor. With MMB's adoption into the Group, we also became part of the Group in April 2015. We have been

working on what we can to contribute in the areas of new bridge and large-scale renovation projects. At the worksites we are responsible for, we always make safety our highest priority, and we work hard each day, led by the slogans of never running away from a challenge, always taking the high road, and always maintaining a good balance.

When I first met President Aota, he told me, "Let's move forward together," and it made a great impression on me. We will continue to do our utmost to contribute to the growth of the Group, never forgetting the spirit of thriving and growing together.





Watanabe Tekko Co., Ltd.

Shinya Watanabe Chairman, MEC Chiba Works Health and Safety Association Representative Director,

Congratulations on the 115th anniversary of MEG's founding and the 20th anniversary of its establishment.

I heard that the relationship between our company and Miyaji Engineering goes back to 1968, when my father, Yojiro, was contracted by MIYAJI IRON WORKS CO., LTD. to work on the Urayasu Bridge. When I joined our company, we were in the middle of the construction of the Honshu-Shikoku Bridge.

Even now, I vividly remember the great joy and pride I felt when the Shimanami Expressway was opened and I crossed the long-span bridge by bus for the first time, the joy

and pride of having contributed to its construction.

Since then, we have worked on various projects together. When the manufacturing of the Tokyo Gate Bridge began, we were able to use one portion of the four lines in the Chiba Works to launch an on-site partner office. Working alongside the people of the Chiba Works, I learned not only a wealth of knowledge and ingenuity regarding bridge construction, but also the importance of hard work. In order to achieve MEG's sustainable growth, we hope to continue to work with MEG in tackling various challenges by doing whatever we can to contribute and return the favor to MEG.





In commemoration of the 115th anniversary of MEG's founding and the 20th anniversary of its establishment, we introduce carefully selected 20 episodes from our history of growth and overcoming difficulties, from its creation to the present date.

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1908 1940 1960 1980 2000 2020

The Creation Secret Story 1908-1949

From the founding of MIYAJI IRON WORKS CO., LTD. to its entry into the bridge construction business and the establishment of MIYAJI CONSTRUCTION & ENGINEERING CO., LTD.

MIYAJI IRON WORKS CO., LTD. was founded in September 1908 by Eijiro Miyaji, at the age of 22. It was a privately-operated business office located in Honjo-ku, Tokyo (currently Sumida-ku, Tokyo). Eijiro succeeded the Yabe Iron Works operated by his father-in-law. He started out with this small plant in which four to five craftsmen used hand-operated bellows to manufacture bolts, steel doors, steel fences, and the like.

It was initially positioned as a specialized riveting subcontractor for on-site construction work. In 1909, the second year of the company's operations, it received and successfully completed its first order of steel framing construction for a Christian chapel in Sekiguchidai-cho in Koishikawa-ku (currently Bunkyo-ku, Tokyo). Then, in 1914, it received and completed its first bridge erection construction order to erect the Natorigawa Bridge of the Tohoku Main Line, as a subcontractor for OSHIMA-GUMI Co., Ltd. In 1916, it received an order for the Kuribashi Steel Bridge on the Tohoku Main Line as a subcontractor of DAIMARU-GUMI Co., Ltd. It used a pneumatic hammer, a riveting device powered by compressed air that was first deployed by the Ministry of Railways in the construction of the Natorigawa Bridge, to successfully complete its construction work in the Kuribashi Steel Bridge project. In 1920, it received its first order as a lead contractor from the Ministry of Railways Tokyo Railway Bureau for the installation of a girder bridge for the Chuo Line within Shinjuku Station.

The Ojima Works, which had been relocated in order to expand it, was later destroyed by fire in the Great Kanto Earthquake. However, thanks to the dedicated efforts of all of its employees, it was rebuilt, and the company received highway bridge and railway bridge construction orders one after another for the reconstruction of the imperial capital. It completed most of these projects without any accident, further refining its credibility and technical capabilities. At the time, most of the railway bridge and highway bridge construction projects it performed consisted solely of bridge erection. In the late 1920s, Fuji Sanroku Electric Railway Co., Ltd. (currently FUJI KYUKO CO., LTD.) placed an order for a 15-span deck steel girder and Keikyu Electric Railway Co., Ltd. (currently Keikyu Corporation) placed an order for a 24-span overpass. These were the first orders that the company received for the entire construction process, from manufacturing to erection. Following this, the company steadily built up a track record of bridge manufacturing.

Then came the financial crisis, the Manchurian Incident, the Second Sino-Japanese War, and the Pacific War. In October 2023, the company was reorganized as a limited partnership company. As the Second Sino-Japanese War continued, it was reorganized again on April 21, 1938, becoming MIYAJI IRON WORKS CO., LTD., in order to enhance its capital and human resource strengths under the wartime regime. Conditions continued to worsen due to the



Founder Eijiro Miyaji

war, and the Suna-machi Works, which were completed at the end of 1930, became a subcontracting plant for the Yokosuka Naval Arsenal in March 1942. It continued to manufacture auxiliary ships until the end of the war.

In April 1944, certain bridge manufacturing equipment in the Suna-machi Works was transferred to Yeongdeungpo in Yongsan, near the city of Gyeongseong (current Seoul, South Korea). Experienced engineers were sent to the site, which performed local bridge manufacturing as a branch plant. The Suna-machi Works lost most of its critical equipment in the Tokyo Air Raid, and a month after the war ended, on September 15, 1945, it was decided at an emergency meeting of the company's officers to stop operations and shut down the plant. From around 1946, when the details of the GHQ's occupation policies became clearer, the company gradually began working on the manufacture of bridge handrails, farming tools, and the like. A reorganization was carried out in January 1947, and full-fledged operation began. However, due to spiraling inflation and soaring prices, the economy showed no signs of improving.

The government implemented inflation prevention policies such as budget balancing for FY1949. These policies promoted corporate management rationalization and operational improvements. MIYAJI IRON WORKS CO., LTD., which had been facing severe business conditions, decided to split off its plant production and on-site construction departments with the aim of rationalizing management, curbing expenditures, and improving productivity. Integrated operations that encompassed everything from plant production to on-site construction continued to be handled by sibling companies. On March 12, 1949, MIYAJI CONSTRUCTION & ENGINEERING CO., LTD. was established.



The newly established MIYAJI CONSTRUCTION & ENGINEERING CO., LTD.

The opening of the Okinawa Sales Office

The 50th anniversary of the Okinawa Reversion was also the 50th anniversary of the opening of MIYAJI ENGINEERING CO., LTD. Okinawa Sales Office. Okinawa reverted from the United States to Japan on May 15, 1972. Our management philosophy was to contribute to society through bridge-building. Based on this management philosophy, we believed that our mission was to contribute to the revitalization of Okinawa, which had struggled so much during and after the war. MIYAJI IRON WORKS CO., LTD. established the Okinawa Sales Office as its fifth sales office at the time. When establishing the sales office, although MIYAII IRON WORKS CO., LTD, was unfamiliar with Okinawa, it received guidance from the Okinawa Prefecture Department of Civil Engineering and support from related parties it had previously established relationships with, such as Kanehide Tekko K.K. In August 1, 1972, we were able to put up the sign of MIYAJI IRON WORKS CO., LTD. Okinawa Sales Office in Tsubogawa.

After its opening, the Okinawa Sales Office's first project was the Yamashita Pedestrian Crossing Bridge. It then went on to become involved in well over 50 bridge construction projects, including national route and prefectural road reconstruction projects, construction of Okinawa-Jukan Expressway, remote island bridges, the Naha Airport terminal deck, and the track girder of Okinawa urban monorail, Yui Rail. In the year of the 40th anniversary of the Okinawa Reversion, the Irabu Ohashi Bridge, which was said to be the last remote island bridge, made the long 2,000 km journey from the Group's Chiba Works to Miyakojima, and was erected. This connected the islands of Irabu and Miyakojima via a single road, which was a long-held earnest wish of local residents.



Concluding the memorandum regarding the business integration

Center left: President Hiroyuki Sawai, MIYAJI IRON WORKS CO., LTD. Center right: President Nobuo Miyaji, MIYAJI CONSTRUCTION & ENGINEERING CO., LTD.

2003

The establishment of MIYAJI ENGINEERING GROUP, INC.

MIYAJI IRON WORKS CO., LTD. (MT) and MIYAJI CONSTRUCTION & ENGINEERING CO., LTD. (MK) concluded a memorandum regarding the business integration on October 10, 2002, based on their equal spirit and mutual trust. A Business Integration Preparation Committee was established to create a joint holding company through the share transfer. The Committee met ten times, and the Committee's Board of Executives and subcommittees met several times each month to engage in deliberations. On September 29, 2003, MIYAJI ENGINEERING GROUP, INC. (MEG) was established, just as planned.

At the time of the establishment, the first President, Hiroyuki Sawai spoke upon his assumption of office regarding the initials of MIYAJI ENGINEERING GROUP, INC., MEG, which also represented "megumi," Japanese for "blessings," "megumu," Japanese for "sending out sprouts," and "megurasu," Japanese for "reflecting," in the sense of "using your wisdom to reflect." The "Principles of the Business Integration," indicated below, were based on the keen ideas that led to the creation of the industry's first holding company and became the foundation of MEG's remarkable progress today.

Principles of the Business Integration

In their business integration, \boldsymbol{MT} and \boldsymbol{MK} share the following principles.

- They seek to improve their business efficiency, transform into a corporate group that is streamlined and highly profitable, made up of Japan's finest bridge, steel frame manufacturing, and construction companies, with an eye toward overseas markets.
- 2. They will comply with laws and regulations and respect each other's autonomous operations and self-supporting efforts, while striving to create a corporate group that is highly valuable to customers, shareholders, and employees by securing long-term, stable profits.
- They will gather together the Group's proposal and technical capabilities to provide products, construction, and services that customers trust.
- 4. They will leverage their accumulated track records and brand power in designing, fabricating, constructing, maintaining, and managing bridges and steel frames, and in the field of structures with large interior spaces, towers, and other buildings, as well as railroad-related fields. They will also focus their human resources and know-how to enhance their existing development capabilities and cultivate new development capabilities related to building compounds, pre-stressed concrete, environment, urban development, and overseas markets.
- In the near future, they will deliberate regarding coordinating or partnering with other companies in other fields or business types.

2011

The creation of MIYAJI ENGINEERING CO., LTD.

In 2003, a joint holding company, MEG was established. Although it strived to combine the management resources and business know-how of MIYAJI IRON WORKS CO., LTD. (MT) and MIYAJI CONSTRUCTION & ENGINEERING CO., LTD. (MK), enhance their competitiveness, improve their management efficiency, and increase their corporate value, new steel bridge demand had fallen from its peak of 900,000 tons per year to only one third of that, 300,000 tons per year. The business environment surrounding MEG had grown even more severe, and MEG needed a new strategy if it was to survive

To make it through these difficult times, it was important to flexibly adapt to the changing times, evolving instead of simply being big and strong, like the dinosaurs. Organically and completely integrating the management resources of MT and MK had the potential to maximize their business synergy, further develop as a comprehensive engineering company focused on the bridge business, and increase their corporate value. Based on this concept, we considered that merging the companies was an appropriate decision for these turbulent times. On January 14, 2011, a basic agreement on the merger of MT and MK was concluded. Discussions and deliberations were conducted repeatedly with the aim of making this management decision a reality. On March 31, 2011, the companies merged, with MK as the succeeding company. The company was renamed MIYAJI ENGINEERING CO., LTD. (MEC), and it took its first step toward its goal of being a comprehensive engineering company in the top class in the industry with a strong presence, which grows sustainably.

Overlapping divisions from the two companies were eliminated to generate management resources, which were used to work to bring about a business recovery. Measures such as these made it possible for the company to take on projects in the strategic field, such as large-scale renovation projects, new businesses such as FRP, and private sector projects such as railroad-related projects and large interior spaces and special building projects. MEC succeeded in achieving sustainable growth.

2015

The merger with MM BRIDGE CO., LTD.

In 2006, the bridge division of Mitsubishi Heavy Industries, Ltd. (MHI) was split off with its subsidiary, Mitsubishi Heavy Industries Construction Co., Ltd. as the succeeding company, which was established to mainly engage in on-site bridge construction. Later in 2006, it was renamed Mitsubishi Heavy Industries Bridge & Steel Structures Engineering Co., Ltd. (MBE). In 2015, MBE went on to become a MEG operating subsidiary whose main businesses were bridges and coastal structures, and the company later renamed MM BRIDGE CO., LTD. (MMB). MBE was in an extremely difficult business position, with domestic bridge demand falling to only one third of what it had been at its peak. MBE and MHI agreed that they needed to further combine and improve their technical capabilities, and they had to improve their profitability by rationalizing their management and improving its efficiency, in order to achieve sustainable growth in the bridge business going forward. The two companies agreed on this concept with MEG and MEC, with which they had built relationships of trust and cooperation over the years in the construction projects which they carried out as a joint venture. On November 7, 2013, the four companies concluded a basic agreement regarding a bridge business partnership, and they began exploring various possibilities.

As a result, on April 1, 2015, MEG decided to acquire 51% of the shares of MBE from MHI, and the direction of MBE was left entirely to MEG. At the time, there were various opinions within the companies. However, due to our strong belief and keen idea that the synergy between MEC and MBE could put MEG back at the top as an industry leader, the decision was made to establish MMB. In the business environment, which held great promise not only for new bridge construction but also large-scale renovation and maintenance-related construction, MMB was able to achieve dramatic success by leveraging the comprehensive capabilities of the Group and developing its business.



Akashi-Kaikyo Bridge

The History of Our Plants 1908-2023

Changes in our major plants

MIYAJI IRON WORKS CO., LTD. began in 1908 as a small, individually-operated plant located at 36 Minami-Futaba-cho, Honjo-ku, Tokyo (currently 3-14 Kamezawa, Sumida-ku, Tokyo). Sometime after it opened, it began performing bridge erection work. The strong economy due to World War I led to the small plant in Minami-Futaba-cho constantly being swamped with work. In 1919, the company acquired a 661 m² lot in 1 Ojima-machi, Minami-Katsushikagun, Tokyo (currently Ojima, Koto-ku, Tokyo) and built the Ojima Works

The Ojima Works later burned down in the Great Kanto Earthquake. However, thanks to the dedicated efforts of all of its employees, it was rebuilt and contributed to the reconstruction of the imperial capital. When it received a 540 ton steel frame manufacturing order from SHIMIZU-GUMI Co., Ltd., it borrowed a 6.612 m² lot adjacent to its property and expanded the Ojima Works in 1928. As the expanded Ojima Works almost immediately reached its full work capacity in the late 1920s, at the end of 1930, the company built the new Suna-machi Works on a 16.420 m² lot. In April 1933, the Suna-machi No. 2 Works began its operations on a 12.000 m² lot.

Unfortunately, the majority of the Suna-machi Works was burnt down in the Tokyo Air Raid in the last years of the Pacific War, and the company was forced to shut the



Suna-machi No. 1 and No. 2 Works



Suna-machi No. 3 Works



Chiba Works

plant's operations down. The amount of goods and people gradually recovered thereafter, and in January 1947, the company resumed small-scale but full-fledged operations at the Suna-machi Works. While the business situation had remained harsh, in June 1950, the Korean War broke out, and the wartime demand brought a significant benefit to the Suna-machi Works.

In 1955, the Equipment Rationalization Committee was established and specific measures for rationalizing and modernizing equipment were considered. Starting in 1958, the Suna-machi Works was expanded in three stages. In 1960 and 1961, the plant was added to and expanded to respond to growing order volume and accommodate the shift toward larger products. In 1963, the No. 3 Works was built on a 15,752 m² lot, and in 1966, it was further expanded to 33,312 m². The Suna-machi No. 1, No. 2, and No. 3 Works were also collectively referred to as the Tokyo Works.

In the late 1960s, the area around the Tokyo Works became urbanized. To address the problems of paint spatter from the spray-on application of paint, the 54,878 m² Ichikawa Works (in Ichikawa City, Chiba Prefecture) began operations in January 1974. At the same time, business results plummeted due to the setback of plans to relocate the Fukuyama Works as a result of the first oil shock, and the Suna-machi No. 1 Works was shut down in April 1975 in accordance with the company's rationalization plans. The launch of the Ichikawa Works meant that the Suna-machi No. 3 Works no longer had a role to play, and it was shut down in March 1976. Since the Suna-machi No. 2 Works was the linchpin of manufacturing, it was renamed the Shinsuna Works in November 1976 and continued its operations.

However, while the Ichikawa Works excelled at land transport, it struggled with sea transport of large blocks. In order to handle potential large projects such as the Honshu-Shikoku Bridge project, which had previously been suspended but whose suspension had recently been lifted, the company needed to take rapid action. In July 1982, it acquired a site that retained the former plant's furnishings. This 176,722 m² site with a 165 meters long dedicated pier became the Chiba Works. Equipment was relocated from the Shinsuna and Ichikawa Works and centralized in the Chiba Works, which went into operation in December of the same year. Accordingly, the Ichikawa Works was closed in December 1982, and the Shinsuna Works was closed in October 1983.

1945-2010

The history from the evacuation to the Matsumoto Works (Hata Works) due to air raids to its closure

The majority of the head office and the Suna-machi No. 1 and No. 2 Works were burned down in the March 1945 Tokyo Air Raid. However, Division 2 of the Imperial Japanese Navy Technical Department demanded the partial evacuation of the plant in order to manufacture submarine parts. The remaining machinery was relocated to Hata-mura, Nagano Prefecture (currently Matsumoto City, Nagano Prefecture). This was the start of the Hata Works. Although the equipment was relocated, since the Potsdam Declaration was issued on August 15, 1945 and the war ended, the Hata Works never began manufacturing submarine parts.

From May 1946, when the GHQ's occupation policies were fleshed out in greater detail, the Hata Works began operations, making it through the difficult period by manufacturing spades, hoes, threshers, and other agricultural tools for local farmers. From the 1950s, business began expanding gradually as the company received large quantities of orders for steel frames and equipment for large factories along with railway bridge repair orders from Japanese National Railways. To accommodate this increase in business, the company expanded the lineup of machinery in the plant.

The post-war economic boom (Jimmu Boom) led to increases in the manufacture of bridges and steel frames. The plant rode this tide and formulated facility expansion plans in mid-1955. Since then, almost every year, it constructed new plant buildings. In June 1961, the Hata Works was renamed the Matsumoto Works, and it began its history as a full-fledged heavy manufacturing plant. Japan's era of rapid economic growth saw the construction of skyscrapers and plant expansions by many manufacturers. As the Matsumoto Works found itself facing a rapid expansion in order volume, it needed to expand. In May 1967, construction began on the West Works.

Furthermore, in addition to manufacturing volume, there was also a growing emphasis on quality in the construction industry. On June 1, 1984, it was announced that 71 plants were certified under the production plant certification system promoted by the Japan Steel



Work being done in the Hata Works

Constructors Association. The Matsumoto Works received a Grade S certification, meeting the most exacting requirements of the certification system. In March 1993, the company had acquired a 110,307 m2 lot of the adjacent Asahi Works. The company had also considered completely relocating the Matsumoto Works. However, the market for steel frames had remained sluggish for a long period of time. The company decided that building a new plant would not be profitable, and it sold the land and scrapped the new plant relocation plan. Private sector demand for steel frames remained low, and the number of large-scale projects such as urban redevelopment projects declined. As a result, overall order volume was stagnant. This situation was expected to continue for some time. Therefore, the company made dramatic changes to its production system and rebuilt to be independently profitable.

However, competition for orders further intensified, the price of steel rose while order unit prices fell, and order volume itself fell. The company realized that even remaining in business could become difficult. It began transforming the Matsumoto Works to become a bridge plant, while considering the possibility of pulling out of the steel frame business completely. Since highway bridge order volume had also declined significantly, the company decided that a contraction of its production facility scale had become unavoidable. It had to consider closing down the Matsumoto Works entirely. Then, it made the heartbreaking decision to bring the roughly 60 years of history of the Matsumoto Works to an end, and at the end of March 2010, operations at the Matsumoto Works stopped.



The Hata Works in the 1950s

Buildings that Live on in History Our tireless challenges to develop technologies

1958-1964

The history from the completion of the Tokyo Tower, a symbol of Japan's post-war recovery, to the completion of the Edobashi Junction

As Japan entered a period of rapid economic growth starting in the mid-1950s, television began spreading to households. However, since each television station in Tokyo had its own broadcasting tower at the time, viewers needed to adjust their television antennas every time they changed the channel. The Ministry of Posts and Telecommunications developed a plan to build a combined broadcasting tower that would integrate the broadcasting towers of each television station. It decided that if it was going to build a tower, it may as well make it a symbol of post-war Japan that would surpass even Paris' Eiffel Tower. Based on this concept, the Tokyo Tower construction plan was launched.

Since MIYAJI CONSTRUCTION & ENGINEERING CO., LTD. (currently MIYAJI ENGINEERING CO., LTD.) had an extensive track record of constructing steel towers throughout Japan, it was selected to construct the steel frame of the 333 meters tall Nippon Radio Tower, becoming part of this enormous project. Building the steel frame of this ultra-tall steel tower was an extremely difficult task, because the convenient tools and machinery available now did not exist at the time. Instead, selected engineers and technical workers (steeplejacks from Kurosaki Build Co., Ltd.) took on numerous hazardous tasks as they leveraged their extensive experience and advanced craftsmanship, pooled their wisdom, and took on new challenges. They proposed new construction methods and construction machinery, pouring their spirit and



Edobashi Junction construction in progress



The construction of Tokyo Tower

passion into their work. They succeeded in completing the work in a mere year and a half.

The next major project that the Group took on with this team of experts was the most difficult part of the Metropolitan Expressway construction project in preparation for the 1964 Tokyo Olympic Games. Traffic volume was rising rapidly, and delays in the development of roads had resulted in chronic traffic jams. This project sought to alleviate these problems. The construction site conditions were more difficult than any the Group had ever faced. The space above the Nihonbashi River had many curves, narrow sections, and complex shapes. Extreme constraints applied to both the horizontal and vertical sections. This project set out to construct today's Edobashi Junction on Inner Circular Route of the Shuto Expressway.

At the time, construction did not make use of the versatile, advanced construction materials and the design and analysis technologies of today, nor the computers that could rapidly perform arithmetic processing. They did not have the plant manufacturing technologies focused on welding and processing technologies that we now use. Instead, technicians devoured information, both from Japan and overseas, such as past records and documents. They immersed themselves in the creation of new techniques and construction methods based on their own experience. They made every effort to ensure their creations had theoretical backing. These technicians were joined by the experts who had taken part in the construction of Tokyo Tower. The two groups worked together like two wheels of a car, fusing the latest technologies with the expertise of craftsmen. This collaboration produced technologies and techniques that brought this national project of the century to fruition. Construction was carried out safely and efficiently, and the Edobashi Junction was completed by the target completion date, with no major accidents.

This construction project contributed to the development of erection technologies using erection equipment developed in-house: the floating crane (FC) erection method, the traveller crane erection method, the cable crane erection method, the launching erection method with launching girder, and more. These technologies are still used today. The Edobashi Junction project truly created the foundation of bridge technology.

1967-1986

The history of strait crossing suspension bridges

From the Hakogase Bridge (completed in 1967) to the Kanmon Bridge (1973) and the Ohnaruto Bridge (1986)

In 1969, Hiroyuki Sawai, MEG's first President and a special friend of the Group, was a Deputy Director of Local Road Division, Road Bureau, Ministry of Construction (currently Ministry of Land, Infrastructure, Transport and Tourism). He wrote a paper titled "Plans for the Erection of Straight Crossing Bridges" for the Kyoryo to Kiso ("Bridges and Foundations") bridge journal. He then went on to actively announce the results of his research regarding long-span bridges. Through these actions, he made tremendous contributions to the development of steel

The Group had developed a great deal of confidence and the advanced technologies and techniques through its involvement in high-difficulty Metropolitan Expressway construction projects, such as the Edobashi Junction. To prepare for the coming age of long-span bridge erection, we participated in the following two suspension bridge experimental bridge construction projects.

Hakogase Bridge

The Hakogase Bridge, which had been completed in 1967, was a single-span suspension bridge with truss stiffening girders. The Group was responsible for the erection of its main towers, cables, and stiffening girders. When designing it, we verified the adequacy of its structure at a detailed level, focusing on examinations of its wind-resistant stability. When installing its cables, we used the conventional air spinning method*1. When erecting the stiffening girders, we tested the use of the single material cantilever erection from the main towers, using a truck crane. We identified areas requiring improvements in preparation for future construction projects.

Kamiyoshinoqawa Bridge

The Kamiyoshinogawa Bridge, which was completed in 1970, was a single-span suspension bridge with truss stiffening girders, same as the Hakogase Bridge. Since the Group had a major long-span bridge erection project coming up immediately after this project, for this bridge, it experimented with construction techniques on an actual bridge in order to research erection methods. The Group was responsible for the cable and stiffening girder erection work. Of special note is the fact that we tried different erection methods. The upstream cables were erected using the conventional air spinning method, while the downstream cables were erected using the prefabricated strand construction method*2. We researched the characteristics of each construction method. For the erection of stiffening girders, we employed the interfiled block cantilever erection method, using a cable crane. For the slabs, we used precast slabs of lightweight concrete.



The Kanmon Bridge during erection

Kanmon Bridge

We used our experience with the erection of the two aforementioned bridges in the Kanmon Bridge project. This long-span bridge project was the first of its scale in Japan. The bridge was to be 1,068 meters long, have a 712 meter central span, bridge clearance of 61 meters, main tower height of 133.8 meters, and total steel weight of 28,000 tons. Our experience and expertise we gained through the Hakogase Bridge and Kamiyoshinogawa Bridge projects, together with the technologies and techniques we developed by applying and refining new approaches in the cable and stiffening girder erection work, were even further developed and deepened by the engineers and technical workers who were selected for the project.

The stiffening girder construction was handled by a joint venture of three companies: MIYAJI IRON WORKS CO., LTD. (currently MEC), Mitsubishi Heavy Industries, Ltd. (whose bridge division was succeeded by current MMB), and Yokogawa Bridge Works, Ltd. (currently Yokogawa Bridge Corp.). As the sponsor company, MIYAJI IRON WORKS CO., LTD. took the lead, establishing a strong presence in the industry. The actual erection of the stiffening girders was performed using FLSUS-X, an analysis program that MIYAII IRON WORKS CO., LTD, had developed in-house, and Burroughs computers. These were used to analyze the stresses placed on the structure by cumulative error. Through this, we developed the sequential rigid connection method, a unique Japanese stiffening girder erection technique. This construction project was the first in the industry in which computers were kept on-site in the worksite office and used to link designs and worksite conditions in real time. This was a revolutionary approach at the time. At the worksite office, engineers and technical workers engaged in passionate discussions every day, laying their determination and pride on the line.

Furthermore, in the administrative negotiations with the client by joint venture management, sales personnel were kept on-site at all times to ensure that the engineers responsible for site operations could dedicate their full attention to the stiffening girder erection work. The Group completed this project successfully, and the numerous new technologies, experience, and insights regarding the techniques used in the project were applied to future long-span bridge projects.

^{*1} In the same manner as in spinning thread, a roughly 5 mm diameter wire is drawn out (spun) one at a time through the air. It is secured to the anchorage (the block used to secure cables) at the far bank and wrapped around the strand shoe. This process is repeated to create a single cable.

^{*2} Prefabricated wire strands manufactured in a plant and wound onto large reels are taken to the worksite, fed out from the reels, and secured to the anchorages on both banks. This process is repeated, with multiple strands bundled together to create a single cable (PWS method).

The opening of Seto-Ohashi Bridges, the world's longest road-rail bridge

The Seto-Ohashi Bridges consisted of six bridges connecting the five Shiwaku Islands, located between Kurashiki City in Okayama Prefecture and Sakaide City in Kagawa Prefecture, and four viaducts connecting them. These bridges spanned a total of roughly 13 km and are part of the Kojima-Sakaide Route of the Honshu-Shikoku Bridges that span the Seto Inland Sea. The bridges contain both roads and railways, and in 2015, they were recognized by Guinness as the world's longest road-rail bridge. In 2017, they were selected as one of the 20 symbols of Japan's 20th century heritage by the International Council on Monuments and Sites (ICOMOS).

Construction began in 1978, and nine years and six months later, on April 10, 1988, the bridges were opened to the public. The Group was involved in the construction of (starting from the Okayama Prefecture side) the Shimotsui-Seto Bridge, the Hitsuishijima Bridge, the Yoshima Bridge, the Kita Bisan-Seto Bridge, the Minami Bisan-Seto Bridge, and the Bannosu Viaduct. For five of the six bridges other than the Yoshima Bridge, the Group served as a principal member of the joint venture that performed construction, and we played a central role in everything from detailed design to on-site construction work. Below is an overview of each bridge.

Shimotsui-Seto Bridge

This bridge is a 1,400 meters long single-span suspension bridge with a main span of 940 meters. It has a truss structure of stiffening girders made of 64,937 tons of steel. It is the only one of the Honshu-Shikoku Bridges whose cable work was performed using the air spinning method. To avoid ruining the view from the peak of the picturesque Mt. Washu, located in the Setonaikai National Park behind the bridge (on the Kojima side), a tunnel-type anchorage (main cable anchor) was used on the Kojima side. This is one of the notable features of the bridge. The Group played an important role in the erection of the main cables and the detailed design, fabrication, and on-site construction of the stiffening girders.



Shimotsui-Seto Bridge construction in progress



Kita Bisan-Seto Bridge (foreground)/ Minami Bisan-Seto Bridge (background)

Hitsuishijima Bridge

This bridge was, when built, the world's longest road-rail cable-stayed bridge. It is 790 meters long, has a main span of 420 meters, and contains 36,505 tons of steel. Its primary structure consists of upper chord materials and an upper road steel slab deck. Instead of the conventional sanding construction method, we made the main tower foundations using grout injection, with the largest blocks in Japan at the time (L=185 m, W=6,150 t). We also brought large computers on-site and used them online in a construction management system for the first time. The Group played a central role in the construction of this bridge.

Kita Bisan-Seto Bridge/Minami Bisan-Seto Bridge (twin suspension bridge)

This is a twin suspension bridge, where two bridges standing in a row, unusual not only in Japan but overseas, as well. It consists of the Minami Bisan-Seto Bridge, a three-span continuous suspension bridge (length: 1,648 m, main span: 1,100 m, steel weight: 86,073 t) and the Kita Bisan-Seto Bridge (length: 1,538 m, main span: 990 m, steel weight: 78,098 t), which share the same stiffening girder truss structure. The anchorage between the two bridges uses a shared anchor to secure the main cables. The strands that go into the anchor from both sides cross aerially and are fixed. This is a large-scale, special structure that is seldom seen even in other countries. The Group played important roles in the detailed design, fabrication, and erection of the main towers, the erection of the cables, and the detailed design, fabrication, and erection girders.

Bannosu Viaduct (truss)

The Bannosu Viaduct is a continuous viaduct made up of a truss bridge over the strait and a box girder bridge over land. It is 483 meters long, has a 180 meter main span, and contains 18,400 tons of steel. We played a central role in the detailed design, fabrication, and worksite construction of this three-span, upper deck-type, continuous curved-chord Warren truss bridge.

1994-1997

The completion of long-span marine bridges

Kansai International Airport Access Bridge and Trans-Tokyo Bay Expressway Bridge (Tokyo Bay Aqua-Line Bridge)

The Group was also heavily involved in the construction of two of Japan's most iconic long-span marine bridges: Kansai International Airport Access Bridge (Sky Gate Bridge R) and Trans-Tokyo Bay Expressway Bridge (Tokyo Bay Aqua-Line Bridge).

Kansai International Airport Access Bridge

The Kansai International Airport Access Bridge was opened to airport related personnel in 1993 and opened to the general public in 1994 when the Kansai International Airport was opened. It is the world's longest road-rail truss bridge (3,750 m), made up of six three-span continuous truss bridges with 150 meter spans. Due to the airspace restrictions under the Civil Aeronautics Act and the need to secure sufficient space for ships to pass, this bridge is a double-deck truss bridge. The upper deck has three lanes of road traffic in each direction, and the lower deck has multiple dedicated rail lines.

The construction period had to be kept short and the impact on passing ships needed to be minimized. For these reasons, large blocks were assembled in manufacturing plants, and multiple large blocks were erected at once using a large floating crane (FC) in a construction method called the large block erection method. The Group was the representative member of the joint venture responsible for Section 1, which involved the erection of the first large blocks of the bridge over the international shipping route, and for Section 3, which connects to the airport island. We also played a central role in the overall project.



Large block erection using a large FC

Trans-Tokyo Bay Expressway Bridge (Tokyo Bay Aqua-Line Bridge)

The Trans-Tokyo Bay Expressway Bridge (Tokyo Bay Aqua-Line Bridge), which was opened in 1997, is Japan's longest bridge (4,384.4 m). We were responsible for the largest section of the project, the area near the Umihotaru Parking Area. We played an important part in the erection of the bridge's nine-span continuous steel slab deck box girders. This section had a large cross section, with a maximum inter-support distance of 240 meters, and was erected in large blocks using a large FC. We also played a critical role in the construction of the 11-span continuous steel slab deck box girders, which were erected from the Kisarazu-side pier using crawler cranes.

In particular, when constructing the large cross section box girders, which were used in a long span section passing over a shipping route, we not only handled fabrication and on-site construction, but also fully leveraged our Group's wind resistance and vibration control technologies. The tuned mass damper (TMD) that we used to damp vibration continues to make major contributions to the bridge's safety and security even today.

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Kansai International Airport Access Bridge (Sky Gate Bridge R)

Buildings that Live on in History 1998-1999

The completion of the world's largest suspension and cable-stayed bridges at the time

Akashi-Kaikyo Bridge and Tatara Bridge

In 1998 and 1999, a new suspension bridge and a new cable-stayed bridge were erected in Japan, both of which were the largest bridges of their kind in the world at the time. One was the Akashi-Kaikyo Bridge, which is a three-span, two-hinge suspension bridge with a total length of 3,911 meters, a main span of 1,991 meters, a steel weight of 193,000 tons, and a truss structure of stiffening girders. The other was the Tatara Bridge, which is a three-span continuous cable-stayed bridge with a total length of 1,480 meters, a main span of 890 meters, a steel weight of 31,888 tons, and a main girder structure with a box girder cross section design. The Group played a central role in the construction of these two bridges.

Akashi-Kaikyo Bridge

The 300 meters high main tower, almost as tall as Tokyo Tower, carried the risk of being shaken by winds. That was why we used a 1/86 scale model to perform wind tunnel testing, employed measures to prevent vibration such as using a plus-shaped cross section, and installed a special vibration-damping tuned mass damper (TMD). We took painstaking care to ensure safety, such as installing a TMD in a tower crane used during the erection process.

To ensure a sufficient level of perpendicular precision during plant manufacturing, the main tower was precisely finished to have an inclination of less than 1/10,000. The Group played a central role in this process, in every stage from development and deliberation to construction. In erecting the main cables, we are world's first to use a helicopter for the sea crossing of the pilot rope. We also played major roles in hauling ropes, erecting catwalks, using



Large block erection of the Akashi-Kaikyo Bridge's stiffening girders



Tatara Bridge

the PWS method to install strands, and performing other on-site construction.

For stiffening girder erection, special scales with a high level of safety were developed for use in the erection of the main structure trusses for short hangers, which was extremely difficult for conventional long-span suspension bridges. Take-up equipment that used a hydraulic mechanism was developed to equalize tension when placing parallel PWS hangar ropes, which were used in the bridge for the first time in conjunction with the use of the sequential rigid connection method for the main truss. A GPS-based measurement system was created to manage the shape of the bridge, which had a total length of 4 km. The Group played a central role in all of these processes of making creative efforts.

Tatara Bridge

We made similar contributions to the Tatara Bridge, as with the Akashi-Kaikyo Bridge. For this bridge, we also performed bridge erection main tower wind tunnel testing, pedestrian/bicycle/motorcycle road*3 installation wind tunnel testing, cable vibration damping wind tunnel, and erection air measurement testing. The results of these tests were reflected in the bridge's wind resistance design. Here, the Group also played a central role.

During on-site construction work, we served a role of providing overall coordination in the erection of the 220 meters high main tower, the large block main girder erection using a large floating crane (FC), and the cantilever erection for almost 450 meters directly below main girders. Without our efforts, the construction of what was at the time the world's longest suspension bridge and the world's longest cable-stayed bridge would not have been possible.

2012

The opening of the Tokyo Gate Bridge, a high difficulty construction project

The Tokyo Gate Bridge was erected during Stage II of the Tokyo Bay coastal road project. It is positioned in an offshore section of the roughly 4.6 km harbor road from the Central Breakwater exterior reclaimed land area to Wakasu. This bridge is composed of a main bridge section (a three-span continuous truss and box composite steel bridge) and an approach section (three- to eight-span continuous steel slab deck box girder bridge). This long-span bridge is 2,618 meters long, has a 440 meter main span, and contains 36,000 tons of steel. Since the main bridge section is next to the Haneda Airport, there are height (bridge height) restrictions, and because the bridge passes over an international shipping route, there are also bridge clearance restrictions. While the bridge had to harmonize with the environment and serve as a landmark, new technologies were actively used to create a modern bridge structure

We were responsible for the manufacture and on-site construction of the central span, which passes over the international shipping route (the No. 3 Tokyo Bay Shipping Route) and was the section for which construction presented the biggest challenge, and of the approach bridges on the east and west sides (three- and four-span continuous steel slab deck box girder bridges with rigid frames). All of this construction was performed using the highly difficult large block erection method, involving the use of large a floating crane (large FC).

The middle span of the main bridge was especially noteworthy. The erection of this central span truss structure required the international shipping route to be shut down for 34.5 hours and for a large FC to suspend the structure as cantilever erection was carried out. This construction method had never been used before in Japan. The box girder structure in the center of the central span also required the international shipping route to be completely shut down for 14.5 hours and for a large FC to perform large block erection, a first for the construction project. This was an extremely difficult construction work.

The Group engaged in close discussions with related organizations before the work began, and it created safe, secure, and highly detailed construction plans based on the results of various erection calculations (analyses). On the day of the construction, it strictly complied with the height restrictions for the Tokyo International Airport Runway B extended approach surface and the construction work restrictions in the area of the Tokyo eastern shipping route where ship traffic was prohibited. It closely managed relative planar positions of election points and successfully completed the large block erection work within the tight time constraints. The Tokyo Gate Bridge construction work was a demonstration of the superb technical capabilities that we had developed through the years.



Tokyo Gate Bridge

^{*3} A side road or dedicated route within the truss for use only by pedestrians, bicycles, and motorcycles

The completion of the Kesennuma Bay Crossing Bridge, a symbol of reconstruction from the Great East Japan Earthquake

The Kesennuma Bay Crossing Bridge was erected across Kesennuma Bay on the Kesennuma road, which was carried out through the Sanriku Coastal Road (Sanriku Expressway) project. The road was positioned as a symbol of recovery from the Great East Japan Earthquake, and the bridge was made up of a three-span continuous cable-stayed bridge over the water and a continuous box girder bridge over the land. It measures 1,344 meters long, has a main span of 360 meters, contains 12,879 tons of steel, and has been affectionately named the "Kanae Ohashi."

The Group was responsible for the most difficult part of the bridge's construction, the Kogoshio section of the threespan continuous cable-staved bridge. Since the Kogoshio section main tower is located in a bay with a high amount of ferry and fishing vessel movement, we applied the large block erection method using a large floating crane (large FC). Although extremely difficult, we chose this method because of its effectiveness in performing on-site construction in a short period of time, minimizing the impact on ships. At our Chiba Works, we assembled the 65 meters high main tower lower section and the 30 meters high main tower upper section separately as large main tower blocks. We then used a 3,000 ton FC to ship out the blocks, transporting them to the site via large barges. At the site, the same FC was used to perform large block erection.



Preparing the main tower for shipping using a large FC

For the main girders, a 600 ton FC with diagonal bents was used near the main tower to perform large block erection. This structure was then used as the starting point to perform hoisting cantilever erection (balancing erection) on both sides using erection girders and double twin jacks. At the Kogoshio area land bridge edge, a 750 ton crawler crane was used to perform large block erection, an extremely difficult construction task. The Group collaborated closely with related organizations, using the advanced technical capabilities we have developed through the years to perform the work safely and reliably. We completed the difficult construction processes successfully and made it possible to open the bridge in time for the 10th year after the earthquake, as desired by the related parties.

Furthermore, with the cooperation of the client, we voluntarily carried out actual bridge vibration testing using the Group's large-size exciter. We verified the comprehensive attenuation characteristics of the cable-staved bridge, which had the notable features of using a completely welded structure for all bolt-less sections of the bridge other than the main tower foundation and having separate seismic isolation functions for the horizontal and vertical dimensions. These characteristics were difficult to infer based on conventional wisdom, and they further improved our Group's exceptional wind and seismic resistance technologies.



Kesennuma Bay Crossing Bridge (Kanae Ohashi)

Crises beyond the Limits of Management Efforts 2001

1972

The setback of plans to relocate the Fukuyama Works as a result of the first oil shock

Since its founding in 1908, the Group has been confronted with countless major crises, such as the loss of plants due to fires caused by the Great Kanto Earthquake and World War II. In particular, there were two major crises, which were beyond the Group's ability to deal with through management efforts alone, and which had a major impact, shaping the current financial capital strategy.

The first crisis was the indefinite delay of the Honshu-Shikoku Bridge construction plan that resulted from the first oil shock in the 1970s. We were at the forefront of long-span bridge technologies that we had gained through our work on the Kanmon Bridge. In preparation for construction on the Honshu-Shikoku Bridge, we had acquired land to build a new plant in Fukuyama City, Hiroshima Prefecture, and had completed the preparation of a pier. When we were just about to begin plat construction, the project was indefinitely delayed. It was unclear when we would be able to recover the massive investment we had undertaken. The loans we had taken out became non-performing loans, placing a tremendous burden on our company.

To keep our company alive through this trying period, all of our employees worked together to reduce costs, such as through thorough cost rationalization efforts. However, that was not enough to make up for the losses. In 1975, we were forced to choose a recovery approach based on rationalization efforts, which included laving off 500 employees of our 1,500 employees at the time.

As we were forced to make this agonizing decision, we realized that our company could be suddenly pressed into bankruptcy as a result of changes in government policies, etc. We were only able to protect our company in such crises that shook the very foundations of our company through the dedicated collaboration of our employees and partner companies, who loved our Group, and through our solid financial foundation. This crisis was a powerful reaffirmation of the importance of protecting these two factors.

The starvation resulting from the dramatic reduction in public works spending due to the government's policies

The second crisis we faced was the major contraction in public works spending began in the 2000s due to a change in the government's policies. Public works projects had played a major role as stimulus measures following the collapse of Japan's economic bubble. However, this policy suddenly changed, and the public works budget, which had previously been almost ¥10 trillion, was reduced significantly.

This tide of budget cuts was carried on by the subsequent Democratic Party of Japan administration under the slogan, "People, not concrete." The public works budget was reduced in half compared to pre-contraction levels, to less than \(\frac{1}{2}\)5 trillion. Although the public works budget was halved, the number of clients, such as national and local governments, and the number of people working in them were not halved. As a result, the amount of budget available for actual construction project order placement, after the expenses of client placing the orders, was cut by far more than half, which had a major impact on us.

The major reductions in order volume significantly affected the management of the companies whose business was predicated on public works. A limited number of primarily steel bridge business-focused companies had plant production facilities and on-site construction systems that were capable of handling budget levels of ¥10 trillion. These companies had to secure enough business from the limited order volume to maintain operations at their plants. In addition, dumping competition*4 occurred frequently. Due to these circumstances, the 76 members in the Japan Bridge Association at the time, 45 withdrew or went bankrupt, reducing the membership to 31 members, an unprecedented

Our Group found itself in the same difficult situation. To deal with the decline in received order volume resulting from the plunge in order placement volume, we sold our head office building in 2007 and, in 2010, we shut down operations at the Matsumoto Works, which had a history of over 60 years, as described above.

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^{*4} Bidding systems were revised with guidance from the national government, and it is now impossible to take on orders that would constitute dumping. Instead, all bidding is performed using appropriate pricing

Other Major Crises

The cornering of our stock by the Seibi Group

The share price of MIYAJI IRON WORKS CO., LTD., which had been in the \u2004200 range in November 1979, suddenly rose as a result of speculative dealing by the Seibi Group, led by Akira Kato, who was nicknamed the "soldier of fortune of Kabuto-cho." The share price reached its record high on August 28, 1980, at ¥2,950. The Seibi Group unilaterally announced in the Nihon Keizai Shimbun that they "owned roughly 70% of the shares of MIYAJI IRON WORKS CO., LTD.," and they demanded a share takeover. However, we steadfastly refused. An Extraordinary General Meeting of Shareholders was held, and a demand was issued to make major changes to the executive board

However, this steel bridge company required advanced technical and sales capabilities, and its management could not be so easily replaced. Ultimately, the President at the time, Takeo Miyaji, remained in his position and the company accepted two Directors nominated by the Seibi Group. The autonomy of the company's administration was maintained.

At the Board of Directors meeting in January 1981, it was decided to increase capital by doubling the face value. On July 1, 1981, the number of issued shares was doubled, from 30 million to 60 million, and the share issue appeared to have been settled. Unfortunately, the impact of this increase in the number of shares continued for a long period of time, and it took five years for the shareholder composition to reclaim the stability it had before the speculative dealing.

The Rokugo Bridge accident

The Group excels at special construction projects involving a high level of technical difficulty. Although we take the utmost care with respect to safety, completely eliminating accidents is not possible. When accidents occur involving technically difficult highway or railway bridge erection projects, they have a major impact on society.

As a group that works with social infrastructure, a major accident that even now we take as a lesson with respect to safety is the accident that occurred during the disassembly of the Rokugo Bridge, which crosses the Tamagawa River on the National Route 15. On December 14, 1984, when the old arch bridge to be replaced was being loaded onto a barge and transported for dismantling, the brackets supporting the bridge suddenly collapsed and the bridge girders fell. Five workers lost their lives, and 13 were injured.

Through this accident, we keenly realized the importance of safety management. By thoroughly implementing safety measures through the efforts of everyone within the Group, we have avoided any major accidents since the Rokugo Bridge accident. However, major accidents still occur in the bridge industry. We will never forget that letting one's guard down, even slightly, can result in catastrophe, as we strive to perform our work safely and securely.

2()()5 Ending collusion

On October 5, 2004, the Japan Fair Trade Commission conducted on-site inspections of the steel bridge industry, and on May 23, 2005, criminal charges were issued against us by the Public Prosecutors Office for suspected violations of the Antimonopoly Act. We sincerely reflected on our own actions, promptly issued a declaration indicating our commitment to abandoning past practices, established a compliance management system, and rebuilt our business structure with a focus on governance.

Clients such as the Ministry of Land, Infrastructure, Transport and Tourism suspended nominations for almost a year. In addition, in accordance with the Construction Business Act, our operations were suspended for 45 days. Through this difficult experience, we reaffirmed the importance of compliance. The Group formulated the Basic Regulations for Compliance and Risk Management, and to ensure that this system was operated appropriately and thoroughly, we established a Compliance and Risk Management Committee, chaired by the Company's President. The Committee is providing strict guidance and management for Group companies to ensure that improprieties like this never occur again.

Social Contributions 2011

Emergency restoration in the event of a natural disaster

Contributing to the safety and security of the people in Japan

Our management philosophy is "Contributing to the enrichment of our nation and the creation of a brighter society through the construction, maintenance, and repair of societal infrastructure such as bridges, buildings, and coastal structures." By implementing this philosophy, we strive to achieve and maintain sustainable growth as a Group and to live up to our corporate social responsibility to all of our stakeholders, such as our shareholders, investors, other business partners, employees, and communities.

We see our emergency restoration work to repair social infrastructure damaged in a disaster as part of our contributions to society, and we leverage the technical capabilities we have accumulated through the years together with our rich stock of special equipment to assist with recovery efforts. Long ago, our Ojima Works was completely burned down in the Great Kanto Earthquake of September 1, 1923. Thanks to the diligent efforts of all of our employees, the plant was rebuilt. We built over a dozen bridges, including the Hijiri Bridge and the Shirahige Bridge. Furthermore, having earned the tremendous trust of Japanese National Railways, we participated in 90% of all railway bridge construction, including the Circular Route (current Yamanote Line) and the Sobu Line. We made major contributions to the reconstruction of the imperial capital.

The Great Hanshin-Awaji Earthquake of January 17, 1995 led to a massive review and revision of bridge seismic resistance standards. We contributed significantly to the rapid restoration of railways and roads through projects such as the restoration work of the JR Rokkomichi Station and the Hanshin Expressway No. 3 Kobe Route. This DNA has been carried on to MEG today. Here, we introduce a few examples of the emergency restoration work we have carried out since MEG's establishment.



Tohoku Shinkansen's RC viaduct support pillar emergency restoration measures



Joetsu Shinkansen's RC viaduct support pillar emergency restoration measures

Emergency restoration work of Shinkansen viaducts that were damaged by earthquakes

The powerful tremors of the Niigata Chuetsu Earthquake of October 23, 2004 caused damage (buckling) in support pillars of the Joetsu Shinkansen's RC viaduct. MEG rapidly installed emergency temporary receiving brackets to prevent further collapse.

MEG completed the restoration of the Tohoku Shinkansen's Kakyoin Overpass, which had undergone a prominent lateral shift due to the Great East Japan Earthquake of March 11, 2011, in just a month and a half, in time for the Shinkansen's resumption of operations at the end of April. The earthquake also caused damage (buckling) in support pillars of the Shinkansen's RC viaduct near Morioka Station. MEG rapidly installed emergency temporary receiving brackets to prevent further collapse.

Restoration work to recover the Sixth Abugawa Bridge, which was damaged by heavy rains in Yamaguchi and Shimane

The JR Yamaguchi Line's Sixth Abugawa Bridge was swept away by the heavy rains in Yamaguchi and Shimane on July 28, 2013. While the reconstruction work would normally take two or more years, the entire company worked together as one to rapidly rebuild the bridge. Thanks to these efforts, the whole process, from beginning design to completing construction, took less than a year.



Abugawa Bridge

Contributions to the reconstruction of Kumamoto Castle, part of Japan's historical heritage, which was damaged by the Kumamoto Earthquake, and to the restoration of the First Shirakawa Bridge



First Shirakawa Bridge

The historical heritage of the Kumamoto Castle Iidamaru-Gokai-Yagura Turret was on the brink of collapse due to damage from the Kumamoto Earthquake of April 14, 2016. The Group's materials and machinery were used in the careful planning and construction of large-scale equipment installed to prevent further collapse as part of the emergency collapse prevention measures.

The First Shirakawa Bridge was also severely damaged by the earthquake. Because the bridge is a tourist attraction of the Minamiaso Railway, a new bridge was designed and fabricated to have the same visual appearance as the former bridge. We removed the damaged bridge and erected the new bridge using special construction methods that employed MEG's materials and equipment.



Collapse prevention equipment



Cable crane erection

Restoration of the Kagetsugawa Bridge, which was damaged by the heavy rain in northern Kyushu

From July 5 to 6, 2017, the heavy rain in northern Kyushu caused landslides that swept away the JR Kyudai Main Line's Kagetsugawa Bridge. Our design, fabrication, and construction teams worked together as one to meet the strong desire of the community for the rapid restoration of the bridge. Thanks to their efforts, they successfully carried out the startling plan of fully restoring all lines in just one year, contributing to the transportation infrastructure of the community and Kyushu as a whole.



The damage to the Kagetsugawa Bridge



Large block erection using a crawler crane

Restoration of the Hino Bridge (Tokyo), which was damaged by Typhoon Hagibis in 2019

Typhoon Hagibis struck the Kanto region on October 12, 2019. The typhoon caused the bridge pier of Hino Bridge to sink, making the bridge impassable. While the restoration work of the bridge would normally take at least two years, all of the departments involved worked closely together to complete design, fabrication, and erection in just six months, and the bridge was reopened for use.



Removal using a crawler crane



The Sources of MEG

For over a century, MEG has been supporting society's infrastructure.

MEG's firm determination and belief have been passed down through the times.



Eijiro Miyaji

Founder of MIYAJI ENGINEERING GROUP First President of MIYAJI IRON WORKS CO., LTD. (1908 to 1961)

Eijiro Miyaji began operations of MIYAJI IRON WORKS as a sole proprietorship in Minami-Futaba-cho, Honjo-ku, Tokyo. There, he began manufacturing bolts, iron doors, and similar products, and accepting orders for steel framework assembly. He gradually expanded the business, reorganizing it a limited partnership company in 1923 and a joint-stock corporation in 1938.



Takeo Miyaji

Second President of MIYAJI IRON WORKS CO., LTD. (1961 to 1983)

Takeo Miyaji led employees to build the foundation of the company as one of Japan's top bridge and steel frame manufacturers, rapidly responding to the expansion of social capital such as expressways, the Shinkansen, and skyscrapers by constructing large bridge steel frame plants.



Yukitaka Uemae

Third President of MIYAJI IRON WORKS CO., LTD. (1983 to 1989)

To restore the confidence that was lost as a result of the cornering of our stock, Yukitaka Uemae piloted the company's management strategy, such as relocating to the Chiba Works, and worked furiously to promote sales activities, direct technical development, and encourage production activities. Through these efforts, he was able to restore the company's image.



Jinichi Toyama

Fourth President of MIYAJI IRON WORKS CO., LTD. (1989 to 1995)

Believing that the company must work together as one in conducting its business, Jinichi Toyama improved and reinforced the company's regulations and systems. The company maintained its mission of contributing to the public interest, and tirelessly took on the challenges of technical innovation and quality improvement, driven by sincerity, passion, and creativity.



Hiroyuki Sawai

Fifth President of MIYAJI IRON WORKS CO., LTD. (1995 to 2003) First President of MIYAJI ENGINEERING GROUP, INC. (2003 to 2005)

Led by the belief that constantly taking on new challenges was vital to the sustained development of the company, Hiroyuki Sawai created the basis of our current business foundation by using his keen ideas to integrate the maintenance departments of MIYAJI IRON WORKS CO., LTD. and MIYAJI CONSTRUCTION & ENGINEERING CO., LTD., and to establish a holding company MEG.



Yasusuke Agata

Second President of MIYAJI ENGINEERING GROUP, INC. (2005 to 2011)

Yasusuke Agata used his exceptional foresight to predict dramatic reductions in public works budgets in the bridge business segment. He carried out a reorganization of the Company and a renewal of its production systems to enable the Group to emerge victorious when competing in terms of costs, while strengthening our business foundation.



Shigetoshi Aota

Fourth President of MIYAJI ENGINEERING GROUP, INC. (From 2013)

Shigetoshi Aota has been doing his utmost to restore MEC's sluggish business performance. Driven by his strong belief, he took the lead in bringing MMB into the Group. He has created synergy through this alliance, realizing MEG's dramatic growth.

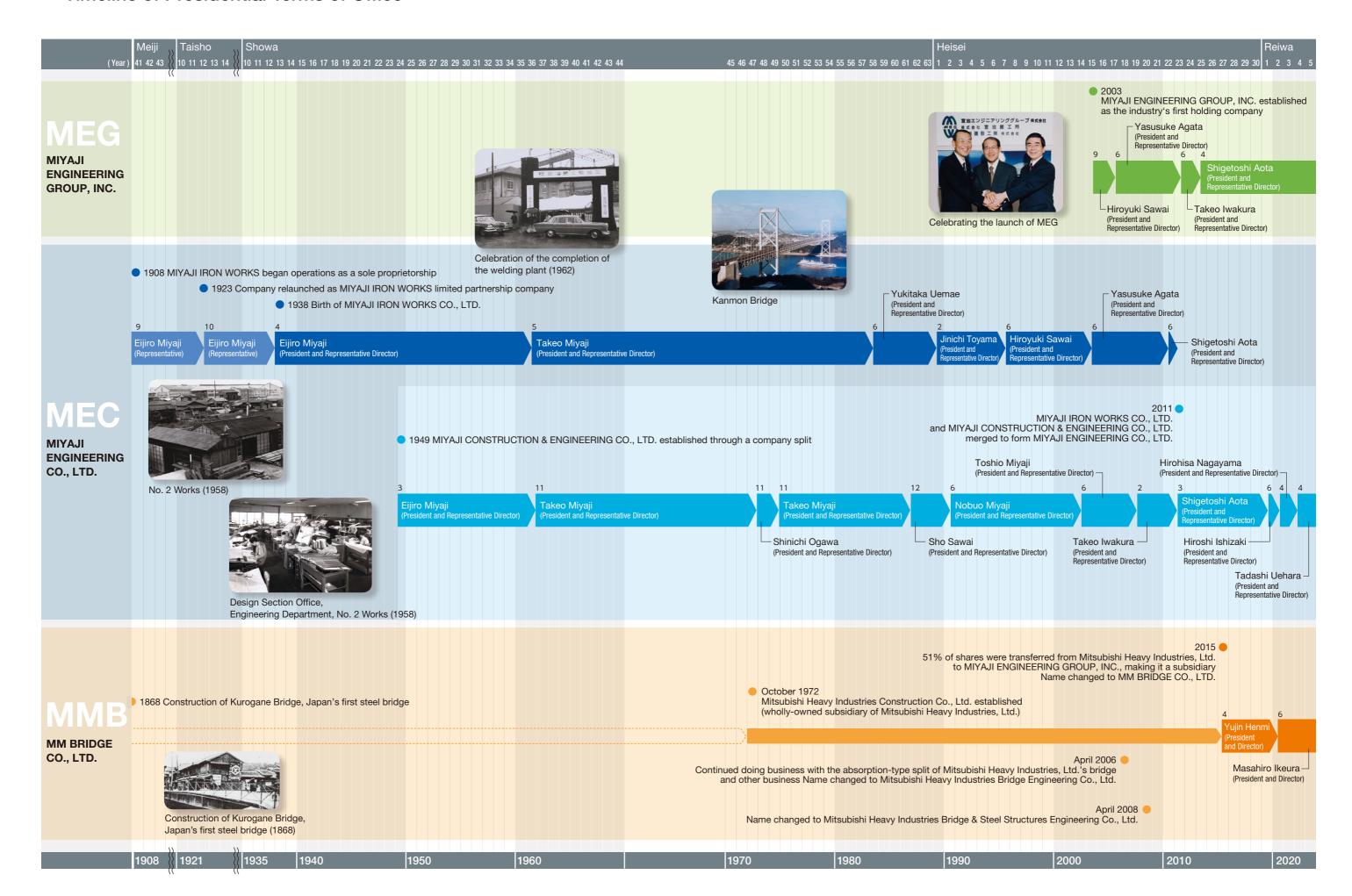


Takeo Iwakura

Third President of MIYAJI ENGINEERING GROUP, INC. (2011 to 2013)

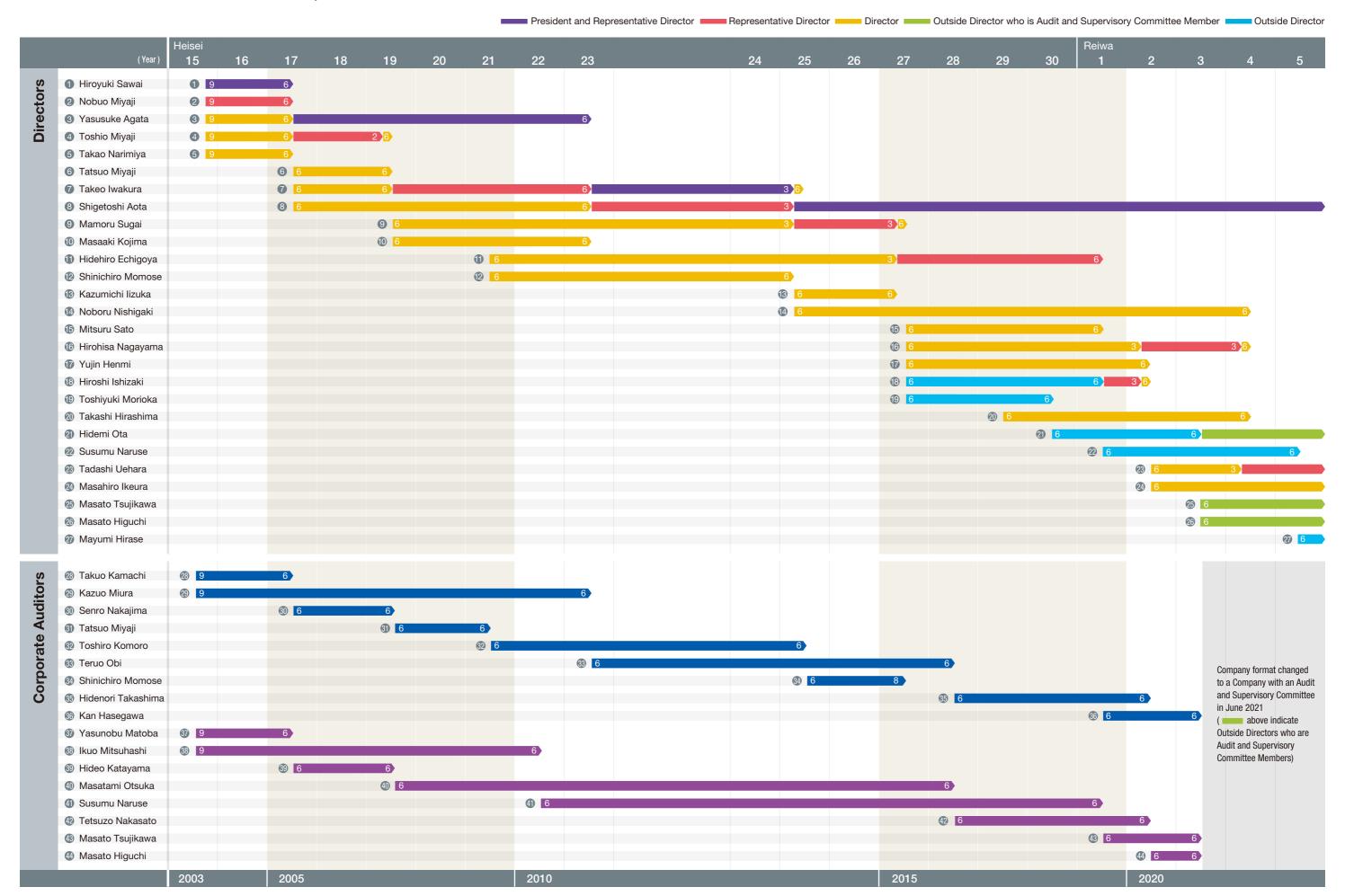
Takeo Iwakura transformed the mentalities of MEG's employees and decided on and implemented a merger between MIYAJI IRON WORKS CO., LTD. and MIYAJI CONSTRUCTION & ENGINEERING CO., LTD. to restore MIYAJI CONSTRUCTION & ENGINEERING CO., LTD.'s sluggish business performance, and enable it to survive in a highly competitive business environment. He paved the way to the recovery of MEC's business performance.

Timeline of Presidential Terms of Office

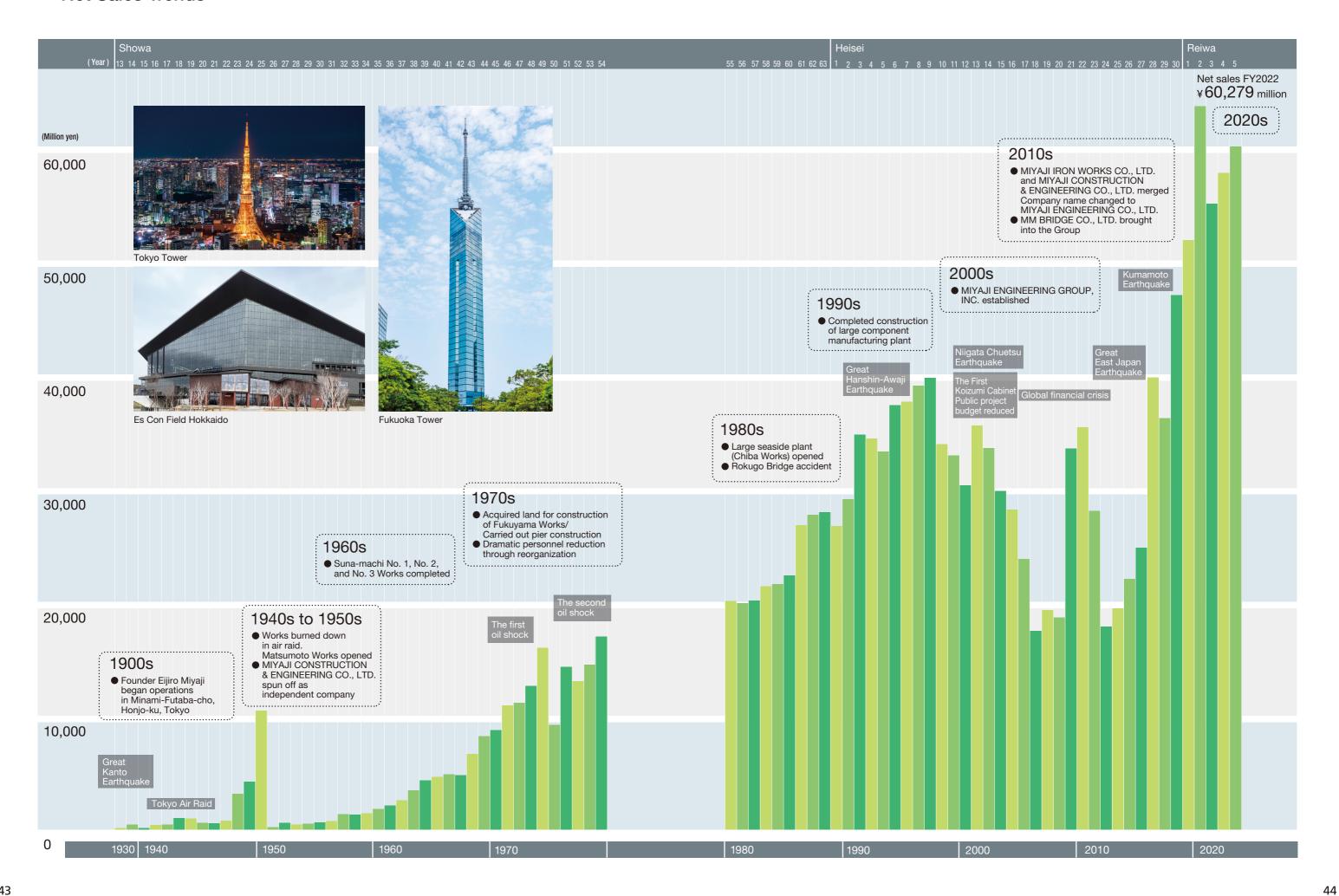


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MIYAJI ENGINEERING GROUP, INC. Timeline of Executive Terms of Office



Net Sales Trends



			Major Social Events
1908	MEC MIYAJI IRON WORKS CO., LTD.	MIYAJI IRON WORKS began operations Eijiro Miyaji opened sole proprietorship in Minami-Futaba-cho, Honjo-ku, Tokyo. Began manufacturing bolts, iron doors, and similar products, and accepting orders for steel framework assembly.	V
1919	MEC MIYAJI IRON WORKS CO., LTD.	Ojima Works opened in Ojima-machi, Minami-Katsushika, Tokyo. Bridge construction began from following year.	
1923	MEC MIYAJI IRON WORKS CO., LTD.	Minami-Futaba-cho Office and Ojima Works completely destroyed in fire. Company reorganized as MIYAJI IRON WORKS limited partnership company following the Great Kanto Earthquake with ¥50,000 in capital stock.	Great Kanto Earthquake
1931	MEC MIYAJI IRON WORKS CO., LTD.	Head Office building and plant constructed in Minami-Suna-machi, Joto-ku. Minami-Futaba-cho Office and Ojima Works closed.	
1938	MEC MIYAJI IRON WORKS CO., LTD.	Company reorganized as joint-stock corporation with ¥500,000 in capital stock.	
1942	MEC MIYAJI IRON WORKS CO., LTD.	Designated as a Navy-managed plant, took part in establishment of Tokyo Shipbuilding Works, Ltd.	
1945	MEC MYAJI IRON WORKS CO., LTD.	Matsumoto Works (Hata Works) opened Works burned down in Tokyo Air Raid. Part of plant operations relocated to Hata Village in Nagano on request from the Imperial Japanese Navy Technical Department, establishing the Hata Works (Matsumoto Works) (operations shut down completely in December 2014).	Tokyo Air Raid Atomic bombing of Hiroshima and Nagasaki End of World War II
1949	MEC MIYAJI CONSTRUCION & ENGINEERING CO., LTD.	MIYAJI CONSTRUCION & ENGINEERING spun off as independent company The civil construction department of MIYAJI IRON WORKS split off and MIYAJI CONSTRUCION & ENGINEERING CO., LTD. established in Chuo-ku, Tokyo.	
1952	MEC MIYAJI IRON WORKS CO., LTD.	Suna-machi No. 2 Works (temporary assembly) began operations. Works toured by Prince Takamatsu.	
1958	MEC MIYAJI IRON WORKS CO., LTD.	Marked 50th anniversary of company's foundation.	Tokyo Tower completed
1961	MEC MIYAJI IRON WORKS CO., LTD.	Hata Works renamed Matsumoto Works. Listed on the 2nd Section of the Tokyo Stock Exchange.	
1962	MEC MIYAJI IRON WORKS CO., LTD.	Listed on the 1st Section of Tokyo Stock Exchange. (Delisted in September 2003.)	
1963	MEC MIYAJI IRON WORKS CO., LTD.	Suna-machi No. 1 and No. 2 Works completed. Suna-machi No. 2 Works expanded and No. 3 Works completed.	Edobashi Junction opened
1964	MEC MIYAJI CONSTRUCION & ENGINEERING CO., LTD.	Listed on the 2nd Section of the Tokyo Stock Exchange. (Delisted in September 2003.)	Tokaido Shinkansen Tokyo to Shin-Osaka section opened
1972	MEC MYAJI IRON WORKS CO., LTD. MMB Mitsubishi Heavy Industries Construction Co., Ltd.	Acquired land for construction of new works in Fukuyama-shi, Hiroshima and began construction of a pier. (Later withdrew.) Mitsubishi Heavy Industries Construction Co., Ltd. established as a wholly-owned subsidiary of Mitsubishi Heavy Industries, Ltd.	The first oil shock
1973			Kanmon Bridge opened
1974	MEC MIYAJI IRON WORKS CO., LTD.	Ichikawa Works (temporary assembly and painting works) opened.	
1975	MEC MIYAJI IRON WORKS CO., LTD.	Dramatic personnel reduction through reorganization Head Office and Tokyo Works reorganized (eliminated 468 employees (224 people in clerical and technical positions, 244 operators)). No. 1 Works closed and entire No. 1 Works organization moved to Tokyo Works.	

			Major Social Events
1976		o. 3 Works closed, equipment added to Ichikawa Works, Fukuyama Works grounds eturned to Hiroshima Prefecture.	
1980	MEC MIYAJI IRON WORKS CO., LTD.	ll shares acquired by Seibi Group (Highest share price: ¥2,950).	
1982	MEC MIYAJI IRON WORKS CO., LTD.	hikawa Works closed.	
1983	MIYAJI IRON WORKS an	Torks relocated to Chiba Works (Ichihara-shi), a large seaside bridge plant, and operations started in full. okyo Works (Suna-machi) closed.	
1984	CO., LTD.	atsumoto Works given Grade S Steel Frame Production certification.	
1986			Ohnaruto Bridge opened
1988	MEC MYAJI IRON WORKS CO., LTD.	Tarked 80th anniversary of company's foundation.	Seto-Ohashi Bridges opened
1989		urchased shares of Seiwa Construction Co., Ltd. Currently MK ENGINEERING CO., LTD., a non-consolidated subsidiary)	
1990	MEC MIYAJI IRON WORKS CO., LTD.	stablished Himawari Co., Ltd. (currently MG Corporation Inc.).	
1991			Hiroshima new transportation system bridge girder drop Collapse of the economic bubble (1991 to 1993)
1993	MIEC Pr	arge (component manufacturing) plant completed. resident Toyama appointed Executive Director of the Japan Bridge Association une 1993 to June 1997).	
1995			Great Hanshin- Awaji Earthquake
1996	MEC MIYAJI IRON WORKS CO., LTD.	Tarked 50th anniversary of Matsumoto Works.	
1997			Aqua-Line Expressway opened
1998			Akashi-Kaikyo Bridge opened
1999	MEC MIYAJI IRON WORKS CO., LTD.	faintenance departments integrated.	Shimanami Expressway opened (Tatara Bridge opened)
2000	MEC MIYAJI IRON WORKS CO., LTD.	ead Office relocated to newly purchased building in Odenma-cho, Chuo-ku, Tokyo.	
2001			Public project budget reduced by the First Koizumi Cabinet.
2003	MEG MIYAJI ENGINEERING GROUP, INC.	IYAJI ENGINEERING GROUP, INC. established. ecame the first holding company in the industry, listed on the 1st Section of ee Tokyo Stock Exchange. order to respond to the sudden reduction in public sector investment, MIYAJI IRON ORKS CO., LTD. and MIYAJI CONSTRUCION & ENGINEERING CO., LTD. were merged.	

Data SectionHistory

			Major Social Events
2005	MEC MIYAJI IRON WORKS CO., LTD.	Company was prosecuted for steel bridge collusion by the Japan Fair Trade Commission, and later responded as directed.	
2006	MITSUDISH HEAVY INCLUSIVES Bridge Engineering Co., Ltd.	Continued doing business with the absorption-type split of Mitsubishi Heavy Industries, Ltd.'s bridge and coastal structure business. Name changed to Mitsubishi Heavy Industries Bridge Engineering Co., Ltd.	
2007	MEC MIYAJI IRON WORKS CO., LTD.	Sold Head Office building (Odenma-cho, Chuo-ku). (Land: 645 m², buildings: 5,732 m², sale amount: ¥3,400 million)	
2008	MIRSUDISHI Heavy Industries Bridge & Steel Structures Engineering Co., Ltd.	Name changed to Mitsubishi Heavy Industries Bridge & Steel Structures Engineering Co., Ltd.	Global financial crisis
2009	MIMB Missabah Heay Industries Bridge & Steel Structures Engineering Co., Ud.	Chiba Works constructed in Futtsu-shi, Chiba, and began temporary operation.	The Democratic Party of Japan administration "People, not concrete" policy of restrained public sector construction
2010	MEC MIYAJI IRON WORKS CO., LTD.	Closed Matsumoto Works, a steel frame production site, due to decline in construction demand resulting from the recession.	
2010	MEC MIYAJI CONSTRUCION & ENGINEERING CO., LTD.	Established MK WORKS CO., LTD. (currently a non-consolidated subsidiary).	
	MEG MIYAJI ENGINEERING GROUP, INC.	Acquired shares of Miyaji Technical Industry Co., Ltd. (currently non-consolidated subsidiary MG Corporation Inc.) and converted it into a wholly-owned subsidiary.	
2011	MEC MIYAJI ENGINEERING CO., LTD.	MIYAJI IRON WORKS CO., LTD. and MIYAJI CONSTRUCTION & ENGINEERING CO., LTD. merged. Company name changed to MIYAJI ENGINEERING CO., LTD. (currently a consolidated subsidiary).	Great East Japan Earthquake
2012			Tokyo Gate Bridge opened Tokyo Skytree completed
	MEG MIYAJI ENGINEERING GROUP, INC.	Acquired 51% of shares of Mitsubishi Heavy Industries Bridge & Steel Structures Engineering Co., Ltd. (currently MMB), turning it into a subsidiary.	
2015	MEC MIYAJI ENGINEERING CO., LTD.	Constructed MIYAJI ENGINEERING Matsumoto Power Plant in Matsumoto-shi, Nagano, and began power generation business.	
	MMB BRIDGE CO., LTD.	Name changed to MM BRIDGE CO., LTD. (currently a consolidated subsidiary).	
2016	MM BRIDGE CO., LTD.	Ichihara Works opened. Toyama Branch opened.	
2017	MEG MIYAJI ENGINEERING GROUP, INC.	Conducted share consolidation (10 to 1 consolidation).	
2018	MMB MM BRIDGE CO., LTD.	Nagasaki Branch opened.	
2021	MEG MIYAJI ENGINEERING GROUP, INC.	Company format changed to a Company with an Audit and Supervisory Committee.	
2022	MEG MIYAJI ENGINEERING GROUP, INC.	Transferred from Tokyo Stock Exchange 1st Section to Prime Market. Formulated Medium-Term Business Plan (FY2022 to FY2026).	Russian invasion of Ukraine
2023	MEG MIYAJI ENGINEERING GROUP, INC.	Timely disclosure of "Action to Implement Management that is Conscious of Cost of Capital and Stock Price"	

For MIYAJI ENGINEERING GROUP to continue sustainable growth, we believe that it is essential to make it a group in which every one of the employees in Group companies and partner companies thinks and acts autonomously.

Toward our sustainable future, we will take on the challenges of becoming a ¥100.0 billion company and creating a new business portfolio. As a company that thrives and grows along with its stakeholders, we are contributing to society through our pioneering efforts, driven by our pride and passion for our work. As a company responsible for safe and secure social infrastructure, we aim to become a group that plays a central role in the construction industry.

Committee for the Creation of a Commemorative Issue Celebrating the 115th Anniversary of Our Founding and the 20th Anniversary of Our Establishment MEG Group Planning and Administration Division, IR Office

General Manager Yutaka Setoi, Deputy Manager Terutaka Hiraoka

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