

# 2020 | SOCIAL RESPONSIBILITY REPORT

MCC, A PARTNER OF CHOICE



# ABOUT THIS REPORT

## Reporting Boundary

- ◆ Reporting Scope: The report covers Metallurgical Corporation of China Ltd. and its subsidiaries.
- ◆ Reporting Period: The report covers from January 1 to December 31, 2020, and includes additional information beyond the stated reporting period.
- ◆ Reporting Cycle: This report is the 12th annual social responsibility report issued by Metallurgical Corporation of China Ltd.

## Basis of Preparation

This report is mainly prepared in accordance with the Environmental, Social and Governance Reporting Guide issued by Stock Exchange of Hong Kong Limited (HKEX), and regarding the following guidelines:

- ◆ Guidelines of Shanghai Stock Exchange for Environmental Information Disclosure of Listed Companies issued by Shanghai Stock Exchange (SSE)
- ◆ GRI Sustainability Reporting Standards (GRI Standards) issued by the Global Sustainability Standards Board (GSSB)
- ◆ ISO 26000: Guidance on Social Responsibility (2010) (ISO 26000: 2010) issued by International Organization for Standards
- ◆ GB/T 36001-2015: Guidance on Social Responsibility Reporting (GB/T 36001-2015) by General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China and Standardization Administration of the People's Republic of China
- ◆ Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises (CASS4.0) issued by Research Center for Corporate Social Responsibility, Economics Division, China Academy of Social Sciences

## References

For better expression and readability, Metallurgical Corporation of China Ltd. is referred to as "MCC", "the Company" or "we" in this report, and its controlling shareholder – China Metallurgical Group Corporation – is referred to as "MCC Group".

## Data Sources

This report truly reflects the actual practices of economic, environmental, and social responsibilities. All data in this report are based on MCC's official documents and statistical reports, and the summary and statistics of social responsibility practices from its subsidiaries. The financial data are from MCC's 2020 financial statement, and other data sources are mainly from 2020 and partially from previous years. In this report, the monetary measurement unit is RMB unless specially noted.

## Access to This Report

This report is published in Simplified Chinese, Traditional Chinese, and English. In case of any discrepancy, the Simplified Chinese version shall prevail. This report is released in printed edition (with recycled paper) and PDF, and the latter can be downloaded from the website of MCC (<http://www.mcc.com.cn>).

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## MESSAGE FROM THE CHAIRMAN

This is the 12th Social Responsibility Report of Metallurgical Corporation of China Ltd. (MCC). We sincerely appreciate the community's long-term care and support to MCC!

The year 2020 is full of opportunities and risks. Facing the profound and complex changes in the domestic and international environment and the severe challenges of the pandemic era, MCC closely followed and fully implemented the important instructions of General Secretary Xi Jinping and the CPC Central Committee's decisions and arrangements. Under the guidance of "focusing on the main business of MCC and building a better MCC", MCC overcame obstacles and difficulties, and handed in a wonderful answer to the community in an extraordinary year.

**Staying true to the original aspirations, MCC actively fought against the pandemic, showing the essence of central state-owned enterprises (SOEs).** MCC Leaders and Party members stood in the front in extraordinary times, commanding calmly. An emergency "mobilization order" was issued as soon as the 29th of the December in the lunar year. On the second day of the lunar new year, a video conference call was urgently held for organizations stationed in Wuhan and overseas, which quickly entered the state of "wartime". On February 5, MCC deployed overseas pandemic prevention and control, and production and operation in advance, and put forward a declaration of victory that "We will win the battle against the pandemic eventually. We still have our lives and need to move on". This foresight pointed out the direction of system-wide pandemic prevention and control, production and operation. All MCC employees were united, stretching out their shoulders and raising their arms to bear the burden. All MCC pandemic prevention and control leading groups and offices cooperated with the local administration actively, strictly preventing the spread of the pandemic. 3,200 Party organizations and more than 42,000 Party members fought at the forefront as the main force. More than 4,600 people from 7 enterprises rushed to support the construction of 34 pandemic prevention and medical facilities. More than 2,000 medical staff from 6 transformed hospitals went back to the front line for treatment. Over 10,000 overseas MCC employees and 17,900 staff members from its cooperative units stood by. MCC did the best to stabilize the industry chain, unblock the supply chain, and effectively ensured that more than 3,500 projects

under construction at home and abroad have been working continuously. MCC fully promoted the implementation of a large number of domestic and foreign key projects, including the Universal Studios Beijing Theme Park, the YAMAMA CEMENT project in Saudi Arabia and 3.50 Mt/a Iron & Steel Project for PT. Dexin Steel Indonesia, demonstrating the responsibility of MCC as a central SOE.

**Going forward under pressure and bravely shouldering the important task of stable growth, MCC has been playing a key role in sustaining strong winds and waves.** In 2020, under the extremely severe external situation, MCC kept its goals unchanged and its business performance has risen against the trend, hitting record highs in succession, achieving the operating revenue of RMB 400.12 billion and a total profit of RMB 11.92 billion, giving full play to the role of central SOEs as a "stabilizer" and "ballast stone" in the national economy. MCC stuck to the strategic positioning of "being a national team for metallurgical construction, the main force in infrastructure construction, and the pacesetter of emerging industries, insisting on taking the path of high-

tech construction in the long term", and actively participated in the construction of the dual circulation economy. MCC undertook a number of international landmark projects such as Mandai Rainforest Park in Singapore and the New Phnom Penh Airport project in Cambodia and built a number of world-class standards projects such as the National Sliding Center Project of Beijing Winter Olympics, Baosteel Zhanjiang's No.3 Blast Furnace System Project, and HBIS Group Industrial Upgrading and HBIR Xuansteel's Production Capacity Transfer Project. The value of newly signed contracts exceeded RMB one trillion for the first time, reaching RMB 1019.72 billion, providing a strong guarantee for the successful conclusion of the 13th Five-Year Plan and the smooth start of the 14th Five-Year Plan.

**We give top priority to innovation, and fully stimulate the vitality of high-quality development.** In 2020, MCC continued to strengthen in-depth reforms, fully implement the Three-Year Action Plan for SOEs Reform, benchmarked the world-class management improvement, and promoted the "Double Hundred SOE Reform Campaign" and "Pilot Action for Technology SOEs". We vigorously integrated internal resources, promoted the adjustment of headquarters organization and functions, established MCC Eco-Environmental Protection Group Co., Ltd., continued to optimize the allocation of internal resources, and stimulated the vitality of endogenous growth of the organization. There are 26 state key laboratories and national-level science and technology R&D platforms, which is the first among SOEs, due to the full play to the leading role of scientific and technological achievements. The total number of effective patents has exceeded 33,000, and it is the only central SOE with two National Technical Standard Innovation Bases. We have truly realized the connotative growth driven by reforms and the development and progress led by innovation.

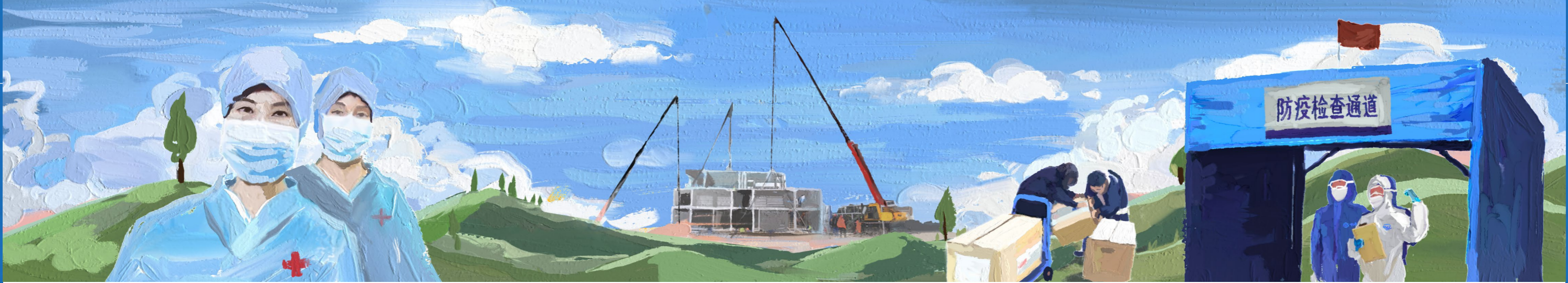
**We continue to prioritize green development and help open up new prospects in the construction of ecological civilization.** Facing the challenge of climate change and the commitment to achieve carbon neutrality by 2060, MCC has been guided by the development concept of "lucid waters and lush mountains are invaluable assets" and strengthened ecological protection as the obligation of an enterprise. We fulfilled safety and environmental protection rectification responsibilities, will continue to improve energy conservation and environmental protection management systems, focus on promoting green environmental protection operation mechanisms, vigorously build green projects, and actively deploy green environmental protection industries. MCC helps the ecological civilization construction through accountability mechanisms, operational guarantees, industrial development, and many other ways, protecting Beautiful China with practical actions.

**We adhere to the value of shared and win-win development to build a well-off society and a harmonious home.** In the face of high expectations from all walks of life, MCC continues to strengthen communication with the government and regulatory authorities, investors, customers, local communities, the public, the media, and other stakeholders, listening and responding in the form of roadshows, surveys, and other forms, and realizes value co-creation and sharing. To meet employees' expectations for long-term development, we take fairness and justice as the principle to create "positive motivation and happiness for all employees" atmosphere, and constantly improve employee satisfaction and corporate reputation. Our multi-pronged work of poverty alleviation through consumption, officials, projects, and donations has helped the country win the battle against poverty. We are committed to the front line of flood fighting and rescue, building a solid embankment for the life safety and property protection of the people, and giving back to the society with sincerity, and contribute to the decisive victory of a well-off society to fight against poverty.

The ambition is far-reaching. The new journey of building a modern socialist country and marching towards the second centenary goal has begun. "Focusing on MCC's main business and building a better MCC" has entered a new stage of high-quality development. Holding the dedicated spirit of "never delaying, never slacking", MCC employees will create a brighter future together with all stakeholders!

王文清





## FEATURE

## STAY TRUE TO THE ORIGINAL ASPIRATION AND UNITE AS ONE: CORPORATE RESPONSIBILITIES HIGHLIGHTS IN THE PANDEMIC PERIOD

MCC sent  
**550**  
managers and  
designers

Nearly  
**7,000**  
construction  
builders

Provided  
**2,290**  
equipments

Created more than  
**25,000** beds

Allocated a special  
fund of more than  
RMB  
**48** million

In 2020, in the face of the battle against The Coronavirus (COVID-19), MCC has strictly followed with General Secretary Xi Jinping's instructions and commands and played its role and responsibility as "the national team of metallurgical construction" and the "main force of infrastructure construction". MCC has immediately constructed emergency medical care facilities all over the country, and promptly built-up solid pandemic prevention and control system. All MCC subsidiaries and their employees have acted together to fight against COVID-19 in the front line, who purchased and donated medical supplies to places and countries with poor supplies. At the same time, MCC implemented pandemic prevention and control carefully and effectively, and resumed work and production properly in an orderly manner, to ensure that all domestic and foreign key engineering projects would be finished with high quality and on time. With all actions taken, we delivered the determination of performing the promise and strength of Chinese enterprises to the world.

### Not Afraid of Danger, MCC Provided Emergency Assistance to the Frontline of Battling the Pandemic

War is a "touchstone". At the critical moment of the fight against the pandemic, all MCC employees went all out to overcome the difficulties together, fully demonstrating the mission and responsibility of the central SOE to "withstand" at the critical moment. CFMCC, WISDRI, SBC, CTMCC, MCC17, WSGRI and other subsidiaries have rushed to assist to design and construction, when Huoshenshan Hospital, Leishenshan Hospital, Jinyintan Hospital, the makeshift hospitals, Leishan Hospital and the stationed pandemic prevention projects of our subsidiaries needed emergency assistance. With more than 4,600

employees working non-stop, these subsidiaries have accomplished the construction and transformation of 34 hospitals, creating conditions for the efficient treatment of infected patients. MCC sent a total of 550 managers and designers, nearly 7,000 construction builders, provided 2,290 equipment and created more than 25,000 beds. MCC Group Party Committee issued a proposal, and all levels of party organizations allocated a special fund of more than RMB 48 million.

### List of key emergency medical facility projects designed, supported or built by MCC

#### Chongqing

The back-up hospital renovation project of Banan People's Hospital of Chongqing for the pandemic

Three Gorges Makeshift Hospital in Wanzhou District of Chongqing  
Nanpeng Makeshift Hospital

#### Hubei

Leishan Hospital in Ezhou  
Huoshenshan Hospital in Wuhan  
Leishenshan Hospital in Wuhan  
Repair and renovation of 15 hospitals and quarantine facilities

Renovation of 11 makeshift hospitals

#### Guangdong

The phase II makeshift hospital project of The Third People's Hospital of Shenzhen

#### Liaoning

Construction of No.14 project of Anshan Health Center

#### Beijing

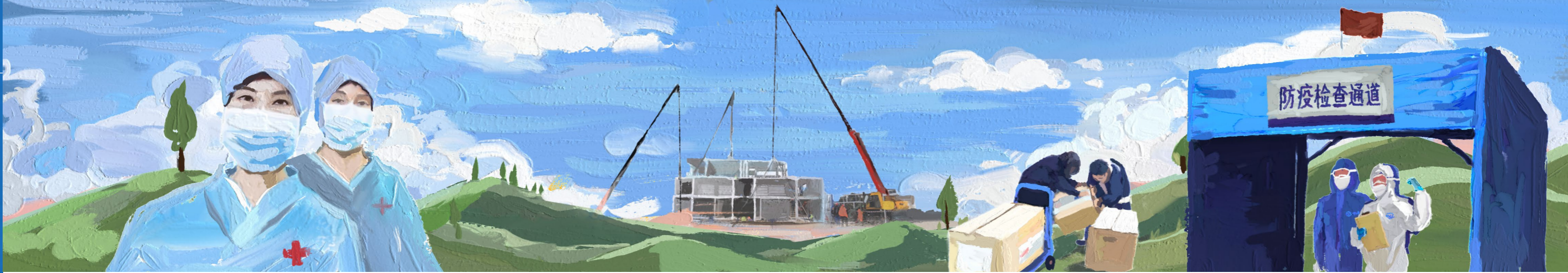
Xiaotangshan Hospital

#### Tianjin

Construction of quarantine facilities for close contacts of COVID-19 in Binhai New Area

#### Anhui

Quarantine facility of Baiqiao town in Zhengpu Port New Area in Ma'anshan city, Anhui province



## Sending Helps During Hardships, MCC Composed a Great Chapter

MCC had more than **3,200** party organizations

And more than **42,000** party members as the main force in the fight against the pandemic

It is the character and soul of MCC people to perform extraordinary duties and extraordinary efforts in extraordinary times. MCC had more than 3,200 party organizations and more than 42,000 party members as the main force in the fight against the pandemic, charging at the front line and fighting at the forefront. When medical supplies and medical staff were in short supply in the hard-hit areas, countless MCC people stepped forward. More than 2,000 outstanding medical workers from 6 MCC transformed hospitals went retrograde to support Wuhan, Panzhihua, Ma'anshan and other places. 20,000 employees of three Wuhan-based enterprises were fighting at the forefront of the fight against the pandemic; countless MCC volunteers were engaged in material procurement, transportation and voluntary services for pandemic prevention, and together with the people of the whole country, to help each other and overcome the difficulties together.

The raging fire makes real gold, and true love manifests in adversity. When the pandemic broke out in the country, MCC donated to hospitals, communities and related organizations 10,110 N95 masks, nearly 220,000 medical masks, 3,225 medical protective suits, more than 17,800 pairs of medical gloves, nearly 400 goggles, 5,000 bottles of disinfectants, 3,000 bottles of medical alcohol, and a lot of necessities such as nearly 900 boxes of instant noodles, mineral water, milk, ham sausages, pork, rice, oil, soaps, towels, cotton-padded clothes, etc. Party members of MCC donated RMB 4.68 million to areas with severe pandemics.



MCC donated to the world:



N95 masks  
**10,110**



Nearly  
**900,000**  
medical masks



Medical protective suits  
**3,225**



Nearly  
**400**  
goggles



Nearly  
**5,000**  
bottles of disinfectants



More than  
**70,800**  
pairs of medical gloves



More than  
**5,200**  
boxes of testing reagents



A lot of necessities including nearly  
**900**  
boxes of instant noodles

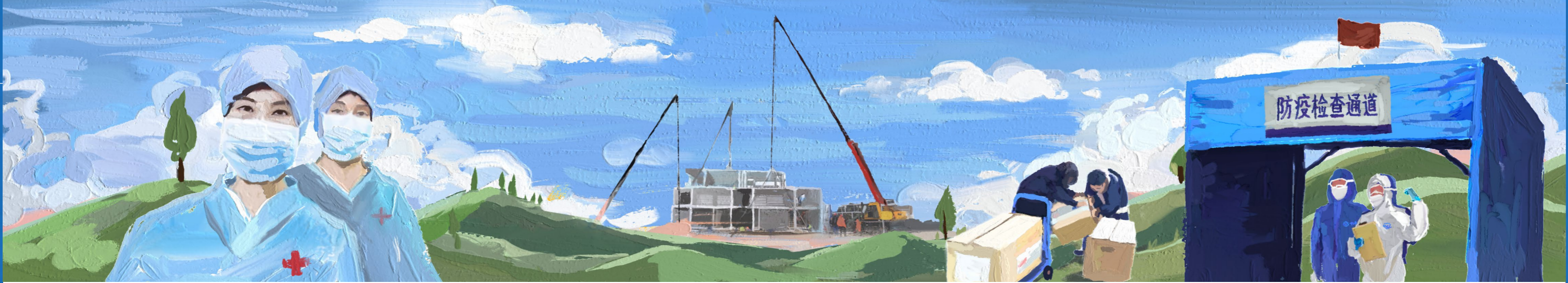


MCC Party member donated RMB  
**4.68**  
million to areas with severe pandemics



7 MCC subsidiaries donated RMB  
**4.4733**  
million

In the face of the severe situation of the rapid spread of the pandemic around the world, MCC gave full play to the role of central SOE, and actively carried out foreign donations on the basis of fully meeting the self-protection needs of employees, and assisted overseas enterprises and the governments of countries and regions where overseas projects were located to fight the pandemic. MCC donated medical and anti-pandemic materials to Sri Lanka, Pakistan, Afghanistan, Papua New Guinea and other countries. As of December 31, 2020, the total amount of donations from 7 MCC subsidiaries was approximately RMB 4.4733 million, including more than 681,500 masks, more than 53,000 pairs of gloves, and more than 5,200 boxes of testing reagents. The recipients included 7 national or regional governments and 42 partners in 29 countries and regions.



## Never Slacken off, Preventing Pandemic and Resuming Production Without Fail

"The pandemic will be overcome, and we must carry on. We must continue to climb and mountain and travel on our way". In the critical period of pandemic prevention and control in February 2020, MCC required all subsidiaries to strengthen their confidence, scientifically prevent and control, start construction in an orderly manner, and move forward firmly. MCC established a leading group for pandemic prevention and control at the group level and built a top-down organizational system covering enterprises at all levels, formulated various policies and measures for pandemic prevention and control, and carried out special emergency pandemic investigations 5 times in 2020, organized 31 special meetings on pandemic prevention and control, and counted 305 daily reports on pandemic information of MCC. Multiple video conferences were held with domestic and foreign enterprises to deploy works including the reserve of pandemic prevention materials, orderly resumption of work and production, overseas pandemic prevention and control, risk analysis, etc. The series of tasks are specifically deployed, and the responsibility is to guard the land, and to be responsible for the land.

MCC has followed the requirements of "providing targeted guidance and measures to different companies and industries", made endeavour to overcome difficulties, implemented pandemic prevention and control carefully and effectively, and resumed work and production properly in an orderly manner. With targeted measures for enterprises at different regions and levels, MCC has promoted comprehensive work resumption of enterprises and engineering projects in low-risk areas and implemented staggering work resumption of enterprises and engineering projects in medium-risk areas while ensuring that enterprises in high-risk areas gradually start work resumption only when the pandemic is under control. Coordinating the procurement of pandemic prevention materials, the Company distributed 607,200 masks to 17 subsidiaries. The Company has effectively solved practical problems such as shortage of protective materials, difficulty in returning to work, and insufficient labor for nearly one million construction troops in more than 3,500 projects under construction at home and abroad, ensuring the normal work of employees and the normal operation of different projects and subsidiaries.

In 2020, MCC carried out special emergency pandemic investigation for

**5** times

Organized

**31**

special meetings on pandemic prevention and control

Counted

**305**

daily reports on pandemic information

On one hand, MCC reasonably deployed the resources of the metallurgical construction echelon and worked hand in hand with major steel enterprises to promote major iron and steel projects to effectively perform contracts, including the Zhanjiang Iron and Steel Base, Liugang Fangcheng Port, HBIS Group Industrial Upgrading and HBIS Xuansteel's Production Capacity Transfer, Steel Project of Great Dong Hai Corporation and the Steelmaking Project of Shanxi Jincheng Steel Holding Group. On the other hand, MCC effectively guaranteed that priority was given to work resumption of projects about pandemic prevention and control, people's livelihood and other important issues, so as to ensure the safety, quality and on-time delivery of projects concerning people's livelihood. Work resumption has been comprehensively and orderly accelerated in major projects in Beijing-Tianjin-Hebei region, Xiong'an New District, Guangdong-Hong Kong-Macao Greater Bay Area, economic circle of southwestern China, Pan-northwest economic zone of China and other key areas.

While doing a good job in domestic pandemic prevention and control and resuming work and production, MCC has tried every means to promote the implementation of overseas key projects on time and on schedule, with quality and quantity. Five overseas mining enterprises, including Ramu Nico, MCCT, NCMCC, all overseas projects under construction and nearly 10,000 overseas MCC employees and 16,000 personnel of cooperative units overcame great difficulties and insisted on both production and operation and pandemic prevention and control. Overseas institutions and projects have comprehensively formulated prevention and control emergency plans, organized emergency drills, strengthened material support, and taken several measures to fully promote the resumption of work and production. As of the end of 2020, there was no confirmed case in any overseas projects of MCC. The key overseas projects have been fulfilled on schedule, and the resumption of work and pandemic prevention campaign have won a phased victory.



# ABOUT MCC



## Company Profile

MCC is an extra-large enterprise in China and has become the largest and strongest metallurgical construction contractor and metallurgical operation service provider in the world. In December 2008, MCC Group set up MCC, which was then successfully listed in Shanghai and Hong Kong in September 2009 (A-share Code: 601618, H-share Code: 01618).

MCC is the pioneer and main force in the steel industry of China. From 1948, when it participated in the construction of Ansteel, the cradle of the iron & steel industry in China, to the construction of WISCO, Baogang Group, TISCO, Pangang Group, and Baosteel, MCC has undertaken the planning, investigation, design, and construction of major production facilities of nearly all large and medium iron and steel enterprises in China, hence becoming the founder of the "iron and steel backbones" of China.

Adhering to the strategic positioning of "being the national team of metallurgical construction, the main force of infrastructure construction, and the frontrunner of emerging industries, and insisting on the road of high-tech and high-quality development in the long term", MCC takes the responsibility of leading China's metallurgical industry to be more intelligent, green, low-carbon and efficient with its advanced core technology, integrated advantages in the irreplaceable whole metallurgy industry chain, and the capacity of continuous innovation. Relying on its outstanding scientific research, exploration, design and construction capabilities, MCC speeds up transformation and upgrading, builds up the "four-beam and eight-pillar" business system, and forges itself into the leading force of national infrastructure construction. By taking innovation as the new engine and fuel for corporate development, MCC undertakes the important task to innovate and lead China's development of emerging industries, thus constantly upgrading itself with new "name card" for promoting sustainable development under the new normal.



### MCC Mission

Create value, return to the shareholders, benefit the staff and forge glories.



### Strategic Positioning

Bing the national team of metallurgical construction, the main force of infrastructure construction, and the frontrunner of emerging industries, and insisting on the road of high-tech and high-quality development in the long term.



### Core Values

Efficiency creates value, innovation drives development, and quality builds eternity.



### Corporate Vision

Focusing on MCC's main business and building a better MCC.



### MCC Spirit

Never delaying, never slacking



### MCC Social Responsibility

Developing innovatively and sustainably, building the future of the world together.

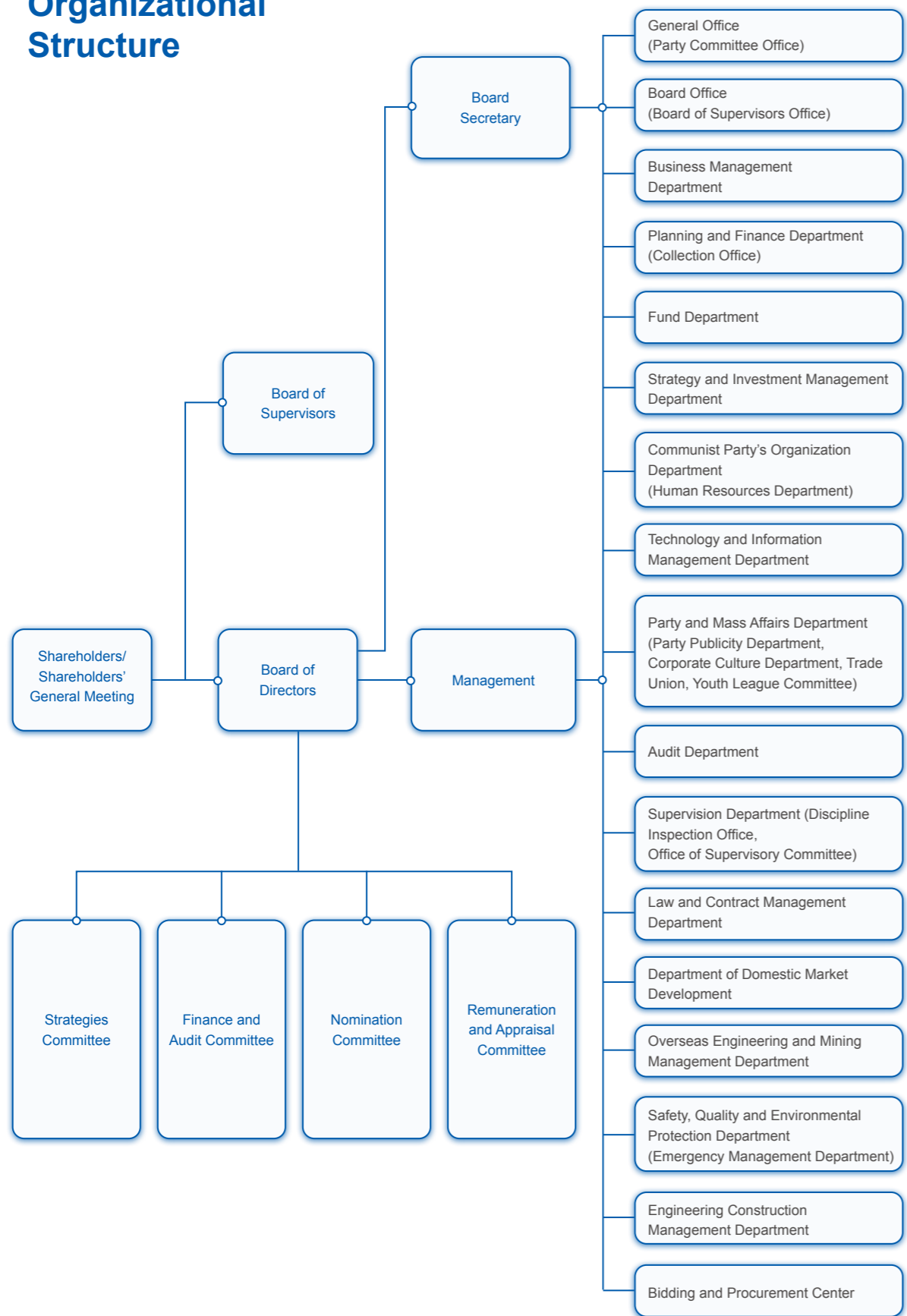


### MCC Motto

MCC, a partner of choice



# Organizational Structure



# Subsidiaries

Order	Name of subsidiaries (short form)
1	Central Research Institute of Building and Construction Co., Ltd. (CRIBC)
2	Beijing Metallurgical Equipment Research Design Institute Co., Ltd. (MCCE)
3	China ENFI Engineering Co., Ltd. (ENFI)
4	Capital Engineering & Research Incorporation Ltd. (CERI)
5	CISDI Group Co., Ltd. (CISDI)
6	WISDRI Engineering & Research Incorporation Limited (WISDRI)
7	Huatian Engineering & Technology Corporation, MCC (HT)
8	ACRE Coking And Refractory Engineering Consulting Corporation, MCC (ACRE)
9	Zhongye Changtian International Engineering Co., Ltd. (CIE)
10	Northern Engineering & Technology Corporation, MCC (NETC)
11	Shen Kan Engineering & Technology Corporation, MCC (SKET)
12	Wuhan Surveying-Geotechnical Research Institute Co., Ltd. of MCC (WSGRI)
13	China First Metallurgical Group Co.,Ltd. (CFMCC)
14	China Second Metallurgy Group Co., Ltd. (MCC 2)
15	China Third Metallurgical Group Corporation Ltd. (TMCC)
16	China MCC5 Group Corp.,Ltd. (MCC5)
17	MCC Tiangong Group Corp.,Ltd. (CTMCC)
18	China MCC17 Group Co.,Ltd. (MCC17)
19	China Metallurgical Construction Engineering Group Co., Ltd. (CMCC)
20	China 19th Metallurgical Corporation (MCC19)
21	China MCC20 Group Corp.,Ltd. (MCC20)
22	China MCC22 Group Corp.,Ltd. (MCC22)
23	Shanghai Baoye Group Corp.,Ltd. (SBC)
24	China Huaye Group Co.,Ltd. (NCMCC)
25	MCC Baosteel Technology Services Co., Ltd. (MCCBTS)
26	MCC Communication Construction Group Co., Ltd. (MCC-CC)
27	MCC Rail Transit Co., Ltd.

Order	Name of subsidiaries (short form)
28	MCC Inner Mongolia Construction and Investment Co., Ltd.
29	MCC Road & Bridge Construction Co., Ltd. (MRBC)
30	Metallurgical Corporation of Central China Ltd (Henan) Branch
31	MCC Utility Tunnel Science and Technology Development Co., Ltd. (UTMCC)
32	MCC Southern China Construction Investment Co., Ltd. (MCC Southern China)
33	MCC (Hainan) Investment Development Co., Ltd. (MCC Hainan)
34	MCC Urban Investment Holdings Company Ltd.
35	MCC (Yunnan) Engineering Investment Construction Co., Ltd. (MCCYN)
36	MCC Eco-Environmental Protection Group Co.,Ltd.
37	MCC Real Estate Group Co.,Ltd. (MCCZY)
38	MCC Tongsin Resources Ltd. (MCCT)
39	MCC Australia Holding Pty Ltd. (MCCH)
40	MCC-JJJ Mining Development Co., Ltd. (MCC-JJJ)
41	Ramu NiCo Management (MCC) Limited (Ramu Nico)
42	MCC Finance Corporation Ltd (MCCFC)
43	MCC Financial Leasing Co.,Ltd.
44	MCC International Incorporation Ltd. (MCCI)
45	MCC Overseas Ltd.
46	MCC Vietnam Engineering and Technology Company Limited
47	China MCC International Economic and Trade Co., Ltd.
48	MCC Holdings (Hong Kong) Corp., Ltd. (MCC HK & Mac)
49	MCC-SFRE Heavy Industry Equipment Co., Ltd. (MCC-SFRE)
50	MCC MINING(Western Australia) Pty. Ltd. (MCCM)
51	China No. 13 Metallurgical Construction Co., Ltd.
52	Tianjin United Huixin Investment Partnership (Limited Partnership)
53	Tianjin United Huitong Investment Partnership (Limited Partnership)
54	Tianjin Hongxin Investment Partnership (Limited Partnership)

\* The disclosure scope of its subsidiaries is consistent with the MCC 2020 Annual Report.

# Business Layout

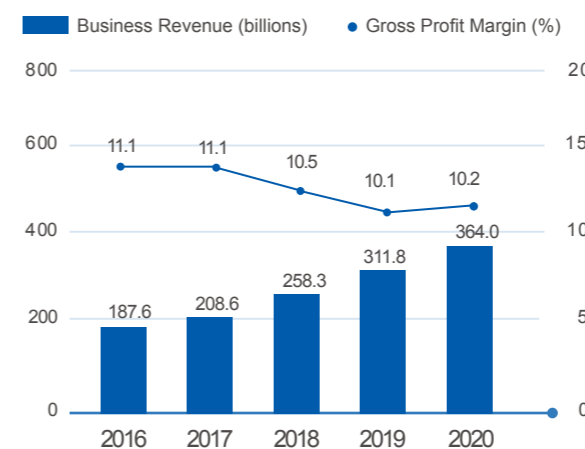
## Industrial Structure- Four Sectors and Eight Types of Business



## Four Business Sectors

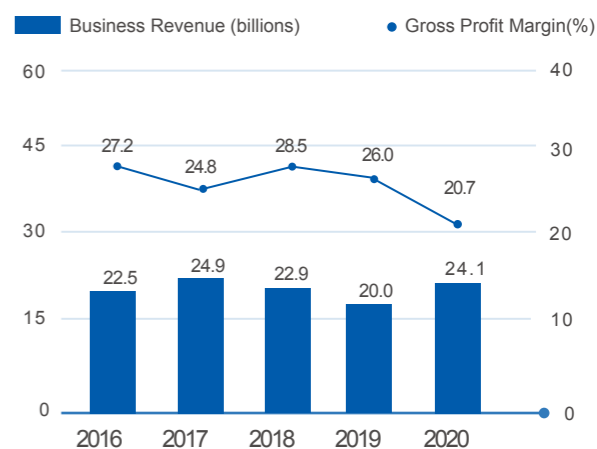
### Engineering Contracting

MCC is one of the largest engineering contractors in the world as well as the metallurgical engineering contractor with the longest operation history and strongest professional design, construction and service capacities in China. Relying on the excellent capabilities in research, survey, design, construction and service, MCC actively promotes its upgrading and transformation, and makes great achievements in the engineering contracting sector.



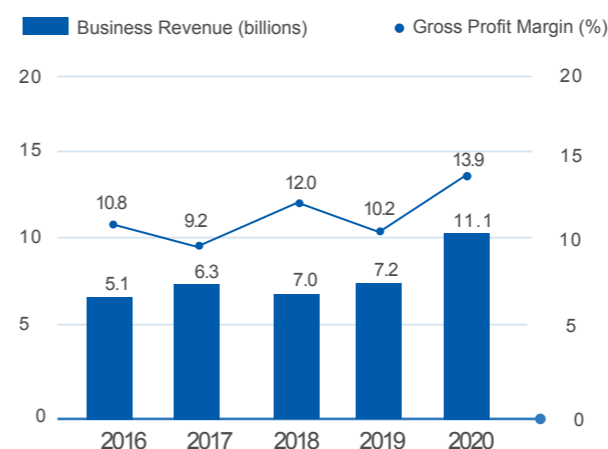
### Property Development

MCC is one of the first central SOEs with real estate being part of their principal business approved by the State-owned Assets Supervision and Administration Commission of the State Council. The property development brand of the Company – “MCC Real Estate” has already built a good reputation.



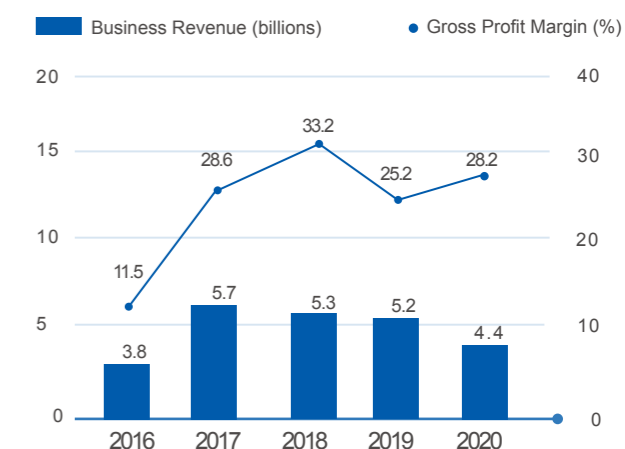
### Equipment Manufacturing

MCC is one of the large metallurgical equipment manufacturing enterprises in China that can manufacture core metallurgical equipment with its own independent intellectual property rights. In the meantime, the Company is also the largest steel structure manufacturer in China, which holds a leading position in the R&D, design, manufacturing, and installation of steel structure in China.



### Resources Development

In this sector, MCC is one of the large Chinese enterprises engaged in overseas resources development. It owns the mining right of many resources development projects, exploring iron ore, copper, nickel, cobalt, lead, zinc and other metal mineral resources. Besides, the Company is rated the world's Top 10 largest polysilicon production enterprises for several consecutive years, and it is an influential polysilicon production enterprise in the world.



## Honors of MCC

MCC was assessed as **A-level** (best level) of information disclosure by Shanghai Stock Exchange for 4 consecutive years

MCC won the "Golden Round Table-the Best Board of Directors" award for 2 consecutive years

MCC won the Golden Bauhinia Award for "The Most Responsible Listed Company" and "The Best IR Listed Company" for **9** consecutive times

MCC won the "Best Board" and "Best IR" awards for the 11th Tianma Prize

MCC was named the "Best IR Hong Kong Listed Company" by New Fortune

MCC won the "Special Contribution Awards for 20th Anniversaries" at the 20th China Business Top 100

MCC won the titles of "China Top **500** Enterprises Charity and Public Welfare"

**28** projects won the National Quality Engineering Award

MCC won **18** Metallurgical Science and Technology Awards by China Iron and Steel Association and the Chinese Society for Metals

MCC won **7** first places of Science and Technology Awards by China Nonferrous Metals Industry Association

MCC won **17** Science and Technology Awards in Construction by China Association of Construction Enterprise Management

MCC ranked **8<sup>th</sup>** in the ENR's 2020 Top 250 Global Contractors and ranked as Top **10** for 12 consecutive years

MCC won **1** Tien-yow Jeme Civil Engineering Prize; **19** prizes in total

MCC won **6** first places of China Construction Engineering BIM Competition

MCC won **7** Luban Prizes for China Construction Projects



## SUSTAINABLE MANAGEMENT

Following the social responsibility philosophy of "Developing innovatively and sustainably, building the future of the world together", MCC actively improves its social responsibility management system and incorporates environmental, social, and governance (ESG) risks into the risk management system. At the same time, we have been communicating with stakeholders proactively, identifying sustainable development issues that are closely related to the enterprise, and listening to the voices of all stakeholders to achieve sustainable development goals.

### ESG Governance

#### Governance structure

MCC has continuously improved the social responsibility organization system and institutional system to standardize the responsibilities and processes of social responsibility work and promote the CSR practices in-depth with scientific and effective social responsibility management. The Board of Directors attaches great importance to ESG-related work and discusses and approves major ESG-related matters, such as information disclosure of MCC Social Responsibility Report, and major project decisions related to quality, environmental protection, and safety risks. The Management actively implements projects' work on the board's request and regularly reports to the directors on the implementation situations.

The Board of Directors is the decision-making body and fully responsible for the Company's social responsibility work. The management leads the Company's CSR daily work. The Party and Mass Affairs Department is responsible for the overall coordination and daily management of social responsibility work. All branches and subsidiaries determine the designated management organization and assign social responsibility contact.

Indicator	2020
Frequency of Board of Directors Meeting	14
Motions considered by Board of Directors	93

#### Sustainable Development Approach

MCC adheres to the concept of sustainable development, guided by the UN 2030 Agenda for Sustainable Development, and is committed to working with all stakeholders to jointly promote environmental protection, industrial progress, social prosperity, and people's well-being while realizing the economic value of enterprises, contribute to the sustainable development of the country, and the achievement of the sustainable development goals of the United Nations.

# Stakeholder Communication

MCC attaches great importance to the requirements of stakeholders. During the reporting period, the Company re-evaluated the importance of stakeholders in the past based on the two dimensions, the impact of stakeholders on the Company and the impact affected by the Company. On this basis, MCC actively communicates with stakeholders regularly through multiple channels, listens to the requirements and expectations of stakeholders and responds promptly, fully communicates with stakeholders, and accepts their supervision.

Stakeholders	Expectations and Concerns	Communication and Responses
 Investors	<ul style="list-style-type: none"> <li>Return on investment</li> <li>Protection of rights and interests</li> <li>Knowing about the Company's operation</li> <li>Corporate risk management</li> </ul>	<ul style="list-style-type: none"> <li>Increasing profitability</li> <li>Shareholders meetings</li> <li>Roadshows</li> <li>Timely information disclosure</li> <li>Improving risk management system</li> </ul>
 Clients	<ul style="list-style-type: none"> <li>High-quality products</li> <li>Accomplishing project on time</li> <li>High-quality service</li> <li>Equal and mutually beneficial cooperation</li> </ul>	<ul style="list-style-type: none"> <li>Strengthening project quality and performance management</li> <li>Resuming work and production orderly</li> <li>Improving customer service mechanism</li> </ul>
 Employees	<ul style="list-style-type: none"> <li>Protection of legal rights and interests</li> <li>Career development platform</li> <li>Healthy and safe working environment</li> </ul>	<ul style="list-style-type: none"> <li>Regular workers' congress</li> <li>Smooth internal communication channels</li> <li>Improving staff training system</li> <li>Strict measures to prevent the pandemic</li> <li>Providing occupational protection and physical check</li> </ul>
 Suppliers	<ul style="list-style-type: none"> <li>Win-win cooperation</li> <li>Being open and fair and keeping promises</li> </ul>	<ul style="list-style-type: none"> <li>Management meeting</li> <li>Daily communication and regular meeting</li> <li>Open and fair procurement system and rules</li> <li>Multi-channel cooperation and research</li> </ul>
 The Government and Regulatory Institutions	<ul style="list-style-type: none"> <li>Implementation of government policies and regulatory rules</li> <li>Maintaining and increasing the value of state-owned assets</li> <li>Operating lawfully</li> <li>Creating jobs</li> <li>Protecting the environment</li> </ul>	<ul style="list-style-type: none"> <li>Responding to the government advocacy actively</li> <li>Receiving inspection and conducting rectification</li> <li>Complying with law, strengthening compliance management and strengthening anti-corruption</li> </ul>
 Competitors /Industry Associations	<ul style="list-style-type: none"> <li>Fair competition</li> <li>Promoting the industry development</li> </ul>	<ul style="list-style-type: none"> <li>Enhancing research and development capabilities</li> <li>Participating in industry development forums</li> <li>Promoting cooperation among industry, academia and research</li> </ul>
 Communities and the Public	<ul style="list-style-type: none"> <li>Protecting community environment</li> <li>Supporting public welfare</li> <li>Creating job opportunities in the community</li> <li>Boosting local economic development</li> </ul>	<ul style="list-style-type: none"> <li>Strengthening environmental protection</li> <li>Launching community charitable activities</li> <li>Participating in local community development projects</li> <li>Strengthen the localization management of overseas communities</li> </ul>
 Media	<ul style="list-style-type: none"> <li>Information disclosure and transparency</li> </ul>	<ul style="list-style-type: none"> <li>Enhancing information disclosure</li> </ul>
 Experts and Professionals	<ul style="list-style-type: none"> <li>Promoting the development of new industries</li> <li>Responding to climate change</li> </ul>	<ul style="list-style-type: none"> <li>Technology innovation</li> <li>Driving development of new industries</li> <li>Strengthening target-setting and energy management</li> </ul>

## Investors' Communication

Case

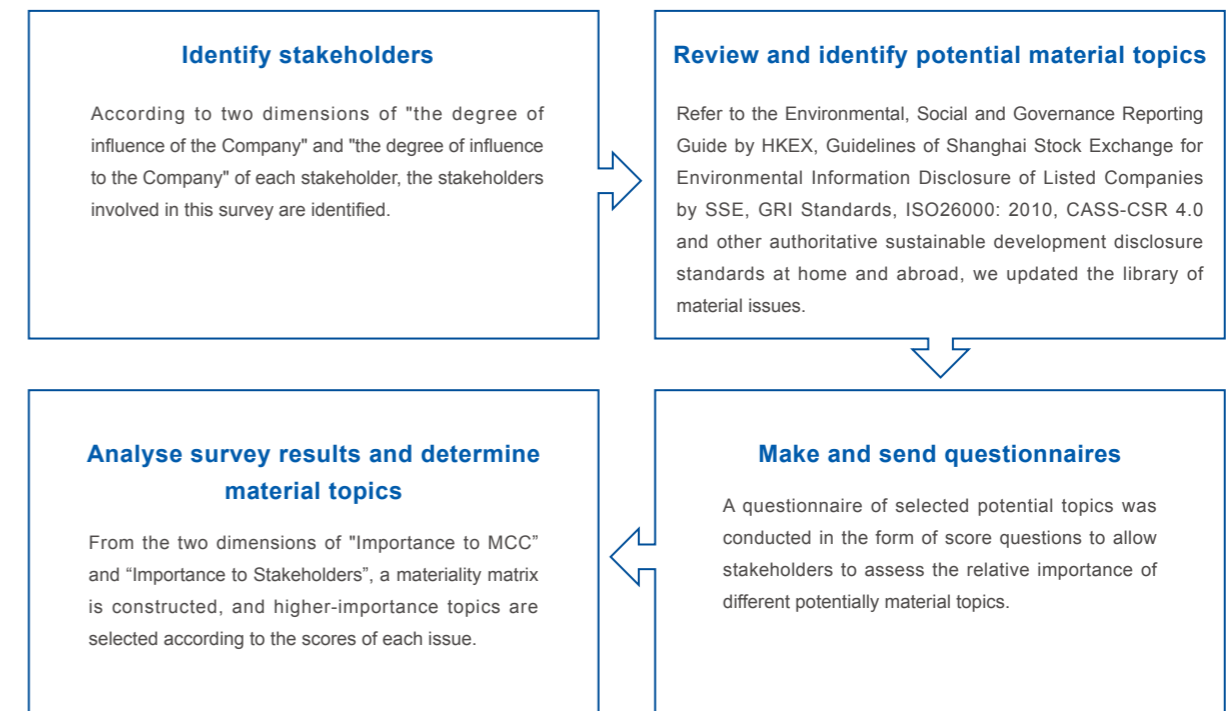
In the face of strict pandemic prevention and control, MCC has continued to maintain the effective investors' daily communication through diversified communication methods and took advantage of the initial results of pandemic prevention to carry out targeted positive/reverse roadshows and other investor relations special activities in the light of the Company's strategic development and market concerns. Among them, more than 100 investors from 60 national and international institutions, analysts, and financial media reporters attended the interim results meeting, which fully mobilized constant attention of the capital market to the construction industry and companies.

Indicator	2020
Frequency of receiving visits from domestic and foreign investors	25
Number of processing investors' emails	780
Frequency of investor communication meeting	12
Frequency of answering hotline for small and medium investors	190

## Identification of Material Topics

In order to understand the impact of different sustainable development issues on stakeholders and the Company, MCC conducted a survey and analysis on the materiality of sustainable development topics in 2020, collecting a total of 2,668 valid questionnaires covering 13 categories of internal and external stakeholders, fully understanding the concerns of all parties to the Company's social responsibility, re-analyzing and determining the content of material topics.

### Materiality assessment process



## Material topics

MCC believes that environmental, labor and operational responsibility are the most important parts of the Company's sustainable development process. Therefore, we categorized sustainability topics into these three aspects to analyse separately.

### Environment

- 1. Pollutant emissions and management
- 2. Resource utilization and efficiency
- 3. Greenhouse gas emissions and management
- 4. Ecological environment protection

- 5. Contingency plans for environmental accidents
- 6. Climate change action
- 7. Hazardous waste disposal and management
- 8. Clean energy development and utilization
- 9. Green technology research and development and application

### Labor

- 10. Employment and employee's rights
- 11. Employee's compensation and benefits
- 12. Occupational health and safety
- 13. Career development and training
- 14. Labor standards

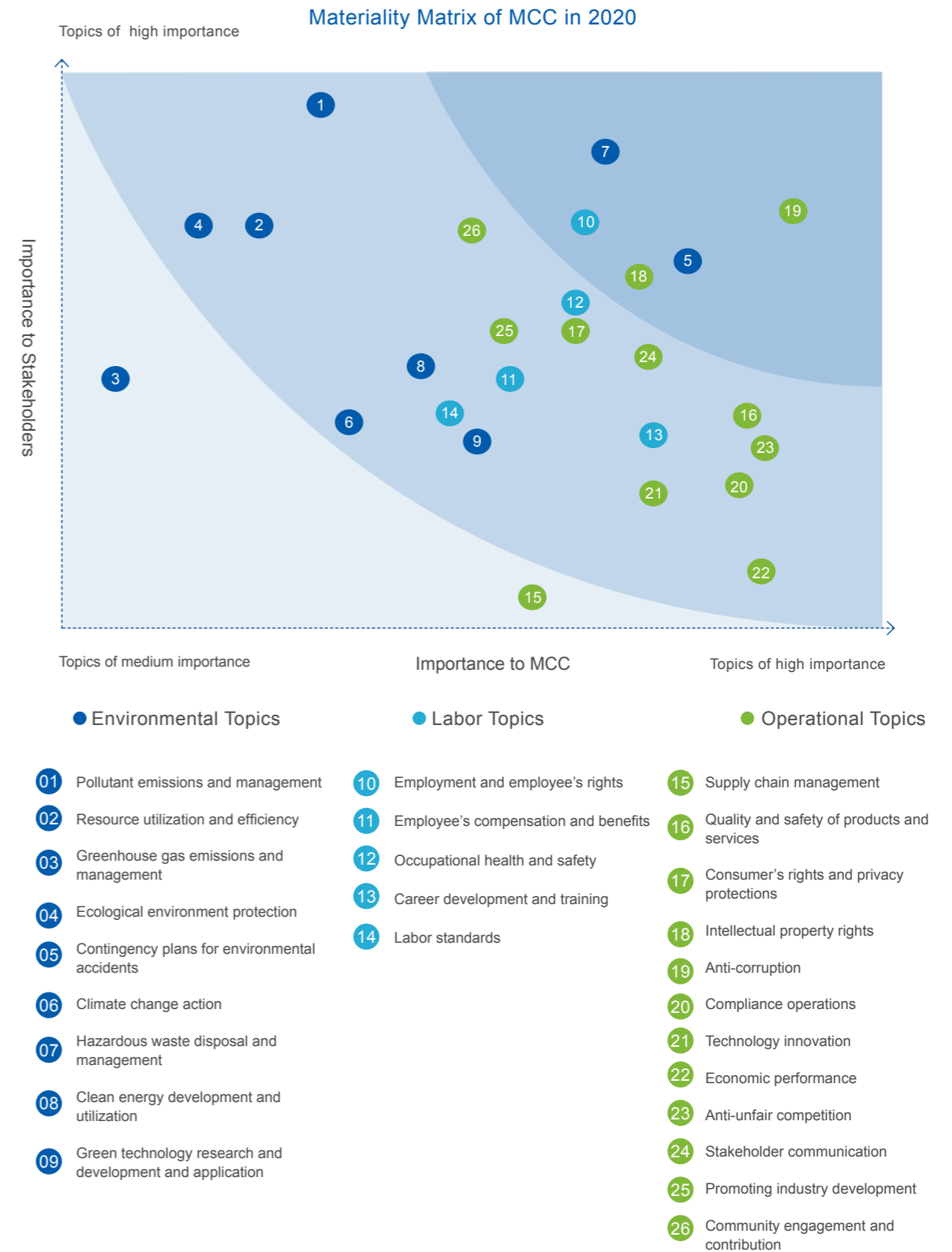
### Operation

- 15. Supply chain management
- 16. Quality and safety of products and services
- 17. Consumer's rights and privacy protections
- 18. Intellectual property rights
- 19. Anti-corruption
- 20. Compliance operations

- 21. Technology innovation
- 22. Economic performance
- 23. Anti-unfair competition
- 24. Stakeholder communication
- 25. Promoting industry development
- 26. Community engagement and contribution

## Materiality matrix

Based on the analysis and assessment of potential material topics, five topics of high importance were selected this year: Hazardous waste disposal and management, contingency plans for environmental accidents, employment and employee rights, anti-corruption, and intellectual property rights. This report will make key disclosures on highly important topics to respond to the concerns of stakeholders.



## Risk Management and Internal Supervision

### Risk management

MCC has established comprehensive risk management and internal control system and formulated a company-level and business-level system framework. Under this framework, through a risk control matrix, a corresponding relationship between key risk exposure points and control points is established, and control measures for risk identification, assessment, and response are implemented in various business processes within the Company, thereby realizing organic risk management and internal control integration, which has significantly improved corporate risk prevention and control capabilities and control methods. In addition, MCC has established a standardized, effective and holistic risk management system, and strengthened risk management and control through system construction such as MCC Risk Management System, MCC Group Risk Assessment Management Measures.

During the reporting period, based on changes in internal and external environment, as well as management practices such as business objectives and business characteristics, MCC sorted out and identified five risk areas including strategic risk, financial risk, market risk, operational risk, and legal risk. It also incorporated environmental protection, social responsibility, and corporate governance risks into risk management, involving many businesses in corporate management. During the reporting period, no systemic or disruptive risk events occurred.

### Internal supervision



MCC's internal control adopts a combination of self-evaluation and supervision. The internal control evaluation work is combined with the internal control audit work of accounting firms to continuously improve the level of internal control management. For subsidiaries, MCC has adopted the form of combining self-inspection of subsidiaries with on-site audits by MCC and its subsidiaries to continuously improve and optimize the internal control evaluation system. In terms of auditing and internal management, during the reporting period, MCC conducted a total of 1,267 audits, found management loopholes through the audits, and further implemented rectifications.



Within the Company, regular internal inspections to different departments and labor union's management system are organized every year, based on the standards of GB/T19001-2016, GB/T24001-2016, GB/T45001-2020, and relative laws and management documents. These inspections are conducted in methods such as document data reviewing, interviews and sampling.

## Compliance Management

### The rule of law

According to the requirements of the State-owned Assets Supervision and Administration Commission (SASAC), MCC implemented the rule of law work plan, focusing on improving the construction of the rule of law system in three aspects. The first is to promote the quality of the legal risk prevention, improving the legal standards, controlling the core risk, making risk management guidelines, warning red line and the code of conduct, to move legal risk prevention level forward. The second is to promote the effectiveness of legal case handling by improving the system, coordinating resources, focusing on supervision, classifying research, and by seizing the key points such as project settlement, evidence collection, property preservation, and priority compensation confirmation. The third is to consolidate the foundation for the construction of the compliance system, actively following up international compliance supervision cases and new development and sorting out potential risks such as legal disputes and overseas sanctions in key overseas regions.

### Law Popularization Education

In 2020, MCC promoted its employees' legal awareness and literacy through various forms of law popularization activities, and effectively helped companies prevent legal risks:

Case



MCC's "Entering the Civil Code Series Lectures" activity

- Carried out more than **10** training sessions on the rule of law, covering more than **18,000** person-times, and focused on improving the ability of legal consultants to perform their duties.
- Organized the "Entering the Civil Code Series Lectures" activity, and carried out special lectures on judicial enforcement, with more than **1,100** participants.
- Carried out special training and seminars on contract performance risks, educated the frontline employees by case studies.
- Edited the MCC Environmental Protection Compliance Quick Check Manual and distributed it to each subsidiary.

## Information security

MCC attaches great importance to information security and customer privacy protection. In the Contract Management System of MCC Group and MCC, it is clearly stipulated that if the Company's trade secrets and other confidential matters are involved in the contract negotiation, the competent department of contract business shall require the contracting party to sign a confidentiality agreement before the negotiation. When the relevant personnel of the Company knew the trade secret of the other party in the negotiation process, they should keep it confidential to avoid the legal risk of infringement.

## Anti-corruption

MCC complies with the Supervision Law of the People's Republic of China, The Regulations on Disciplinary Actions of the Communist Party of China, The Accountability Regulations of the Communist Party of China, The Regulations on the Supervision and Discipline of the Disciplinary Inspection Organs of the Communist Party of China, and the Administrative Sanctions Law of Public Officials of the People's Republic of China and other laws and regulations. We have zero-tolerance for corruption, fraud, and other related behaviors. MCC builds an integrated system to promote the anti-corruption system and mechanisms through system construction and institutional mechanism reforms.

In terms of system construction, MCC has formulated a series of documents including the Provisions on the Clean Practice of Leaders of MCC Group and MCC, and Management Measures for the Prevention and Control of Integrity Risks of MCC Group, and implement the anti-corruption requirements in the Regulations of MCC Group and MCC on the Supervision of Bidding and Tendering. By advancing the "supervision" mechanism, organizing financial auditing, personnel, bidding and purchasing, investment management and other departments are responsible to report integrity risk information on a quarterly basis, forming a supervisory linkage pattern of information sharing, problem discussing and achievements sharing.

For the anti-corruption education, MCC organized the special study of regulations with the theme of "Respect, Ethics, and Style" in the Anti-Corruption and Integrity Publicity and Education Month during the reporting period. A total of 2,302 anti-corruption training sessions were organized for board members and employees at all levels, with 116,391 participants in total. Through multi-form educational activities, employees were educated to build a solid ideological and moral defence line against corruption and degeneration.



MCC Party Clean Work Style Building and Anti-Corruption Work Conference

**2,302**

anti-corruption training sessions were organized for board members and employees at all levels

**116,391**

participants in total



## Petition and whistle-blowing system

MCC arranges specific personnel to handle petition and whistle-blowing. The contact information such as phone number, e-mail, and mailing address is publicized on the Company website. MCC requires relevant personnel to strictly comply with the work discipline, keep the work secrets and must not leak the whistle-blowers' personal information. In the process of tracking the threads, the whistle-blowers' information should be kept confidential.



## Report confidentiality system

MCC issued the Opinions on the Implementation of the Regulations for Discipline Inspection and Supervision Organs on Handling Reports and Accusations, which puts forward strict confidentiality requirements. First, the name (unit name), work unit, address and other relevant information of the report and accuser and the contents of the accusations must be kept strictly confidential. Second, they shall not transfer or inform the organization or person accused of reporting any information about the accusing materials or the accuser. Third, the acceptance of accusations or the verification work shall be carried out under the condition that the identity of the accuser shall not be disclosed. Fourth, in the case of reporting meritorious persons and involving the disclosure of their names, units and other personal information, consent shall be obtained from them.

# 1. NEW PATTERN: FOCUSING ON HIGH-QUALITY DEVELOPMENT

In the closing year of the "13th Five-Year Plan", MCC has entered a new stage of high-quality development in an all-around way. Faced with the development structure where the domestic and international circulation is mutually promoted, MCC insists on the main responsibility to achieve the top metallurgical construction national team. On the other hand, MCC strives to create differentiated competitiveness of infrastructure and emerging industries to achieve new advantages.

• Focusing on Main Business to Be Stronger and Bigger

• Developing Steadily in Diversified Business

• Upholding the Dual Circulation Economy

\*Baosteel Zhanjiang's No.3 Blast Furnace System Project



# Focusing on Main Business to Be Stronger and Bigger

Sticking to MCC's strategic position of being the national team of metallurgy construction, MCC always stands at the international level of the high-end metallurgical industry. With the world-class core technology, consistent innovation capacity, and irreplaceable integration advantages of the whole metallurgical industry chain, MCC takes the responsibility of leading China's metallurgical industry to be more intelligent, green, low-carbon, and efficient.

## Baosteel Zhanjiang's No.3 Blast Furnace System Project

Case

The Baosteel Zhanjiang's No.3 Blast Furnace System Project was undertaken by MCC5, MCC17, MCC20 and SBC, and is the key project of Guangdong Province. MCC undertook the overall engineering design, main unit engineering design, and partial equipment supply. Combined with the latest requirements of intelligent manufacturing and green manufacturing, the project adopted new ultra-low emission standards to help Zhanjiang Iron and Steel build the smart and green steel plant which is the most advanced, efficient and competitive.



## HBIS Group Industrial Upgrading and HBIR Xuansteel's Production Capacity Transfer Project

Case

The HBIS Group Industrial Upgrading and HBIR Xuansteel's Production Capacity Transfer Project were designed by CERI. And ACRE, CERI, SBC, TMCC, and MCC20 were responsible for the coking, ironmaking, steelmaking, continuous casting, and steel rolling units respectively. Aiming to build a new generation of "green, intelligent, branded" steel plant, MCC supported HBIS Group in building the first coastal iron and steel base equipped with world-class technologies and equipment as well as energy saving and environmental protection capacity.



## Guangxi Liugang Fangcheng Port Relocation Project

Case

The Guangxi Liugang Fangcheng Port Relocation Project is located in Fengcheng Port, Guangxi Zhuang Autonomous Region. CIE, CISDI, WISDRI, and CERI were responsible for sintering, ironmaking and steelmaking units and continuous casting and hot rolling production line respectively. This project is a demonstration project for the country to further promote the steel coastal strategy and lead the second entrepreneurship of Guangxi Iron and Steel. It is of great significance to promote the economic development of the Beibu Gulf region and the Belt & Road Initiative.



## Renovation Project of Circular Cooler of No.4 Sintering Plant of TISCO

Case

The Renovation Project of Circular Cooler of No.4 Sintering Plant of TISCO contracted by NETC, has the world's largest actual ventilation area after the renovation. The project was successfully put into operation in 2020, marking the maturity of the sixth-generation multifunctional and high-efficiency sintering ring cooler technology independently developed by NETC. The transformation has not only improved the on-site operating environment, but also provided TISCO with good equipment conditions for energy saving, consumption reduction, and efficient operation.



## Developing Steadily in Diversified Business

MCC is committed to be the main force of the country's infrastructure construction, and constantly expanding new paths of the development of emerging industries, to build strong competitiveness on an open platform.

### Main force of national infrastructure construction

As the country's main force of infrastructure construction, MCC is closely focusing on the coordinated development of the Beijing-Tianjin-Hebei region, the construction of the Xiong'an New District, the Guangdong-Hong Kong-Macao Greater Bay Area, and the regional integrated development of the Yangtze River Delta. We give our full play to our advantages to contribute to the rapid development of national infrastructure and national economy through housing construction, transportation and municipal infrastructure and mid- and high-end real estate and other infrastructure construction business areas.

### National Sliding Center Project of Beijing Winter Olympics

Case

The National Sliding Center Project of Beijing Winter Olympics in 2022 was undertaken by SBC. The project has a construction area of 16.64 hectares, including the main track, training track, refrigeration system, fire protection engineering, tunnels, culverts, etc., and ecological restoration projects. The project is one of the 12 competition venues in China's first Winter Olympics. The snowmobile sleigh track is also the first in China and the 17th snowmobile track in the world. The project team has developed nine core technologies, filling many technical gaps in China.



### Jinwan Civic Art Center Project

Case

Jinwan Civic Art Center Project was undertaken by MCC Urban Investment Holding Company Limited. The project is the legacy of the internationally renowned architect Zaha Hadid. It is also a landmark building in Zhuhai, with a total construction area of 99,582 square meters. The building units mainly include the grand theater, science museum, multi-function hall, art exhibition hall, and commercial supporting facilities. After completion, it will become the most important and cultural center in Zhuhai Jinwan District.



### Yanjiang Road and Embankment Environment Renovation Project in Fankou of Ezhou

Case

The Yanjiang Road and Embankment Environment Renovation Project in Fankou of Ezhou was undertaken by CFMCC. It is a demonstration project of practicing General Secretary Xi Jinping's concept of "Yangtze River Protection". The project includes roads and bridges, housing construction, river beach improvement, garden landscape, and water system management. The project construction used intelligent construction sites, BIM (Building Information Modeling), green construction, and sponge transformation technologies to create the Binjiang River riverside ecological landscape zone and the first water botanical garden and natural fish migration channel in Yangtze River.



## Yunnan Mangshi to Lianghe Highway Project

The Yunnan Mangshi to Lianghe Highway Project constructed by MCC-CC is located in Dehong Prefecture, Yunnan Province and is an important section of the Yunnan Provincial Road Network Planning (2016-2030). The total length of the main line of the project is 62.39 kilometers, and the total length of the Wengleng branch line is 6.148 kilometers. There are 7 interchanges across the line, including 2 extra-large bridges, 63 bridges, 2 extra-long tunnels, and 6 middle tunnels. The completion of the project is of great significance to improving the service level of the main highway network in the prefecture, strengthening the construction of border defence, promoting the formation of the western Yunnan tourist road, and accelerating the economic and social development of Dehong.



## Nanjing Shengshi Binjiang Project, Jinxiu Longwan Project

In the face of the impact of the pandemic and market pressure, the Nanjing Shengshi Binjiang Project and the Jinxiu Longwan Project of MCCZY have completed the 2020 targets with quality and quantity, and provided customers with an ideal habitat. The two projects have managed pandemic prevention and resumption of production at the same time. By optimizing team management and coordinating resource allocation, these projects have become the first batch of local resumption and production projects and completed the project acceptance and delivery tasks on schedule.



## Frontrunner of emerging industries

MCC continues to explore new models and new paths for the economic growth of emerging industries and strives to achieve breakthroughs in market segments such as the health industry and theme parks, energy conservation and environmental protection, pipe gallery, prefabricated construction, smart city, and sponge city. MCC aims to form a multi-wheel drive of technology, capital, and business model innovation, and leverages strength to become the industry leader in market segments.

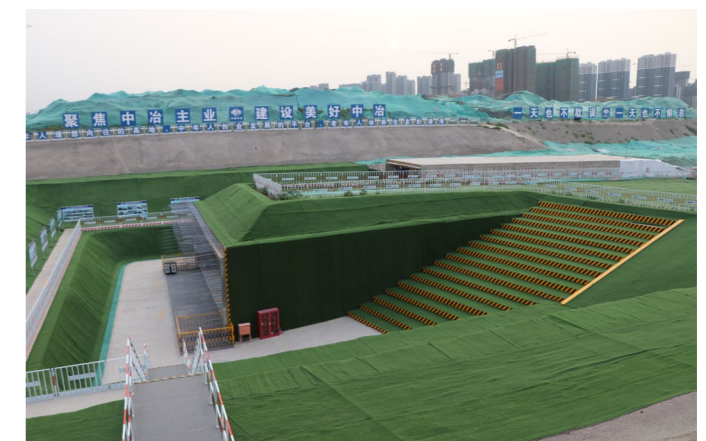
## Universal Studios Beijing Theme Park

In the Universal Studios Beijing Theme Park, its bid section 5 was undertaken by SBC, with a construction area of 21,186 square meters, mainly including a number of large-scale entertainment facilities, restaurants, shops, and other logistical supporting buildings. Its bid section 6 was undertaken by CRIBC with a construction area of 33,502 square meters, including large-scale indoor ride facilities, theatres, open-air performance stages, theme shops, restaurants, regional washrooms, etc. The project was completed at the end of 2020 and is the world's largest, smartest, and most high-end global theme park.



## The Project of Comprehensive Road Network System and Pipe Gallery in the Central Business District, East Zone of Handan City

The Project of Comprehensive Road Network System and Pipe Gallery in the Central Business District, East Zone of Handan City was undertaken by NCMCC. The project integrates tunnels, pipe galleries, and surface roads. After completion, it will become a window for Handan's foreign exchanges and image display, as well as a place for industry agglomeration and value creation. It is of far-reaching significance to the future layout and development of Handan City.



### Systematic Reclaimed Water Treatment Project for Weihai Botong Co., Ltd.

CASE

Systematic Reclaimed Water Treatment Project for Weihai Botong Co., Ltd was contracted by HT. This project is a key project in Weihai City in 2020. The wastewater discharged from the sewage treatment plant is used as raw water. The combined process of high-efficiency precipitation + two-stage filtration + double-membrane method is adopted. The daily processing scale of the plant can reach 30,000 tons and the daily water production is 20,000 tons. The project has opened up a new environmentally friendly water-saving model for the local area and has a long-term impact on the promotion of local sustainable development and water recycling.



### Jinyuan Prefabricated Residential Project in Gengyang

CASE

The Jinyuan Prefabricated Residential Project in Gengyang is the first fabricated + finely decorated residential community in Tangshan City. In December 2020, it won the Guangsha Prize, the highest honor in the real estate industry. The project adopted the concrete prefabricated housing and steel structure prefabricated housing technology independently developed by MCC22. All horizontal components such as floor slabs and stairs are prefabricated to create the new product that represents the development direction of China's real estate.



### Rainbow Swing in the Cloud Project

CASE

The first domestic rainbow swing independently developed, designed, manufacture, and installed by MCCE is located on the edge of a 700-meter-high cliff in the Longgang Scenic Spot in Yunyang, Chongqing. It is suspended by a 100-meter-high rainbow-painted arched swing combined with the 108-meter-high lifting tower. On July 23, 2020, its first day of business, the swing was listed in the Guinness Book of World Records as "Tallest Swing Frame".



## Upholding the Dual Circulation Economy

Facing the changeable market situation, MCC responds to the country's call to accelerate the construction of the dual circulation economy.

### Domestic market

#### Market development strategy

In the current economic downturn, MCC has given full play to its large domestic market advantages, adding impetus to country's economic development and driving the recovery of the world economy by prospering the domestic economy and smoothing the domestic cycle. Following the market development principle of "grazing sheep where there is grass, and casting nets where there are fishes", we focus on strengthening the layout in hotspots, especially on the five hotspots including Beijing-Tianjin-Hebei, East China, South China, Central China, and Sichuan-Chongqing. In order to promote the implementation of a number of major projects, MCC has organized regional market promotion meetings in the local area. In 2020, the Company's marketing in the above five regions has reached RMB 475.4 billion, achieving remarkable results and greatly increasing market brand influence.

## Customer visit and strategic cooperation

MCC continued to adhere to the concept of "maintaining old customers and winning new customers", and visited Shandong, Gansu, Guangdong, Xi'an, Lanzhou, Qingdao and other provinces and municipalities. We participated and attended more than 50 market promotion, government-enterprise mutual visits and project docking activities, which cultivated and consolidated the cooperative relationship with key customers. At the same time, MCC actively cooperated in the government-enterprise mutual visits and strategic cooperation between China Minmetals Corporation and China Resources, China Merchants, Jilin Provincial Government and other units. MCC also signed 4 strategic cooperation agreements with Baoding City, Handan City, Gansu Public Transport Construction Group, Hangzhou Xiaoshan District and other local governments. The contents of the agreements covered all areas of urban construction.

Participated in more than

**50**

market promotion, government-enterprise mutual visits and project docking activities

Signed **4** strategic cooperation agreements

### Baoding Urban Village Reconstruction ABO (Authorize-Build-Operate) Project

Case

The Baoding Urban Village Reconstruction ABO Project was the largest people's livelihood project since MCC 2 and Baoding signed a strategic cooperation framework agreement, involving 5,857 households in 13 natural villages. The construction mainly included land acquisition, demolition and resettlement compensation services involved in the reconstruction of urban villages; the construction of resettlement houses; infrastructure construction (including smart parking, advertising space, and charging pile construction); public service facilities construction, etc. The project has improved the living environment of residents in Baoding.



## Customer complaints handling

MCC forward customer complaints to the project construction management department for matters related to the progress of the project performance process, the schedule of the project performance process, the subcontractor, and the wages of migrant workers. The Engineering Construction Management Department organizes investigations on relevant subsidiaries to clarify the extent, nature, impact, reasons and solutions. Then, it organizes the customer's response letter based on the feedback materials of the subsidiaries, and reports it to the Company's leadership for review, and then send back to the customer. It also supervises the subsidiaries continue to rectify and improve. Finally, a closed-loop system of complaints and supervision is formed, and the main responsibilities of the subsidiaries involved in the matter are to strive for the greatest satisfaction of the customers.

In the property projects of MCCZY, the types of customer complaints involve eight aspects: housing management, equipment management, safety management, environmental management, comprehensive services, household disputes, real estate-related categories and other categories. The levels of complaints include general complaints and major complaints. After receiving the complaint, each branch shall complete the handling of the customer complaint within 48 hours and fill in the Customer Complaint Handling Record Form. According to statistics, there is no major complaints in 2020, and all customer complaints received have been handled.

Each branch shall complete the handling of the customer complaint within **48** hours

## Number of customer complaints and satisfaction in 2020

Year	Customer satisfaction rate	Number of major customer complaints	Complaint handling closure rate
2019	81.6%	0	100%
2020	83.3%	0	100%

\*The scope of this data is the annual customer satisfaction and the number of complaints of MCCZY.

## Overseas market

Facing the global spread of the pandemic, MCC followed the national "The Belt & Road" Initiative, concentrated strength and resources on countries with controllable pandemic, strengthened localization, and achieved true grounding and regional development. As of December 31, 2020, there were 386 overseas projects under construction, covering 57 countries and regions, and a total of 279 overseas projects under construction in 25 countries along the "The Belt & Road" Initiative.

**386**

overseas projects under construction

Covering **57**

countries and regions

### 3.50 Mt/a Iron & Steel Project for PT. Dexin Steel Indonesia

Case

The 3.50 Mt/a Iron & Steel Project for PT. Dexin Steel Indonesia is a successful practice of WISDRI as the "national team" of metallurgical construction to build an environmentally friendly, high-efficiency and energy-saving modern steel production base along the "The Belt & Road" Initiative. WISDRI provided full-process and full-life cycle services for the project, covering early-stage high-end consulting, overall design, and EPC (Engineering Procurement Construction) delivery of ironmaking, steelmaking, continuous casting, hot rolling, power plants, coal storage yards, and plant-wide public facilities.



## YAMAMA CEMENT Project in Riyadh, Saudi Arabia

Case

The YAMAMA CEMENT Project undertaken by MCC5 is located 80 kilometers east of the Saudi capital Riyadh. It is currently the world's largest modern cement production line. The project is a new construction project to improve the environmental pollution problem in the Saudi capital, and has received great attention from the Saudi government. The construction content is mainly to build two cement plant production lines with a daily output of 10,000 tons of clinker. The construction scope includes civil construction, steel structure production and installation, mechanical and electrical equipment and pipeline installation, refractory construction, thermal insulation construction, factory roads, and supporting facilities etc.



## Johor Bahru Stadium Project in Malaysia

Case

The Sultan Ibrahim Stadium in Rajin, Malaysia is the first general contracted stadium contracted by SBC, which is implemented by MCCI. The project not only opened a new starting point for the construction of large overseas venues, but also was the first large-scale public civil building undertaken by SBC in Malaysia. The project is located at the northern end of Johor Bahru, Malaysia. The main body is a reinforced concrete frame structure with a steel truss outer profile. The total construction area is 69,073.4 square meters. It can accommodate 35,000 people to watch the game. It is an intercontinental football stadium that meets FIFA standards.



## Municipal Solid Waste Incineration Power Plant (4,000t/d) in Hanoi

Case

CFMCC and China Tianying Co., Ltd. signed a general contract for the Municipal Solid Waste Incineration Power Plant (4,000t/d) in Hanoi, Vietnam. The project is located in the Nanshan Waste Comprehensive Treatment Center in Shuoshan District, Hanoi City, Vietnam, with a total daily processing capacity of 4,000 tons of municipal solid waste and a land area of 173,936 square meters which is approximately 260.9 acres. After the project is completed, it will become the largest waste incineration power plant in Vietnam, and its single-unit project will rank second in the world. The project will effectively improve the environmental sanitation of Hanoi, Vietnam, and set a benchmark for the green and sustainable development of the city.



MCC implements a localization strategy and actively integrates into the local area. In terms of employment, the Company recruits localized employees and requires that the localization rate should be higher than 50%. At the same time, MCC strengthens the training of localized employees and promotes cooperation with local enterprises to make full use of localized personnel, equipment and technology. In addition, we attach great importance to respecting, understanding and learning local culture, combining Chinese concepts with international concepts. As of December 31, 2020, the total number of overseas employees was 9,456, of which 6,199 were local employees. Among overseas employees, localized employees accounted for 65.56%.

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Including  
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employees

Localized employees  
accounted for  
**65.56%**

## 2. NEW ENERGY: INNOVATION SPARKS VITALITY

Innovation occupies a core position in our country's modernization construction, and it is also an inevitable choice for enterprises to respond to the competitive landscape and grasp the opportunities of industrial change. MMC insists on driving development with scientific and technological innovation, promoting win-win through open cooperation, achieving self-innovation, and evolution through mechanism innovation. By leading China's metallurgical construction to a higher level through comprehensive and multi-level innovation, MCC will accelerate its progress towards the high end of the value chain and build its high-level competitive advantage.

- Sticking to Technological Innovation
- Establishing Platform for Openness and Win-win Cooperation
- Deepening Reform and Mechanism Innovation

# Sticking to Technological Innovation

Facing the impact of the global pandemic on the iron and steel industry, especially the new round of industrial competition opportunities led by green development and intelligent manufacturing, MCC aims at the commanding heights of future technological development, and strives to strengthen scientific research and national scientific research in the key field, and development platforms construction on the road of high-tech and high-quality development. In 2020, MCC vigorously promoted scientific and technological innovation, carried out long-term incentives for science and technology enterprises, established a talent development fund and a risk-sharing mechanism, and fully stimulated the enthusiasm of scientific and technological innovation. The annual R&D investment is RMB 12.37 billion, with a year-on-year increase of 19.3%.

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with a year-on-year increase of **19.3%**

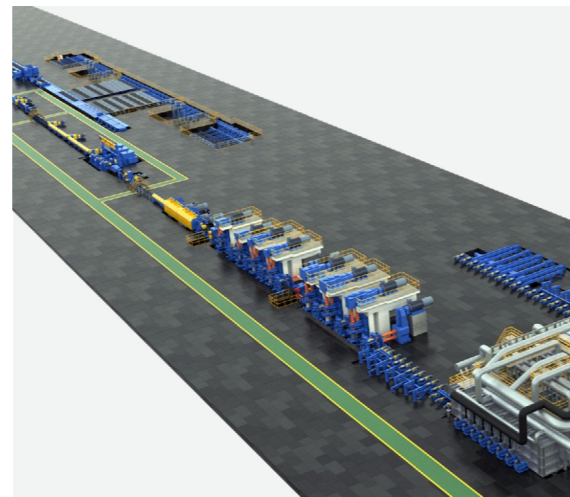
## Overcoming key technologies

Going green is necessary for sustainable development. Facing the status quo of steel and metallurgy industry with huge energy consumption and pollution, MCC delved into key innovative technologies and has achieved progress with green steel as the core of its development.

### Flexible 45 m/s High-speed Bar Technology

Case

The Flexible 45m/s High-speed Bar Technology developed by CERI has opened up a complete set of technical links from process technology, core equipment, control technology innovation to market transformation. This technology has filled the domestic technological gap, providing valuable experience to achieve resource and environmentally friendly oriented high-quality development. The research has applied for 27 patents, 3 software copyrights, and published 1 monograph. Appraised by the Chinese Society of Metals, the technological achievement has reached the domestic leading and international advanced level and won the first place of the Metallurgical Science and Technology Award.



## Scientific and technological honors

During the reporting period, MCC continued to promote its subsidiaries to carry out the key layout of the National Science and Technology Award, strengthen industry-university-research cooperation, and cultivate advantageous award-winning projects. The Company's scientific and technological cultivation has achieved fruitful results in many awards. Among them, MCC:

Won **18** Metallurgical Science and Technology Awards from China Iron and Steel Association

3 first places  
6 second places

Won Science and Technology Award by China Nonferrous Metals Industry Association

7 first places  
6 second places

Won **17** Science and Technology Awards in Construction by China Association of Construction Enterprise Management

4 first places  
13 second places

Won China Construction Engineering BIM Competition

6 first places  
5 second places  
10 third places

## Research and Application of Key Technologies for Improving Service Efficiency of Prestressed Structures

Case

Led by the CRIBC, in conjunction with Southeast University and other units, this project has taken the lead in systematically in-depth research on key problems such as time-varying prestressing effect analysis, real-time effect evaluation, and high-stress force flow reconstruction, forming a breakthrough with a series of inventions as the core. The innovation results have achieved a significant improvement in the service efficiency of the prestressed structure. The results of the project passed the review of the second place of the 2020 National Technology Invention Award, and accumulated 25 authorized invention patents, 5 software copyrights, edited 4 industry standards, and published 86 papers (SCI Scientific Citation Index/EI Engineering Index 45), 3 monographs. The pre-stressed structure service efficiency improvement technology established by the project has broken through a number of technical bottlenecks and guaranteed structural safety. The results have been applied to more than a thousand actual projects and achieved significant economic benefits.

## Information construction and security

During the reporting period, MCC strengthened the R&D and application of emerging technologies, including cloud computing, big data, Internet of Things, mobilization, and intelligent technology. And MCC promoted the Company's high-quality development of intelligence and informatization through BIM, smart construction sites, and smart construction promotion and application. At the same time, the Company also actively organized its subsidiaries to participate in the collection of national smart enterprise construction innovative practice cases. Four subsidiaries of MCC including CERI, WISDRI, ENFI, and SBC won the Best Practice Case Award.

### SBC Management and Control Information Platform Project

Case

SBC applied information technology to all stages of project planning, construction, survey, design, manufacturing, construction, operation and maintenance, and built a project management and control information platform based on advanced information technologies such as big data, mobile communications, internet, and BIM to achieve a unified engineering management platform. The research results have been widely used in more than 1,000 industry-representative projects such as the most complex Shanghai Disney's Tomorrowland Park, and the Nanjing GE World, the largest super high-rise building in Asia. The project team has published more than 40 papers, applied for more than 30 invention patents, obtained 13 computer software copyrights, won more than 200 BIM competitions, and compiled 7 corporate BIM standards.



MCC strictly abides by the Cybersecurity Law of the People's Republic of China and the Decision of the Standing Committee of the National People's Congress on Strengthening Information Protection on Networks and ensures the information security of enterprises and customers through a series of practices such as technology upgrades, supervisions, early warnings, and authority settings.

MCC regularly conducts vulnerability scans on network security systems and equipment, timely rectifies and reinforces problems, retests to ensure the security and stability of the information use environment. At the same time, MCC sets up firewalls, WAF (Web Application Firewall), IDS (Intrusion Detection System), IPS (Intrusion Prevention System), and other network security equipment at the network exit to resist external network attacks. An automated network monitoring and early warning platform is deployed to monitor the network status in real-time and deal with abnormal operations. In addition, MCC strictly sets the authority of data operations personnel and implements real-time monitoring and post-auditing of data operations through behavior control, operation logs, and other means to prevent unauthorized operations or illegal use of customer information.

## Establishing Platform for Openness and Win-win Cooperation

MCC has stimulated innovation vitality with an open attitude. It has continuously improved its service level by strengthening the construction of science and technology platforms. At the same time, it has achieved integration and complementary advantages through cooperation between universities and enterprises.

### Strengthening the construction of platforms

MCC has continuously strengthened the construction of a scientific and technological innovation platform system to help subsidiaries improve platform service levels and capabilities. MCC guided HT and other companies to declare national technological innovation demonstration enterprises. During the reporting period, HT has been officially approved by the Ministry of Industry and Information Technology as a national technological innovation demonstration enterprise. At the same time, the Sub-center of the National Enterprise Technology Center based on China City Environment Protection Engineering Limited Company (CCEPC) was approved for construction.

#### Enterprise Technology Center of CCEPC

Case

CCEPC is funded by seven shareholders including WISDRI. Taking the Enterprise Technology Center as the starting point, CCEPC has increased cooperation with enterprises, scientific research institutes, universities, and colleges, undertook more than 10 major national and local scientific research projects. CCEPC achieved more than 20 major scientific and technological achievements, won 1 National Scientific and Technological Progress Award, 19 provincial and ministerial awards, 5 municipal science and technology awards, obtained more than 350 patents, participated in the compilation of more than 10 national and industry standards. It was recognized by the National Development and Reform Commission (NDRC) in December 2020 as the Sub-center of the National Enterprise Technology Center.

Achieved more than **20** major scientific and technological achievements

Obtained more than **350** patents

## Promoting win-win cooperation

MCC actively exerts the role of corporate entities in technological innovation, actively cooperates with universities, enterprises, research institutions and other units, taking the lead in the formation of innovation consortia. During the reporting period, MCC:

- Organized subsidiaries such as CRIBC, ENFI, CISDI to jointly apply for National key R&D Programs of China with units including National Institute of Metrology, China Metallurgical Testing and Certification Co., Ltd., Jiangsu Yonggang Group Co., Ltd., China National Accreditation Service for Conformity Assessment, China National Institute of Standardization, Tsinghua University, Beijing Insights Value Technology Co., Ltd., Beijing Leshi Alliance Technology Co., Ltd., and Nanjing Chengzhen Information Technology Co., Ltd. And these projects have obtained approval.
- Organized CRIBC, CISDI to jointly apply for the National Scientific and Technological Progress Awards with units including Beijing University of Science and Technology, Chongqing University, Harbin Institute of Technology, China Academy of Building Research, Zhejiang University, Central South University, Beijing Urban Construction Investment & Development Co., Ltd.
- Organized CISDI and Japan Industrial Furnace Manufacturing Association to jointly prepare the international standard Industrial Furnace and Related Process Equipment-Energy Balance Measurement and Energy Efficiency Calculation Method-Part 11: Evaluation of Various Efficiency.
- Jointly compiled *International Electrotechnical Vocabulary No. 841 Industrial Electric Heating* with SMS Group.

### CIE and Tsinghua University Cooperated in the Development of Flue Gas Multi-pollutant Synergistic and Efficient Purification Technology Using Activated Carbon

Case

In cooperation with Tsinghua University, CIE has developed the flue gas multi-pollutant synergistic and efficient purification technology using activated carbon. This achievement has applied for 398 patents (including 226 invention patents), 183 authorized patents. 17 patents including "Activated Carbon Method Flue Gas Purification Device and Flue Gas Purification Method PCT/CN2016/105451" has entered Malaysia, Indonesia, Russia, South Korea, Vietnam, and Brazil through PCT (Patent Cooperation Treaty) channels. This technology and equipment rank first in the air pollution prevention and control category in the major environmental protection technology and equipment catalog encouraged by the Ministry of Industry and Information Technology. This technology is encouraged in the ultra-low emission transformation work plan for steel enterprises of the Ministry of Ecology and Environment (MEE). The project "Industrial Smoke Multi-pollutant Synergistic Deep Treatment Technology and Application" has passed the review of the 2020 National Scientific and Technological Progress Award.



## Protecting intellectual property rights

In 2020, the Company had a total of **11,370** new patent applications

**6,278** new authorized patents

Cumulative effective patents **33,633** pieces

MCC continued to strengthen its patent layout and patent applications and conducted in-depth communication and discussion with subsidiaries on patent applications. The number of patent applications, patent authorizations, and cumulative effective patents maintain continuous growth. In 2020, the Company had a total of 11,370 new patent applications (including 5,627 invention patents); 6,278 new authorized patents (including 1,237 invention patents); cumulative effective patents 33,633 pieces (including 9,138 invention patents).

In addition, MCC complies with the Patent Law of the People's Republic of China and attaches great importance to the protection of intellectual property rights. During the reporting period, MCC organized its subsidiaries to actively participate in the intellectual property week initiated by the State Intellectual Property Office, including lectures on intellectual property strategy sponsored by the China Association for Science and Technology. These lectures were presented by experts from the former State Intellectual Property Office and China Patent Protection Association. It also organized employees to study the Guiding Opinions on Advancing the High-quality Development of the Intellectual Property Work of SOEs, and solicited specific opinions and suggestions from various subsidiaries on further improving the Company's intellectual property work.

## Deepening Reform and Mechanism Innovation

Reform and innovation are the inexhaustible sources of sustainable development. MCC insists on the endogenous driving force of reforming, continuously optimizing the distribution of its resources, keeping in line with the management of world-class enterprises, and creating a complete modern enterprise management mechanism.

### Optimizing the distribution of internal resources

During the reporting period, MCC adhered to the driving force of endogenous reforms, optimized internal resource allocation, solidly promote the integration of MCC Eco-Environmental Protection Group Co., Ltd., MCC (Shanghai) Steel Structure Technology Co, Ltd. and MRBC.



Developed a water business integration plan, establish MCC Eco-Environmental Protection Group Co., Ltd., and create a high-quality brand of "MCC Eco-Environmental Protection".



Optimized the equity structure of MCC (Shanghai) Steel Structure Technology Corp, Ltd., continue to strengthen the professional brand in the steel structure business field, and play a leading role as a flagship.



Completed the integration of MRBC and MCC Inner Mongolia Construction & Investment Co., Ltd. to develop new business areas and regional layout.

## Implement the SOE reforms

To fully implement the Three-Year Action Plan for SOEs Reform, firstly, MCC benchmarked against world-class standards, analysed gaps in eight major areas, formulated management improvement action plans, and clarified various reform goals, key tasks, main results and time through deepening the reform account arrangement. Secondly, MCC has formulated a plan for the organization and function adjustment to optimize the organization of the headquarters, further enhancing the headquarters' capacity in decision-making and management, to create a pragmatic and efficient headquarters. Thirdly, MCC revised and improved core management and headquarters decision-making processes, and promoted the construction of the headquarters and subsidiary governance systems. Finally, MCC promoted the "Double Hundred SOE Reform Campaign" and "Pilot Action for Technology SOEs", playing a leading and demonstrative role in the SOE reforms.

During the "13th Five-Year Plan" period, China Minmetals Corporation and MCC Group implemented complementary strategic reorganization, taking the lead in the global metal mining industry to open up the industrial chain from mine design, operation and development, smelting and processing to trading logistics. In the past five years, MCC has been given full play as "the national team of metallurgical construction" in the high-tech field. We comprehensively strengthened industrial technological innovation, vigorously expanded, extended, and complemented the metal mining industry chain operation services and integrated supply capabilities. Our ability to independently control the supply chain continued to increase.

### Masteel Intelligent Pan-ironmaking Control Centre

Case

The Masteel Intelligent Pan-ironmaking Control Centre is based on the technological accumulation of CISDI's water, soil, and cloud industrial internet platform with independent intellectual property rights. It integrates hundreds of intelligent applications and big data algorithms to create the largest steel industry with the most production lines. With the goal of high-efficiency and low-consumption ironmaking, the project launched an integrated intelligent management and control system for each process to realize the transformation of ironmaking production from experience-driven to digital and intelligent-driven.



### 3. NEW MISSION GREEN LEADING THE FUTURE

MCC implements the development principles of “lucid waters and lush mountains are invaluable assets”. MCC strengthens ecological environmental protection and takes the battle of pollution prevention as the Company’s obligatory responsibility. Through strict management, low-carbon operations, and forward-looking in the field of green environmental protection, we build the harmony of people and nature.

Strict and Solid Environmental Management

Low-Carbon Operation to Protect the Environment

Green Transformation to Bring an Ecological Future

\*Yanjiang Road and Embankment Environment Renovation Project in Fankou of Ezhou

## Strict and Solid Environmental Management

MCC has improved the environmental management system, strengthened environmental accountability assessment, and effectively implemented the deployment of ecological civilization construction.

### Following the law and strengthening management

MCC strictly abides by the national laws and regulations related to environmental protection and has obtained ISO14001 environmental management system certification. We improved the energy conservation and environmental protection management system, formulated one method, four detailed rules, and a plan to clarify the management responsibilities of energy conservation and environmental protection organizations at all levels. MCC lays a solid foundation for the full implementation of the Company's main responsibility for energy conservation and environmental protection.

In order to strengthen risk management and control and strengthen environmental supervision of production enterprises, MCC revised the environmental information list of production enterprises, established the Company's key pollution source management database, strengthened the management of various pollution sources of exhaust gas, wastewater, and solid waste. In addition, MCC established the "Hazardous Waste Monitoring Source List" to strengthen risk source control. In 2020, MCC has signed a safety and environmental protection target responsibility letter with 37 subsidiaries, including energy conservation and environmental protection violations and energy conservation and emission reduction indicators into the assessment.

#### Environmental laws complied by MCC

Environmental Protection Law of the People's Republic of China

Water Pollution Prevention and Control Law of the People's Republic of China

Atmospheric Pollution Prevention and Control Law of the People's Republic of China

Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste

Law of the People's Republic of China on the Prevention and Control of Pollution from Environmental Noise

Cleaner Production Promotion Law of the People's Republic of China

Water Law of the People's Republic of China

Energy Conservation Law of the People's Republic of China

Water and Soil Conservation Law of the People's Republic of China

#### Environmental-related systems formulated by MCC

Administrative Measures on Energy Conservation and Environmental Protection of MCC Group and MCC

MCC Group and MCC Energy Conservation and Environmental Protection Organization System and Implementation Rules

Rules for the implementation of Energy Conservation and Environmental Protection Inspections of MCC Group and MCC

MCC Group and MCC Energy Conservation and Environmental Protection Report Implementation Rules

MCC Group and MCC Comprehensive Emergency Plan for Environmental Emergencies

## Implementing strict and solid rectification

MCC attached great importance to the central environmental protection supervision and implemented rectification in a multi-pronged manner. At the rectification level, MCC has compiled a list of pollution sources of production enterprises to grasp the environmental management status of its subsidiaries; supervised and urged its subsidiaries to establish an ecological environmental protection leading group to improve the ecological and environmental protection management system; developed environmental inspection checklists for subsidiary headquarters, and conducted special inspections on energy conservation and environmental protection; upgraded the "MCC Energy Conservation and Emission Reduction Big Data Filling Information System" to improve the efficiency of energy conservation and ecological environmental protection indicators analysis, statistics and supervision; conducted "one-to-one" environmental protection video inspections, and strengthened the accountability of rectification by incorporating environmental management objectives and energy-saving and emission reduction indicators into the performance assessment of subsidiaries.

At the level of ideological improvement, MCC has compiled nearly one million characters of the "MCC Group and MCC Ecological Environmental Protection Laws and Regulations Summary" to help companies integrate national, local, industry management requirements to their own regulations. In accordance with regulations, MCC has further improved the ability of environmental protection management personnel through the environmental protection trainings for the relevant staff of each subsidiary and key pollutant emission enterprises.

## Low-Carbon Operation to Protect the Environment

Faced with environmental crises such as climate change and ecological destruction, MCC actively takes environmental responsibilities, strives to reduce the negative impact of corporate operations on the environment, and contributes positively to the realization of the national carbon neutrality target by 2060.

### Energy saving and emission reduction

Energy-saving and emission reduction is not only the way for MCC to continuously reform itself and realize its green transformation and development, but also an inevitable choice to help the country and the world respond to climate change. To this end, MCC has strengthened targets setting and taken multiple measures to increase energy conservation and consumption reductions.

#### Climate change related analysis

Climate change risks have a profound impact on MCC's operations. During the reporting period, not only physical risks such as floods and scorching heat had an impact on MCC's projects under construction, but also a series of policy and market changes brought about by the country's carbon peak and carbon neutrality target. In the future, the low-carbon development direction represented by low-carbon technology, technological equipment innovation, green buildings and new energy will bring new market opportunities and challenges to the development of MCC.

#### Enhancing energy saving and emission reduction indicators

To achieve low-carbon operations and fulfill the country's emission reduction commitments, MCC refined its statistical indicators for energy conservation and ecological environmental protection in 2020 and improves its energy conservation and emission reduction indicator system.



## Strengthening energy management

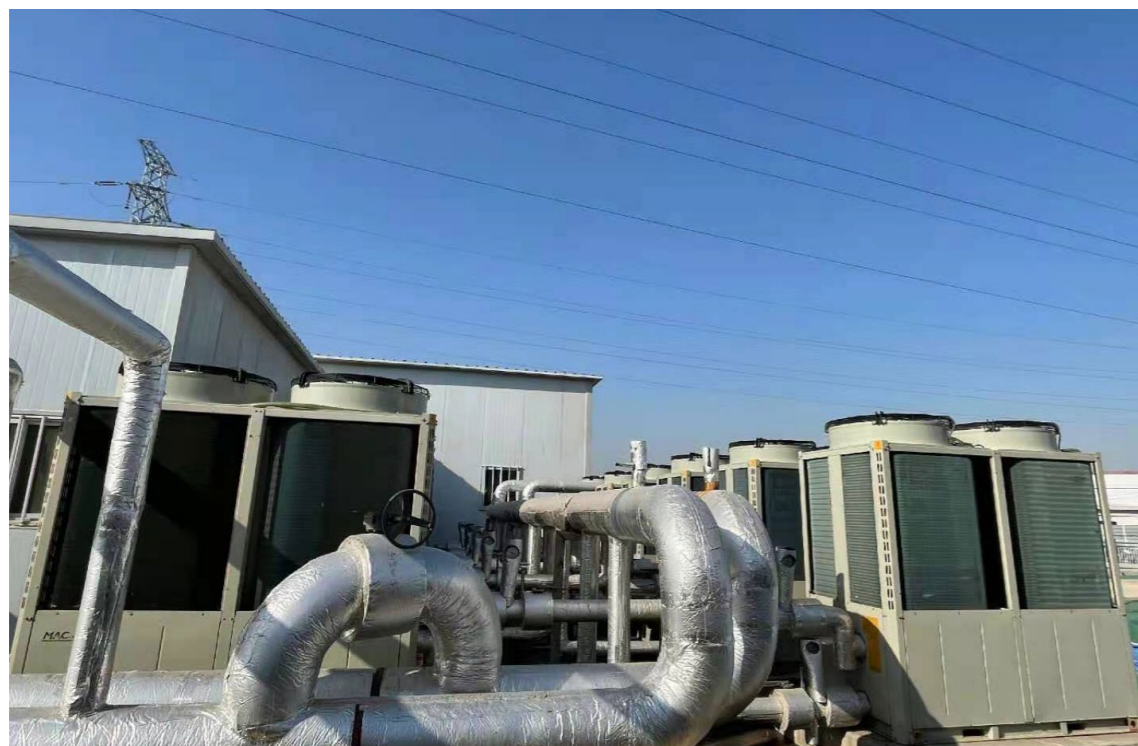
MCC implements the energy management policy of "compliance with laws and regulations to promote cleaner production, energy efficiency, and continuous improvement". Each project department has established energy management benchmarks to be used as energy targets and indicators for the formulation and evaluation of energy which is the main basis for management performance. At the same time, MCC implements the national industry standards for technology, environmental protection, safety, energy consumption, etc., and a series of energy-saving measures such as the implementation of energy-saving and consumption-reducing projects. We promote energy-saving and emission-reduction technologies, remove obsolete and energy-intensive mechanical equipment used on site, and prioritize the use of new environmental protection equipment to reduce energy consumption.

### Energy-saving and Water-saving Practice of Xiong'an New District Projects

Case

MCC's projects in the Xiong'an New District adopt reclaimed water reuse technology. All the domestic sewage is passed through reclaimed water treatment equipment. After the treatment reaches the standard, it is reused in the bathroom for recycling. The excess reclaimed water is used for road cleaning and construction areas. Dust suppression operation not only avoids the direct discharge of sewage, but also meets the environmental protection requirements of the construction area.

In addition, the Xiong'an New District projects use air energy equipment for unified cooling and heating. Air energy equipment operates through a compressor system to absorb heat from the air to produce hot water. Water is used as the medium to transport from the main body to the fan coils in the room for cooling or heating. Compared with air conditioners, air can significantly save electricity and improve thermal efficiency.



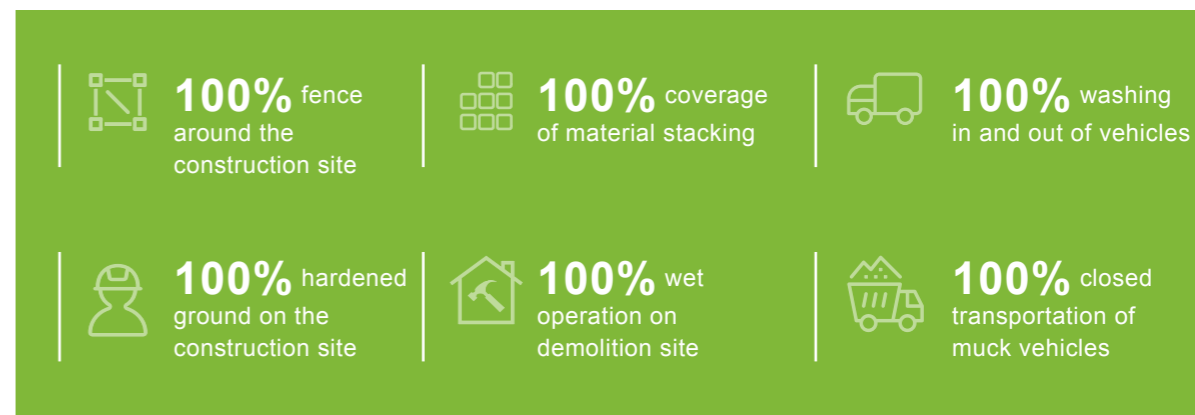
## Pollution prevention

MCC resolutely supports the country in winning the battle against pollution. We have established a sound management system in air pollution, water pollution, soil pollution, waste disposal, etc., and strictly implemented management and supervision to minimize the negative impact on the environment creating a harmonious coexistence of the natural environment.

## Air pollution control

MCC has further promoted the standardization and green construction of project sites. Standardized construction and green construction are basic work to improve the level of project safety and environmental protection management in the long-run. Production enterprises strengthen the control of pollutants' emission and the management of production waste gas emissions, take measures to centrally collect and treat the smoke and dust and other pollutants generated in the production process, and do a good job in the key processes of air pollutants such as electric furnace smelting, heating furnaces, heating boilers. MCC also strengthens the control of unorganized emission in the production process and improve the list of governance projects. Sewage treatment plants increase the deodorization system through projects such as upgrading, renovation or expansion, and reduce the pollution of the waste gas to the environment through the process of collecting, processing, and re-discharging waste gas.

### Dust control "six hundred-percent"



Exposed slope with dust-proof net coverage



Three-dimensional omnidirectional vehicle washing device



High-altitude spray dust reducing



Dust monitoring

## Soil pollution prevention

MCC implements soil pollution risk assessment and control, establishes a ledger and forms a supervisory list according to the requirements of the local environmental protection department, and gradually develops pollution control and restoration plans based on the division of responsibilities. MCC continues to strengthen the process supervision of soil remediation projects to ensure the proper disposal of contaminated soil; regularly conducts comprehensive inspections of soil transfer, desorption remediation, and chemical storage and use in the process of soil remediation, and strictly controls secondary pollution in the process of contaminated soil remediation. MCC also strengthens the supervision and management of the use of hazardous chemicals and pharmaceuticals in the production process of each operating unit, ensures that various safety management measures are in place, and prevents soil pollution caused by leakage or improper storage and use. In addition, all sewage treatment companies have signed sludge transportation and disposal contracts with external companies, and the sludge is transported out in time after it is produced. Daily inspections of sewage treatment facilities and hazardous waste storage facilities are conducted, so that leakage will be dealt with promptly.



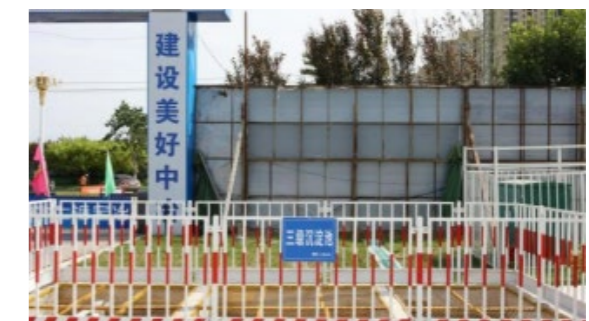
Comparison of before and after application of ENFI's ion-type rare earth mine ecological restoration technology

## Water pollution prevention

MCC subsidiaries have fully cooperated in the investigation and remediation of sewage outfalls into the river, strengthened the control of sewage discharge into the river, and implemented rectification measures. Construction projects continue to optimize rain and sewage diversion, and check the generation, collection, transportation and treatment of rainwater and sewage. We standardize and implement the initial rainwater collection, and treatment at the construction site, improve the anti-seepage measures in key areas and key locations, promote the comprehensive construction of the rain and sewage diversion system, and effectively reduce the wastewater treatment load.



Rainwater (reclaimed water) treatment and utilization system



Three-stage sedimentation tank

In terms of obtaining water sources, MCC has included water pollution risk prevention in the Rules for the Implementation of Energy Conservation and Environmental Protection Inspections of MCC Group and MCC to ensure that there are no violations of laws and regulations or damage to the local ecological environment in the use of water sources. During the reporting period, no issues were found in terms of obtaining suitable water sources.

## Waste treatment

MCC strictly implements the requirements of the new solid waste law and establishes a list of hazardous waste supervision sources. Each production enterprise has established a solid waste account and strictly followed the discharge permit amount and entrusted a qualified unit to handle it. Full-time personnel is responsible for the supervision of the entire process of hazardous waste generation, transfer, and storage. Appropriate protective measures have been set up for the construction waste generated by various engineering projects to improve solid waste disposal mechanism.

At the same time, MCC attaches great importance to the source reduction control at the construction site. Various measures are taken, including the optimization of construction plans, reasonable determination of construction procedures, implementation of digital processing and information management and the combined use of temporary facilities such as roads and fences and permanent facilities. MCC improves the reuse rate of temporary facilities such as office buildings and dormitories on the construction site and of turnover materials to adopt standardized facilities. We also encourage the use of standardized facilities, tool-type scaffolding and formwork supporting systems to strengthen construction quality control and the protection of finished projects, and reduce rework due to quality problems.

## Establish emergency plans for environmental emergencies

MCC and its second-tier subsidiaries have established emergency response plans for environmental emergencies and filed them level by level. At the same time, construction projects and production enterprises are required to formulate special plans or disposal plans in accordance with relevant ecological environmental protection laws and regulations, and industry standards. In accordance with the principles of classified management and hierarchical responsibility, MCC reports to the local government and company for filing.

## Environmental protection advocacy and education

During the reporting period, MCC organized the 2020 Energy Conservation Promotion Week and Low-Carbon Day with the themes of "Green Water and Green Mountains, Energy Saving and Efficiency", "Green and Low Carbon, and All-round Well-off" to cultivate the concept of recycling and advocate the social fashion of diligence and thrift, and to promote the low-carbon development. The Company conducted training and education on ecological and environmental protection management under the new situation. The training adopted a combination of "on-site + video" live broadcast and trained a total of 4,700 people, which greatly expanded the coverage of training, strengthened the ecological awareness of subsidiaries, and promoted the management.



MCC 20 Launches "Safety and Environmental Guardian Cup" Safety and Environmental Protection Skills Competition

In terms of green office, MCC actively adopts a series of environmental protection measures, including cutting off the power of printers, computers, sockets, and other equipment during the non-work hours, and turning off the lighting in vacant areas in time. When equipment is repaired and replaced, priority is given to energy-saving equipment. Printing consumables are domestically made and efficient, with used consumables recycled and processed in a timely manner. MCC also promote paperless office, reduce conference paper data, choose electronic document circulation, and save paper; purchase different types of printing paper, and choose different weights of printing paper according to the importance of the document; encourage to use the reusable letter paper, document paper, and other papers.

In addition, MCC actively responds to the country's call to stop food waste, giving full play to the role of labor unions to publicize and guide, promote advanced models and exposes waste. We actively advocate the reasonable and healthy diet culture by scientific catering, reasonable recycling, and disposal of waste.

## Green Transformation to Bring an Ecological Future

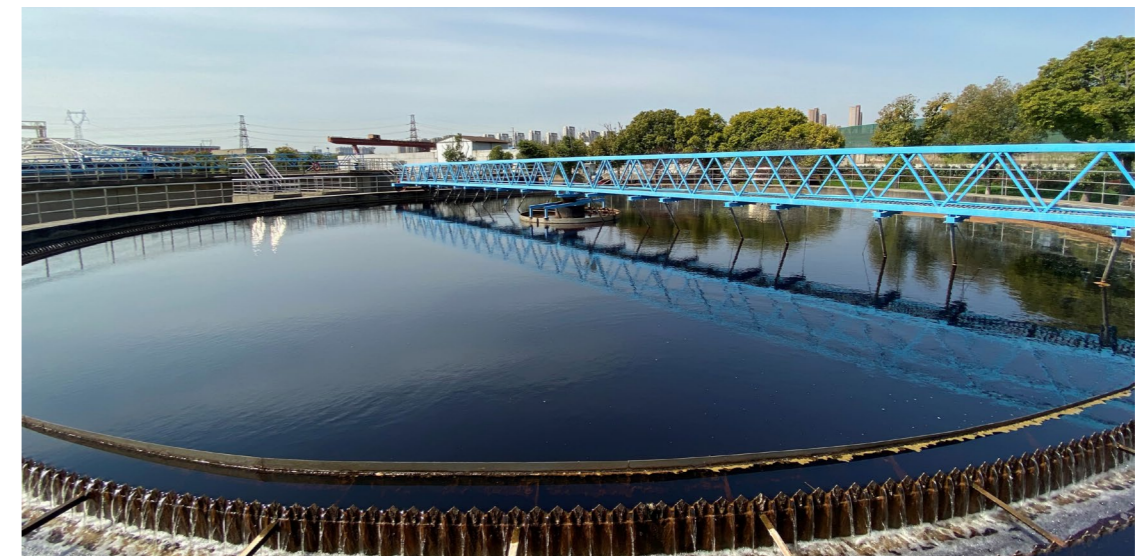
Building an ecological civilization is a millennial plan for the sustainable development of China. MCC actively implements the concept of green development, uses advanced green technology to lead metallurgical and other industries to continuously improve the level of environmental protection, and promotes the vigorous development of emerging green businesses such as green construction, green industries, and green buildings.

## Green technology leads the development

In the metallurgical field where energy consumption and pollution are more serious, MCC focuses on the development of energy-saving and environmentally friendly technologies, with green steel as the core development, fully integrating R&D resources, and actively promoting collaborative innovation among subsidiaries and companies. MCC also focuses on achieving energy saving and consumption reduction in metallurgical production, energy recycling, waste treatment and resource utilization. By conducting core technology research and development in waste gas treatment, solid waste resource utilization, comprehensive utilization of water resources, efficient energy utilization, etc., MCC has achieved positive results in projects such as the recovery and utilization of low-temperature waste heat in converter flue gas technology, low-rank coal cascade utilization technology, carbon dioxide capture and recycling technology, etc. In the non-metallurgical field, MCC has made unremitting efforts in environmental protection technology, equipment research, soil and environmental restoration, and clean energy technology development, contributing to building Beautiful China.

### Wastewater Treatment Technology

Through independent technological innovation, ENFI has successfully developed the biological activated carbon-specific biological enzyme coupling enhancement technology. The technology combines the adsorption effect of activated carbon, carrier strengthening effect, and enzymatic effect of obligate biological enzymes to remove refractory organics, which improves the degradation rate and treatment capacity of pollutants and solves the difficult problem of stable operation of refractory wastewater biological treatment section. At the same time, the efficiency of coagulation sedimentation treatment is improved. This technology has formed 2 scientific papers and 5 patents.



### Solid Waste Treatment Technology

The cross-industry solid waste co-processing technology developed by WISDRI relies on steel technology to co-process solid waste between different industries and promote the harmonious coexistence of steel enterprises and cities. Major measures in this technology include relying on the sintering process in the iron and steel process to dispose of the iron-containing hazardous waste bottom slag; using the surplus gas, high-temperature steam, and electric energy generated by the iron and steel enterprise to reduce the energy cost of the park while improving energy utilization efficiency. By using blast furnace slag, steel slag, desulfurization ash, and other metallurgical waste slag, as well as the red mud produced by the non-ferrous metal industry, and the construction waste produced by the municipal industry, the technology could produce environmental-friendly materials to achieve material coordination across industries.

## Creating high-quality green projects

MCC is committed to creating high-quality green building projects, creating a number of world-class green high-quality steel benchmark projects, and has a number of green building technology promotion and application projects. In order to promote green construction work, MCC fully implemented the "MCC Green Construction Model Atlas" to improve the Company's standard management level of engineering projects, and promoted green construction through the use of new technologies such as the internet and big data. During the reporting period, MCC applied for 42 green construction evaluation projects of China Association of Construction Enterprise Management.

### Zhuhai Cross Gate Central Business District Convention and Exhibition Business Group Project

Through scientific management and technological progress, Zhuhai cross gate Central Business District Convention and Exhibition Business Group Project adopted innovative technical measures, based on the characteristics of resource consumption and environmental impact of large public buildings and high-rise buildings to maximize resource conservation and reduce negative environmental impact. This project achieved energy saving, land saving, water saving, material saving, and environmental protection. The project won the National Green Construction Demonstration Project, 2 Luban Prizes for China Construction Projects, 1 National Quality Engineering Award, and 1 Tien-yow Jeme Civil Engineering Prize.



### Ramu Nico Builds a Green Minet

In the process of mining, Ramu Nico considers the location of the mine in a primeval forest, local economic development and the requirements of local landowners to achieve environmentally friendly, scientific mining, high efficiency of using resources, digital management, to achieve harmony between the mine and the community. Facing the problem of soil erosion caused by mining, Ramu Nico, while rationally arranging and stockpiling the humus in the stripped area, explored reclamation methods and suitable plants, and reclaimed the area in the stripped area 20,000 square meters.



## Vigorously developing environmental protection industry

MCC keeps up with the country's strategic deployment of environmental protection and low-carbon development, takes environmental protection innovation technology as the starting point, actively plays the role of the national team of the metallurgical field, and promotes the green development of the metallurgical industry. By accelerating the layout in the emerging ecological environmental protection business, MCC leads the green development and transformation of the enterprise.

### Promote the green development of Chinese steel industry

MCC, as the national team of metallurgical construction, relied on national R&D platforms such as the National Key Laboratory of Environmental Protection for the Iron and Steel Industry to launch a number of major steel energy-saving and environmental protection technologies to help the steel industry achieve ultra-low emissions, equipment upgrades and green and high-quality development. Among them, the core scientific and technological achievements of "Development and Application of Clean and Efficient Coking Technology and Equipment" increased the concentration of country's coke oven industry by 3.8 times and reduced the emission intensity of coke pollutants per ton by 12%, and won the first place of National scientific and Technological Progress.

### Promote non-steel industry with energy-saving and environmental protection technologies

In terms of soil and environmental remediation, MCC focuses on the development of remediation and treatment technology for soil contaminated by heavy metal pollutants. MCC has a number of core technologies with independent intellectual property rights. In terms of water environment treatment, MCC has many independent intellectual property rights technologies such as advanced comprehensive sewage treatment and reuse technology, and has successively invested and operated 29 urban sewage treatment plants. In terms of solid waste treatment, MCC undertakes more than 90 consulting and design elements, accounting for about 30% of the total daily processing capacity of domestic waste incineration power generation projects, ranking first in the industry. MCC invested in the construction and operation of 3 domestic waste incineration power generation BOT (Build-Operate-Transfer) projects in Xiangyang, Ganzhou, and Gu'an, effectively preventing the occurrence of "garbage besieged city" and realizing no domestic waste treatment in urban areas.

### Develop green buildings

MCC has strictly integrated the concept of green development into the project design and construction process, independently developed a series of green construction technologies, leading green development of the construction industry. CISDI established the Green Building Research Institute, with cooperative research platforms such as the Southwest Green Building Base and MCC Green Building Engineering Technology Center. It has completed a number of national, provincial, and ministerial scientific research projects. CISDI Building was rated as the National Two-star Green Building by the Ministry of Housing and Urban-Rural Development and the National Green Building Innovation Award (first place). The LFC was awarded the LEED Gold Award. MCCZY was awarded "China's Top 20 Green Building Enterprises" by the Green Building Alliance.

### Accelerate the layout of eco-environmental protection business

In 2020, MCC set up MCC Eco-Environmental Protection Group Co., Ltd., with technology-led and investment-driven, to create a large-scale professional company integrating environmental protection investment, construction and operation. The new subsidiary has a strong ecological and environmental protection technology background, with professional platforms such as the MCC Eco-Environmental Industry Research Institute, Technology Research Institute, Engineering Laboratory, Product Development Base, Intelligent Operation Control Center. It has built Technical Research Center for Energy-saving Technology and Equipment of Wastewater Treatment in Machinery Industry, Resource Technology Research Center, Research and Application Base for Wastewater Pollution from Papermaking Control Technology, Engineering Test Base for Printing and Dyeing Wastewater Advanced Treatment, Municipal Sludge Dry Distillation Technology and Biochar Application R&D Center, etc. It edited and participated in more than ten national, industry, and local standards, won 4 National Scientific and Technological Progress Awards, and nearly a hundred provincial and ministerial science and technology awards, with 145 international and domestic patents.



# 4. NEW JOURNEY SHARING A HARMONIOUS HOME

With the completion of a well-off society in 2020, the journey of a modern socialist country has begun. MCC is determined to adhere to the unification of economic and social responsibilities and demonstrates the responsibility of major SOEs at the critical moment. The people of MCC have deeply rooted with the goal to build a better MCC in their mind and worked with stakeholders to create shared value.

• Joint Management of Quality and Safety

• Employee Development to Promote Well-being

• Society Contribution and Value Creation



\*MCC actively participated in poverty alleviation, flood control and many other social activities.

# Joint Management of Quality and Safety

MCC has been continuously pursuing higher standards of quality and safety through improvement of management standards and inspection, as well as strict management towards suppliers and contractors, to ensure the leading position in project quality and safety.

## Quality management

MCC strictly complies with the Construction Law of the People's Republic of China, the Product Quality Law of the People's Republic of China, Regulation on the Quality Management of Construction Projects, Regulations on Administration of Surveying and Designing of Construction Projects and other relevant laws and regulations. On this basis, MCC revised and issued the Quality Management Measures of MCC Group and MCC to earnestly implement the GB/T 19001 quality management system standards and clarify the requirements for quality management agencies and responsibilities at all levels, including quality accident reporting and handling, and quality excellence. MCC has obtained the ISO9001 quality management system certification.

## Strengthening supervision

In 2020, MCC has carried out special quality inspection on three key projects in Xiong'an New District, and conducted a "look back" inspection on the Company's inspections and the rectification of the monthly inspections of the subsidiaries; promoted subsidiaries to complete self-inspection on traffic and municipal engineering quality, which covers 287 projects under construction of 23 subsidiaries. Special inspections were carried out on the construction of the quality management system and quality excellence system of some subsidiaries' headquarters to promote the improvement. The subsidiaries were promoted to strengthen quality control and implement quality responsibilities.

## Awards and honors

During the reporting period, Ha Tinh Formosa Steel Plant won the Gold Award of National Quality Engineering Award, which was designed and contracted by CISDI and contracted by MCC19. This is MCC's first overseas Gold Award of National Quality Engineering Award Gold.

## Safe production

MCC complies with the Law of the People's Republic of China on Work Safety, Regulation on Work Safety Licenses, The Administrative Regulations on the Work Safety of Construction Projects, Regulations on the Reporting, Investigation and Disposition of Work Safety Accidents, Special Equipment Safety Law of the People's Republic of China and other national laws and regulations related to safe production. MCC strictly implements safety production management with the goal of zero accidents of production safety and zero new cases of occupational diseases.



## Safety management standards and systems

MCC has passed ISO45001 occupational health and safety management system certification. We have established and implemented the "Environmental and Occupational Health and Safety Operation Control Procedures" to effectively control activities related to important environmental and unacceptable risks. We have also formulated the MCC Group and MCC Safety Production Management Measures to strictly manage and implement. MCC has established and maintained environmental and occupational health and safety potential accidents and emergency control procedures to prevent or reduce possible environmental impacts and risks, compiling and implementing Emergency Preparedness and Response Control Procedures. After the accident or emergency was handled, MCC would review or revise the emergency preparedness and response procedures. The internal audit work carried out by MCC every year includes the occupational health and safety management system.

## Safety management measures

Following the requirements of the three-year action of the national special rectification of work safety, MCC has actively adopted various inspection methods, including the special inspections of "No notice, no greeting, no report or accompany, and straight to the grass-roots level and the site", special follow-up inspections, area inspections, special inspections, one-month safety production inspections, and the "Hundred Days Action". We also promoted the construction of safety production standardization sites. During the reporting period, 14 projects were awarded "Standardized Sites of Safety Production in Construction Projects", 151 projects were awarded provincial safety production standardized sites, and 136 projects were awarded municipal safety production standardized sites.

## Occupational health management

MCC attaches great importance to occupational health management. In accordance with the relevant provisions of the Law of the People's Republic of China on the Prevention and Control of Occupational Diseases, the MCC Group and MCC Occupational Health Management Measures were formulated to strictly require all subsidiaries to earnestly implement the relevant national laws, company rules and regulations. MCC implements the occupational health management requirements to the workers employed by contractors. During the reporting period, all subsidiaries conscientiously organized special supervision activities to continuously eliminate potential occupational hazards; actively carried out the Occupational Disease Prevention and Control Law publicity week activities to vigorously promote occupational health knowledge. In 2020, there was no occupational health acute poisoning incident.

## Safety training and emergency drill

MCC adopted a combination of "onsite + video" live broadcast to conduct safety training for the first time. It distributed 400 video nodes, and the number of participants has reached 4700. 1,087 project managers among all participants from 35 subsidiaries participated in the training, and they further trained 17,422 management personnel from the project department. This greatly expanded the coverage of the training, and allowed the training to reach the grassroots level, achieving good results. In 2020, all subsidiaries conducted safety training and education for 866,619 people, organized 6,943 emergency drills with 197,021 people participated, which further improved employees' self-protection awareness and emergency response capabilities.

14

projects were awarded "Standardized Sites of Safety Production in Construction Projects"

151

projects were awarded provincial safety production standardized sites

136

projects were awarded municipal safety production standardized sites



Opening ceremony of MCC's "Work Safety Month" campaign



Safety and environmental protection training meeting held by MCC



SBC carried out flood control emergency drill



MCC5 organized voluntary diagnosis services

Key indicators	2020	Unit
Coverage of occupational health file	100%	/
Number of projects performed safety inspection	2,617	/
Number of subsidiaries that has been performed safety inspection	24	/
Number of articles about work safety published in monthly magazines	233	/
Number of occupational patients	0	/
Number of improved emergency rescue plan	8,730	/
Investments in emergency rescue	15,897.85	RMB 10,000
Times of emergency rescue drills conducted	6,943	/
Number of participants in emergency rescue	197,021	/
Construction sites with safety, civilization and standardization	301	/

## Supply chain management

MCC's supply chain management abides by relevant national laws and regulations, strictly implements the principles of fairness, impartiality, and open bidding, and prevents internal corruption through two-level supervision. At the same time, we actively guide suppliers through green procurement and blacklist systems and make unremitting efforts to build a high-quality and green supply chain.

### Tendering and bidding management

According to the relevant national bidding laws and regulations and other procurement rules and regulations, MCC formulated the Procurement Management Regulations of MCC group, standardized the business process of procurement and bidding, protected the reasonable rights of suppliers, and carried out the procurement business according to the principles of fairness, impartiality, and openness. The two-level procurement management departments of MCC and its subsidiaries are responsible for the supervision of the procurement business. Through the procurement platform, we can supervise a procurement business before, during and after the event, ensure the fairness of the procurement business and prevent internal corruption. In terms of the system, MCC implements the China Minmetals Corporation Procurement Supervision and Administration Measures, which provides detailed regulations on the division of labor, process, nature of problems, and handling methods for procurement supervision. During the reporting period, a total of 38,932 suppliers signed contracts through the procurement process of the procurement platform with MCC or its subsidiaries.

### Green supply chain management

To construct a resource-saving and environment-friendly society, promote green circulation and sustainable development and build a green supply chain with green procurement, MCC formulated Supplier Management Measures which specified that suppliers, subcontractors, and service providers were required to provide environmental protection qualifications from access to signing contract. Suppliers with bad records in government departments, industries and company quality or environmental and safety inspections shall be promptly eliminated. MCC actively promotes the concept of green and low carbon, uses environmentally friendly enterprises, supports sustainable supply and behaviors protecting the environment.

### Subcontractor evaluation and blacklist system

MCC has established a blacklist system to manage the environmental and social risks of the supply chain. During the reporting period, MCC included 49 subcontractors reported by subsidiaries into the "blacklist" of subcontractors and they were not allowed to participate in MCC's engineering projects within three years. At the same time, the subcontractors who have worked well in the construction project are included in the list of excellent subcontractors, and have priorities in bidding, with the corresponding incentive system formulated by each subsidiary. If the subcontractors' quality system, safety system, and environmental protection system are imperfect, or if they violate the promise of good faith transactions, or have serious arrears in workers' wages or material payment, they would be included into the "blacklist".

### Strengthen the Management of Subcontractors and Eradicate Wage Arrears for Migrant Workers

Case

MCC has strictly implemented the relevant requirements of Regulation on Ensuring Wage Payment to Migrant Workers issued by the State Council, which standardized the real-name system and wage payment management of migrant workers. MCC has formulated the MCC Engineering Project Real-name System and Wage Payment Management Measures for Migrant Workers. Each subsidiary has also set up a leading group for the payment of migrant workers' wages according to the requirements, and has provided labor and capital supervisors for each project. After the pandemic eased, MCC carried out special inspections of subcontracting management, and conducted spot checks on the Company's 20 major projects and key provincial and ministerial projects in Shanghai, Tangshan, Xiong'an, Handan, and Shenzhen.

Key indicators		2020
Total number of suppliers		155,285
Total number of suppliers (domestic)		155,003
Number of suppliers by geographical region	East China	51,061
	South China	11,667
	Central China	18,673
	North China	30,653
	Northwest China	6,833
	Southwest China	27,849
	Northeast China	8,245
	Taiwan, Hong Kong and Macau	22
Total number of suppliers (overseas)		282

## Employee Development to Promote Well-being

Talents are the solid guarantee for MCC to achieve leapfrog development. MCC unwaveringly protects the legitimate rights and interests of every employee, laying a sustainable path for the long-term development and happiness of employees.

### Employee rights

MCC strictly abides by the Labor Law of the People's Republic of China, the Labor Contract Law of the People's Republic of China, the Employment Promotion Law of the People's Republic of China, the Law of the People's Republic of China on the Protection of Rights and Interests of Women, the Law of the People's Republic of China on the Protection of Disabled Persons, Regulation on Paid Annual Leave for Employees and other laws and regulations. We respect the labor, respect talents, and regard them as the Company's greatest wealth.

MCC actively protects the rights and interests of employees, improves the salary distribution incentive mechanism, and constructs a comprehensive salary system. We pursue the equal and non-discriminatory labor employment policy, oppose forced labor, and eliminate the use of child labor. If such incidents are found, a strict investigation will be conducted, and relevant personnel will be severely punished. In 2020, the employee labor contracting rate was 100%, and the relationship between enterprise and labor is harmonious and stable. Following the principle of "pay by position and pay by performance", a compensation system that is competitive externally and fair internally has been established to continuously improve employee satisfaction. We have paid social insurance and housing accumulation fund in full and on time, standardized the operation of the enterprise annuity plan, and reasonably arranged employees' vacation.

### Employment

Number of on-the-job employees

**101,020**

Proportion of on-the-job employees by gender

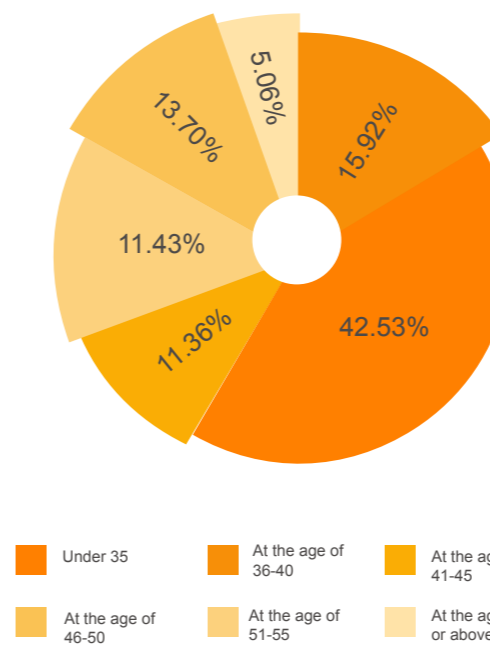


**Male 79.71%**

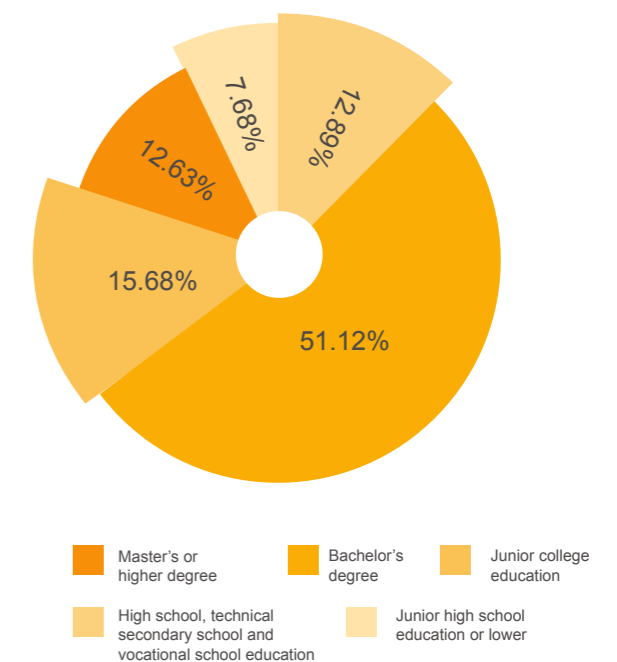


**Female 20.29%**

Proportion of on-the-job employees by age



Proportion of on-the-job employees by educational background



## Employee development

Based on the actual situation of MCC and its subsidiaries, MCC carried out top-level design in the field of human resources, provided work guidance and system guarantee for the Company's future human resources work. We continuously optimized the metallurgical talent planning and laid a solid foundation for the sustainable development of talents with professional training.

### Talent honor of MCC



## Career development channel

During the reporting period, MCC implemented the reform of building a multi-channel career development path of "position" and "rank" with "vertical and horizontal connection". MCC continued to carry out the work of grading new employees and promotion personnel of management sequence in accordance with the relevant provisions of Position System Management Measures and Professional Sequence Qualification Management Measures. We continuously promoted the establishment of the professional qualification evaluation system, organized and carry out the senior expert evaluation of human resources professional sequence and enterprise management professional sequence.

## Employee education and training

MCC has formulated and issued the education and training plan for 2020-2024, which made the education and training working mechanism of "unified leadership, centralized management, hierarchical responsibility and classified implementation" clearer. In 2020, through leaders training, social training, internal training, network education, practical experience, etc., the Company and its subsidiaries have extensively received various kinds of education and training focusing on the party's basic theory, party spirit education, general management knowledge, professional ability and practical skills. During the reporting period, a total of 78,062 people participated in education and training, and 328,700 times of participation. The political awareness, theoretical literacy and professional ability of leaders and employees at all levels were further improved.



MCC19 held outdoor development program for new employees

78,062 people participated in the training



328,700 times of participation

### Special Training Workshop for Project Managers

To improve project managers' comprehensive management capabilities on project quality, standardization, and subcontractors, MCC has carried out special training for project managers for four consecutive years since 2017, combining theory with practice, classroom teaching with on-site training, examination with defense. Trainees in the training course were recommended by 33 subsidiaries engaged in the engineering construction business, including subsidiary leaders, subsidiary engineering management department heads, and project managers. By the end of 2020, 528 trainees have been trained in four training courses, and a group of outstanding project managers have gained improvement in their business capabilities through the training system.

## Caring for employees

MCC accurately grasps the situation of employees, and does a good job of condolences for female employees who give birth, hospitalized employees with major illnesses, retired employees, and employees whose relatives have died. On major holidays, MCC distributes special products from designated poverty alleviation counties to employees. We actively organize fitness and mass sports activities for all staff, and carry out a variety of sports activities. At the same time, the Company standardized the implementation of the national social security relief policy, established a regular statistical system, mastered the enterprise's enjoyment of the policy in real time, and reduced the social security fee by RMB 900 million in the whole year. We also insured the special anti-pandemic insurance freely to the headquarters staffs, and enhanced the staff's sense of security and belonging during the pandemic period. A special reward of RMB 9.9 million was issued to the front-line personnel participating in the prevention and control of the pandemic.

Reduced social security fee by RMB **900** million

Issued special reward of RMB **9.9** million to pandemic control



NETC organized an employee hiking activity



TMCC organized a table tennis competition for employees



Condolence from MCC Hospital to front-line employees



MCC5 organized an activity to celebrate International Women's Day

## Society Contribution and Value Creation

While developing business, MCC fully fulfills the social responsibility of central SOE, helps the country win the battle against poverty, actively participates in community building and public welfare, promotes the harmonious development of society and enterprises, and creates shared value together.

### Poverty alleviation

In 2020, standing at the important juncture of winning the battle against poverty and moving towards a comprehensive well-off society in an all-around way, MCC actively responded to the call of the central government and adhered to "combining poverty alleviation with aspirations and intelligence". MCC took the initiative, innovating new models to alleviate poverty through consumption, officials, engineering, and donation, showing the strength of MCC to win the battle against poverty.

#### ♥ Poverty alleviation through consumption

As of November 2020, MCC has directly purchased organic agricultural products in 6 designated poverty alleviation counties, including Zhenxiang County, Yiliang County and Weixin County in Yunnan Province, Yanhe County and Dejiang County in Guizhou Province, and Huahuan County in Hunan Province. A total amount of RMB 27.7186 million was used to purchase natural organic agricultural products such as native honey, apple, tea, native egg, flaxseed oil, beef jerky, millet, Tartary buckwheat tea, Dendrobium, Gastrodia elata and Morchella. In addition, RMB 5.4489 million was directly purchased from the state-level poor counties apart from the six designated poverty alleviation counties.

#### ♥ Poverty alleviation by officials

Guo Xiaochun of MCC17's Guizhou branch, Yang Cong of CFMCC and Leng Xuzhong of MCC20 took up posts Dejiang County and Yanhe County of Guizhou Province, which were the targets of the MCC's poverty alleviation. They rooted in the local areas, discovered local advantages, and led the local people to overcome poverty step by step.

#### ♥ Poverty alleviation through engineering

MCC has played its role as the main force in infrastructure construction. As of December 31, 2020, MCC has completed about 4 million square meters of relocation projects, built 2,300 kilometers of roads in villages, constructed schools in poor areas and other poverty alleviation projects, becoming a solid force for local's poverty alleviation.

MCC purchased natural organic agricultural products worth of RMB **27.7186** million at 6 designated poverty alleviation counties

Completed about **4** million square meters of relocation projects

Built **2,300** kilometers of roads in villages

#### ♥ Poverty alleviation through donations

In 2020, MCC allocated a total of RMB 8.4243 million in poverty alleviation funds to support poverty alleviation work in targeted poor counties. In addition, the subsidiaries of MCC cared for the poverty-stricken areas and took charity donation as an important means to help with poverty alleviation. A number of subsidiaries have carried out various poverty relief programs, such as caring for poor children, donating money for education, and condoling the people in need.



CFMCC donated school supplies to Changyi Village Primary School



HT launched poverty alleviation through a consumption program and helped the sales of agricultural products in Daxuan and Menggang villages in Anhui.



Leng Xuzhong, a poverty alleviation official of MCC20, introduced the improved citrus varieties to the leaders



Guo Xiaochun, a poverty alleviation official of MCC17 paid attention to the growth of golden chrysanthemum in Tongjing Township.



Yang Cong, a poverty alleviation official of CFMCC led the people to search for water sources

## Flood prevention and control

From June to August in 2020, heavy rains continued in southern China, the water level of the Yangtze River continued to rise, and the flood control situation was extremely severe. While doing well in flood control and waterlogging prevention work, MCC organized its subsidiaries, including CISDI, WISDRI, HT, WSGRI, CFMCC, MCC5, MCC17, CMCC, MCC19, MCC20, MCC Southern China, etc., to join in local flood control work and protect lives and property of the people.

### Wuhan, Hubei

In Wuhan, Hubei Province, the five main units of CFMCC prepared a total of 1,500 people to join in the front line of flood control at any time and undertook the task of patrolling the 1.4-kilometer dike from Wufeng Gate to Tianxingzhou Bridge. WISDRI quickly formed a flood control team to inspect the dike safety one by one in the area where the Chenjiayi project is located and was on duty 24 hours a day. WSGRI assigned 10 employees as "three shifts" to guard the safety of the section from Jianshe 4th to 6th Road near the company.

Five main units of CFMCC prepared a total of

**1,500** people to join in the front line of flood control

### Shenzhen, Guangdong

In Shenzhen, Guangdong Province, the drainage problem of salt field project in the surrounding area of MCC Southern China is severe, creating potential safety risks. The company arranged special personnel to inspect, channel and organize workers to assist in drainage at surrounding communities. With the joint assistance of public works department, the subdistrict office, and the water affairs bureau, the company took advantage of the construction gap time to organize personnel to re-lay and build the drainage facilities in the village to completely solve the surrounding drainage problems.



CFMCC reinforced slope protection at Hongshan river beach in Wuhan



Disposal of landslides and road maintenance by MCC5

### Ma'anshan, Anhui

In Ma'anshan, Anhui Province, MCC17 quickly formed four flood-fighting and rescue teams. At the same time, MCC17 organized medical units, committee teams, and other units to carry out various medical and volunteer services in the front line of flood prevention, with a total of nearly 2,000 people served. HT rushed to the front line of flood prevention in Dangtu County, Ma'anshan City, and Zhengpu Port New Area, demonstrating the responsibility of SOEs.

Served nearly **2,000** people

### Sichuan and Chongqing

In Sichuan and Chongqing, MCC5 launched the emergency plan to cope with the rainstorm and flood disasters effectively, actively organized employees to participate in the emergency repairs of key facilities such as roads, bridges, houses, transportation and other key facilities, helping many people escape from the trapped vehicles. After the flood peak in Chongqing, CISDI sent volunteers to actively clean up the road silt, helped the affected people clean up their houses, and contributed to people's recovery to normal life.



Flood fighting and emergency rescue by MCC17 in Fuyuan natural village, Taibai village, Dangtu County, Ma'anshan City



WISDRI participated in flood control in Wuhan Yangtze River Levee



Volunteers of CMCC participated in flood control



Employees of MCC19 made every effort to fight floods and protect production in Chaohu East Outer Ring Project

## Community development

MCC always pays attention to people in difficulties and actively participates in public welfare and charities. In 2020, each subsidiary is rooted in the community to carry out themed public welfare activities such as helping the poor, improving the landscape, and preventing and controlling the pandemic. MRBC organized employee volunteers to plant more than 200 trees in Mianpuyao Village, Baoheshao Town, Hohhot City, and carried out voluntary blood donation activities, with a total of 3,000 ml of blood donated. WSGRI actively organized volunteers to participate in pandemic prevention activities including community prevention at checkpoints, material handling in Qingshan District, and the construction of mobile cabin hospitals, and has won praises and awards from Qingshan District People's government, People's Armed Forces Department, Xingouqiao street and other government departments. SKET organized nearly 40 volunteers to carry out volunteer work in the Yijingyuan community, Shenhe District, Shenyang City. People of MCC not only donated money and materials to help the community residents improve their lives, but also took concrete steps to bring positive changes to the local area through voluntary service.



SKET launched community volunteer service



CIE launched community volunteer service



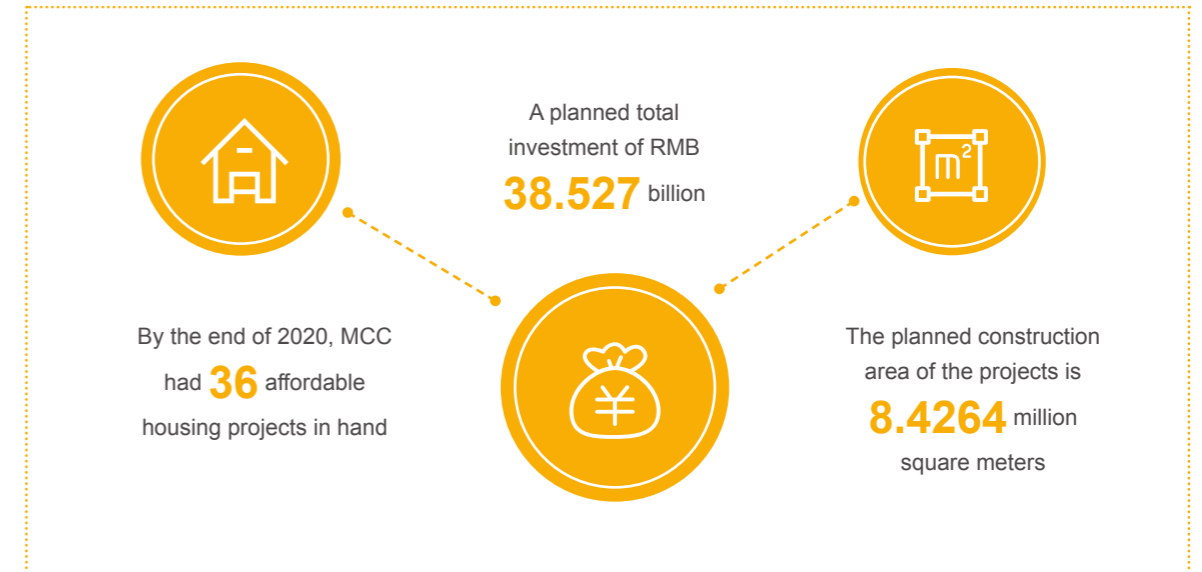
Voluntary blood donation by employees of TMCC

MRBC organized employee volunteers to plant more than **200** trees in Mianpuyao Village, Baoheshao Town

Donated **3,000** ml of blood

## Guarantee people's livelihood

Subsidiaries such as MCCZY utilized their professional advantages of the main force of infrastructure construction, to improve people's living conditions and the quality of life through the construction of affordable housing projects. By the end of 2020, MCC had 36 affordable housing projects in hand, with a planned total investment of RMB 38.527 billion. The planned construction area of the projects is 8.4264 million square meters, including urban shantytowns transformation, public rental housing, state-owned industrial and mining shantytowns transformation, affordable housing and price limited commercial housing, and rural dangerous housing transformation. These houses are mainly distributed in Anhui, Guangdong, Hebei, Jiangsu, Liaoning, Inner Mongolia, Shandong, Shanxi, Shanghai, Sichuan, Zhejiang, Chongqing, etc.



### Affordable Housing Project - Qilian Base

The Qilian Base Project covers a total site area of 106,054.5 square meters and a total construction area of 296,162.27 square meters. The project plans to build 25 18-story residential buildings, 2 2-story supporting public buildings, and 2 independent underground parking lots. The safety of the project has passed the security system certification of Shanghai, with all safety and quality indicators have been fully controlled. The goal of creating excellence has been successfully completed, and the building has been awarded the "Shanghai Excellent Guaranteed Housing". Buildings 13#, 14#, and 15# in A2 plots have won the district's high-quality structure, and the construction sites of A2 and A3 plot have obtained titles including "Civilized Construction Site in Baoshan District", "Shanghai Economical Construction Site", "Shanghai Civilized Construction Site" and "Shanghai Magnolia Project".

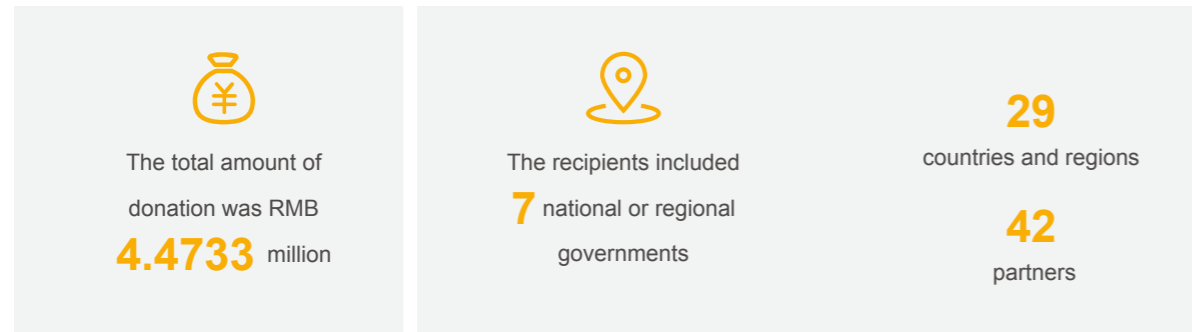


Case



## Responsible practices overseas

In the overseas regions where business is developed, MCC has actively paid attention to people's livelihood and social progress. We share development opportunities and values with the local people, actively participate in community construction and become an excellent local corporate citizen. In the face of the rapid spread of pandemics worldwide, MCC has made every effort to help overseas companies, governments, and regions where overseas projects are located. Medical and anti-pandemic materials have been successfully donated to Sri Lanka, Pakistan, Afghanistan, and Papua, New Guinea, etc. As of December 31, 2020, the total amount of donations from 7 subsidiary companies of MCC was approximately RMB 4.4733 million. The recipients included 7 national or regional governments and 42 partners in 29 countries and regions.



### Saindak Project by MCCT Cared for People's Livelihood

During the 2020 pandemic, MCTT actively assisted the local government in fighting the pandemic and helping people in need. It has donated 43 million Rupees (approximately RMB 3.8 million) of anti-pandemic materials to Balochistan, Pakistan, delivered daily necessities which valued 17.5 million Rupees (approximately RMB 1.55 million) to 3,312 poor families in the surrounding area, including rice, noodles, grains, and oil. The company also sent Chinese medical staff to the surrounding villages to test and screen the villagers to ensure the health of the people. At the time of returning to school, MCCT sent pandemic prevention materials to the local school and helped them to establish the pandemic prevention and control plans and procedures. And the company donated 2.5 million Rupees (approximately RMB 220,000) to the local government for the development of cultural events and the renovation of the stadium.



## Ramu Nico Assisted Community's Development in Papua New Guinea

Under the severe challenge of the pandemic situation in 2020, Ramu Nico allocated a special fund of RMB 100,000 to purchase pandemic prevention materials from China and donated it to the Madang provincial government, local government, and community hospitals of Papua New Guinea. Ward beds and other medical equipment with a total value of 77,000 Kina (approximately RMB 140,000) were also donated to the medical center. In addition, a total of about 274,000 Kina (approximately RMB 500,000) were spent in 2020 to support community development in areas such as economy, education, medical care, agriculture, sports, and other undertakings.



### Emergency Repair of the UIAM Bailey Bridge by MCC19

UIAM Bailey Bridge is located in Namatanai administrative region, New Ireland Province, Papua New Guinea and. It was washed down by a sudden flood in February 2020. With the requirement of the New Irish Provincial Government, MCC19 urgently dispatched 2 management personnel, 5 local employees, 2 excavators, 1 dump truck, and 1 roller to the rescue and disaster relief. First, temporary culvert access was built to ensure the normal traffic of the road. Then, the Bailey bridge was restored to its original position, the river channel was cleaned, and the culvert access was removed. The project lasted 4 days and finally restored the traffic. The New Ireland Provincial Government and local people expressed their gratitude to MCC19 for the timely repairs.



# FUTURE OUTLOOK

## Sticking to Original Aspiration and Shouldering the Responsibility

Looking forward to 2021, MCC will adhere to the Company's vision of "focusing on MCC's main business, building a better MCC", and confidently make plans in the first year of the "14th Five-Year Plan" to develop steadily and firmly on the pathway of high technology and high quality. MCC will take the responsibility of central SOE as the backbone of the industry and the cornerstone of the country.

In terms of corporate governance, MCC's board will further give full play to the core functions of "strategy setting, team management, issues discussion, and risk control" on ESG related matters. At the same time, MCC's management will stick to the "stable operation", strengthening the prevention and resolution of various risks, and incorporating ESG risks into the risk control system to build a solid foundation for high-quality development.

In terms of main responsibilities and main business, MCC will focus on the new strategic position of the national team of metallurgical construction, unswervingly moving forward along the road of becoming stronger, better and larger, and continuously improving the quality and efficiency of operation and development. MCC will accelerate the development of core technology of metallurgical construction to achieve new breakthroughs. Supported by the optimization of resource allocation and led by the construction of the chief expert system, we will improve the training of metallurgical talents and promote the national team of metallurgical construction to a new level.

In terms of ecological and environmental protection, MCC will continuously target at building Beautiful China, fighting for the three major battles of the air, water, and soil pollution prevention. We will strengthen ecological protection and restoration, and strictly preventing ecological environmental risks. In addition, in keeping with the Chinese government's commitments and ambitions for carbon neutrality, MCC will also seize the important opportunities of eco-environmental technology innovation and industrial layout, focusing on key technologies to make breakthroughs, to take advantage of the trend in green upgrading and intelligent transformation.

At present, the impact of the pandemic is far-reaching, and the situation of prevention and control at home and abroad remains severe. On the one hand, MCC will seize the time of strategic opportunities for domestic development and accelerate the construction of the dual-circulation economy. On the other hand, MCC will always take the responsibility for employees, communities, and society and maintain the solid spirit of "never delaying, never slacking", working with all stakeholders to overcome difficulties, achieve new breakthroughs, and create a magnificent future.



# APPENDIX

## 2020 Key Performance Indicators

### Key Economic Indicators

Key indicators	2020	Unit
Operating revenue	400.12	RMB Billion
Total profits	11.92	RMB Billion
Total value of newly signed contracts	1,019.72	RMB Billion
Total value of newly signed metallurgical engineering contracts	143.40	RMB Billion
Engineering contracting business income	363.96	RMB Billion
Property development business income	24.11	RMB Billion
Equipment manufacturing business income	11.06	RMB Billion
Resources development business income	4.38	RMB Billion

### Key Environmental Indicators

Data scope: the key environmental indicators of 2020 cover all the subsidiaries of MCC, including the overseas business.

#### Emissions and relevant statistics

Key indicators	2020 emissions	Unit
SO <sub>2</sub>	20,823	Ton
NO <sub>x</sub>	1,733	Ton
Hydrogen Chloride	47	Ton
Dust	44	Ton
Fluoride	12	Kg

### Emissions of greenhouse gas

Key indicators	2020 emissions	Unit	2020 emission intensity	Unit
*Direct (Scope 1) greenhouse gas emissions	3,002,607	Ton CO <sub>2</sub> -e	0.0750	Ton CO <sub>2</sub> -e per RMB 10,000 income
*Indirect (Scope 2) greenhouse gas emissions	3,425,979	Ton CO <sub>2</sub> -e	0.0856	Ton CO <sub>2</sub> -e per RMB 10,000 income

\*Direct (Scope 1) greenhouse gas emissions cover both domestic and overseas subsidiaries of MCC. The calculation of overseas scope 1 greenhouse gas emissions is based on the 2006 IPCC Guidelines for National Greenhouse Gas Inventories Chapter 2 – Stationary Combustion.

\* Indirect (Scope 2) greenhouse gas emissions cover the purchased electricity and heating power. The calculation of domestic data is based on the emission factors from MEE and NDRC. And the overseas data is calculated with tools according to the Greenhouse Gas Protocol and Sustainability Reporting Guidelines.

### Hazardous waste discharge

Business sectors	Key indicators	2020 emissions	Unit
Equipment manufacturing	Waste oil	70	Ton
	Waste paint bucket	195	Ton
	Emulsion	118	Ton
Other industries	Ash in waste incineration	23,514	Ton
Resources development	Waste oil	264	Ton
Total amount of hazardous waste discharge		24,161	Ton
Total intensity of hazardous waste discharge		0.0006	Ton per RMB 10,000 income

## Non-hazardous waste discharge

Business sectors	Key indicators	2020 output	Unit	Amount of recycled waste in 2020	Unit	Recycling rate in 2020
Engineering service	Waste concrete	1,950,610	*Ton	802,717	Ton	41.15%
	Waste steel	349,061	Ton	126,626	Ton	36.28%
	Waste bamboo and wood	499,176	*Ton	306,167	Ton	61.33%
Equipment manufacturing	Leftover material	25,069	Ton	18,998	Ton	75.78%
Other industries	Bottom ash from waste incineration	167,593	Ton	167,593	Ton	100.00%
	Sludge from waste water treatment	373,130	Ton	/	/	/
Resources development	Earth-rock stripping	20,439,268	Ton	/	/	/
Total amount of non-hazardous waste discharge		23,803,908	Ton			
Total intensity of non-hazardous waste discharge		0.5949	Ton per RMB 10,000 income			

\*The unit of waste concrete and waste bamboo and wood in 2019 was m<sup>3</sup>. The unit has transformed into ton in 2020.

## Other waste

Business sectors	Key indicators	2020 output	Unit
Resources development	Slags (Tailings)	5,129,008	Ton
	Deep-sea landfill tailings	4,333,119	Ton

## Energy consumption

Key indicators	2020 consumption	*Unit	
Direct energy	Heavy oil	1,414,586	MWh
	Gasoline	2,419,902	MWh
	Diesel	5,050,344	MWh
	Natural gas	442,910	MWh
	Total consumption	9,327,743	MWh
	Total intensity	0.2331	MWh per RMB 10,000 income

Indirect energy	Electricity	6,088,883	MWh
	Heating power	120,658	MWh
	Total consumption	6,209,541	MWh
	Total intensity	0.1552	MWh per RMB 10,000 income

\*The unit of energy consumption has been transformed into MWh in 2020, which is in accordance with the Environmental, Social and Governance Reporting Guide issued by HKEX effective since July 1, 2020. The factors used in the calculation are from the official data of NDRC based on MMC's four main sectors

## Resources consumption

Business sectors	Key indicators	2020 consumption	Unit
Engineering service	*Concrete	136,520,622	Ton
	Building blocks	26,717,205	M <sup>3</sup>
	Steel	20,886,498	Ton
	Timber formwork	11,492,332	M <sup>3</sup>
Equipment manufacturing	Steel	611,918	Ton
Other industries	Flocculant	1,499	Ton
	Silicon powder	3,948	Ton
	Antalkali	11,006	Ton

\*The unit of concrete in 2019 was m<sup>3</sup>. The unit has transformed into ton in 2020

## Water resource consumption

Key indicators	2020 consumption	Unit
Fresh water	79,788,529	M <sup>3</sup>
Repeated water	208,957,781	M <sup>3</sup>
Emissions of COD	26	Ton
Emissions of ammonia nitrogen	3	Ton
Fresh water consumption intensity	1.9941	M <sup>3</sup> per RMB 10,000 income

## Key Social Indicators

### Technological innovation

Key indicators	2020
Number of national level science and technology R&D platform	26
Number of national engineering technology research center	5
Number of effective patents	33,633
Number of Metallurgical Science and Technology Awards	18

### Employment

Key indicators	2020	
Number of on-the-job employees	101,020	
Proportion of on-the-job employees by gender	Male	79.71%
	Female	20.29%
Proportion of on-the-job employees by age	Under 35	42.53%
	At the age of 36-40	15.92%
	At the age of 41-45	11.36%
	At the age of 46-50	13.70%
	At the age of 51-55	11.43%
	At the age of 56 or above	5.06%
Proportion of on-the-job employees by educational background	Master's or higher degree	12.63%
	Bachelor's degree	51.12%
	Junior college education	15.68%
	High school, technical secondary school and vocational school education	12.89%
	Junior high school education or lower	7.68%

Key indicators	2020
Labor contracting rate	100%
Number of newly recruited fresh graduates	5,040
Number of newly recruited talents from society	4,334
Number of employee turnover	4,068

### Health and safety

Key indicators	2020	2019	2018
Number of work-related fatalities	0	0	0
Rate of work-related fatalities	0	0	0

\*The scope of data covers MCC employees.

Key indicators	2020
Lost days due to work-related fatalities	0

Key indicators	2020	Unit
Coverage of occupational health file	100%	/
Number of projects that has been inspected on safety	2,617	/
Number of subsidiaries that has been inspected on safety	24	/
Number of articles about work safety published in monthly magazines	233	/
Number of occupational patients	0	/
Number of improved emergency rescue plan	8,730	/
Investments in emergency rescue	158,978,500	RMB
Times of emergency rescue drills conducted	6,943	/
Number of participants in emergency rescue	197,021	/
Safe, civilized and standardized construction sites	301	/

### Development and training

Key indicators	2020	
Number of employees trained	78,062	
Number of trained employees by employee category	Management personnel	24,682
	Professional and technical personnel	44,465
	Skilled personnel	8,915
Number of man-times trained	328,700	

Key indicators		2020
Number of employees received occupational health training		12,112
Number of employees received occupational health training by gender	Male	10,667
	Female	1,445
Number of employees received occupational health training by employee category	General personnel	9,609
	Management personnel	2,503
Total hours of occupational health training received by employees		135,564
Total hours of occupational health training received by employees by gender	Male	121,317
	Female	14,247
Total hours of occupational health training received by employees by employee category	General personnel	114,757
	Management personnel	20,807
Number of employees received safety training		866,619
Number of employees received safety training by gender	Male	779,248
	Female	87,371
Number of employees received safety training by employee category	General personnel	749,524
	Management personnel	117,095
Total hours of safety training received by employees		23,972,093
Total hours of safety training received by employees by gender	Male	21,469,463
	Female	2,502,630
Total hours of safety training received by employees by employee category	General personnel	20,701,822
	Management personnel	3,270,271

## Supply chain management

Key indicators		2020
Total number of suppliers		155,285
Total number of suppliers (domestic)		155,003
Number of suppliers by geographical region	East China	51,061
	South China	11,667
	Central China	18,673
	North China	30,653
	Northwest China	6,833
	Southwest China	27,849
	Northeast China	8,245
	Taiwan, Hong Kong and Macau	22
Total number of suppliers (overseas)		282

## Product responsibility

Key indicators		2020
Customer satisfaction rate		83.3%
Number of major customer complaints		0
Complaint handling closure rate		100%

\*The scope of this data is the annual customer satisfaction and the number of complaints of MCCZY.

## Anti-corruption

Key indicators		2020
Number of corruption lawsuits concluded by MCC or its employees		0

## Community investment

Key indicators	2020	Unit
Poverty alleviation by consumption	33,167,500	RMB
Poverty alleviation by funds	8,424,300	RMB
Overseas donation	4,473,300	RMB

# UN Sustainable Development Goals Mapping Table

UN Sustainable Development Goals	Our Actions	UN Sustainable Development Goals	Our Actions
	Contributing to poverty alleviation by consumption, officials, engineering and donation.		Carrying out voluntary assistance activities in impoverished communities domestic and overseas to promote the reduction of inequality.
	Organizing donations and voluntary service activities, donating food and other daily necessities.		Giving full play to business advantages, continue to deepen the protection of affordable housing projects; carrying out environmental treatment projects, such as sewage treatment, garbage treatment, ecological restoration and etc.
	Strengthening the prevention and control of occupational diseases and creating a safe and healthy working environment for employees.		Promoting green technology research and development, such as solid waste resource utilization, energy efficient utilization, etc.; implementing green procurement, and promoting green and low-carbon concepts in the supply chain.
	Carrying out donation activities to help poor areas build schools.		Formulating energy-saving goals, improving energy efficiency, promoting energy-saving and emission-reduction technologies, and selecting new environmental protection equipment.
	Protecting the rights and interests of female employees, adhering to gender equality, equal pay for equal work, and focusing on caring for female employees.		Carrying out ecological restoration, sewage treatment, and watershed treatment projects.
	Carrying out upgrading and reconstruction projects of tap water and sewage pipe networks in poor areas to provide community residents with high-level medical services.		Strengthening soil pollution prevention and control; carrying out soil remediation projects.
	Strengthening the development of clean energy technologies.		Eliminating child labor and forced labor; zero tolerance for corruption, extortion and fraud.
	Protecting employees' rights and interests, building a comprehensive salary system; providing employees with career development channels and training and learning opportunities; providing rich employee benefits, and caring for employees in difficulties.		Actively cooperating with the government, industry partners, and scientific research institutions to achieve a win-win situation.
	Focusing on housing construction, transportation and municipal infrastructure construction, mid-to-high-end real estate and other infrastructure fields; strengthening scientific research and development and innovation platform construction.		

# Index of Reporting Guide

## HKEX - Environmental, Social and Governance Reporting Guide Index

### Environmental

General Disclosure & KPI	Indicator Description	Chapter References
<b>Aspect A1: Emissions</b>		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste	NEW MISSION: LEADING THE GREEN FUTURE Strict and Solid Environmental Management
KPI	A1.1 The types of emissions and respective emissions data.	2020 Key Performance Indicators - Key Environmental Indicators
	A1.2 Greenhouse gas emissions in total (in tonnes) and , where appropriate, intensity (e.g. per unit of production volume, per facility).	2020 Key Performance Indicators - Key Environmental Indicators
	A1.3 Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility)	2020 Key Performance Indicators - Key Environmental Indicators
	A1.4 Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	2020 Key Performance Indicators - Key Environmental Indicators
	A1.5 Description of measures to mitigate emissions and results achieved.	NEW MISSION: LEADING THE GREEN FUTURE Strict and Solid Environmental Management; Low-Carbon Operation to Protect Environment
	A1.6 Description of how hazardous and non-hazardous waste are handled, reduction initiatives and results achieved.	NEW MISSION: LEADING THE GREEN FUTURE - Low-Carbon Operation to Protect Environment
<b>Aspect A2: Use of Resources</b>		
General Disclosure	Policies on the efficient use of resources, including energy, water and other raw materials	NEW MISSION: LEADING THE GREEN FUTURE Strict and Solid Environmental Management; Low-Carbon Operation to Protect Environment
KPI	A2.1 Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (kWh in '000s) and intensity (e.g. per unit of production volume, per facility).	2020 Key Performance Indicators - Key Environmental Indicators
	A2.2 Water consumption in total and intensity (e.g. per unit of production volume, per facility).	2020 Key Performance Indicators - Key Environmental Indicators
	A2.3 Description of energy use efficiency initiatives and results achieved.	NEW MISSION: LEADING THE GREEN FUTURE - Low-Carbon Operation to Protect Environment
	A2.4 Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency initiatives and results achieved.	NEW MISSION: LEADING THE GREEN FUTURE - Low-Carbon Operation to Protect Environment
	A2.5 Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced.	Not applicable
<b>Aspect A3: The Environmental and Natural Resources</b>		
General Disclosure	Policies on minimising the issuer's significant impacts on the environment and natural resources	NEW MISSION: LEADING THE GREEN FUTURE Strict and Solid Environmental Management; Low-Carbon Operation to Protect Environment
KPI	A3.1 Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	NEW MISSION: LEADING THE GREEN FUTURE Strict and Solid Environmental Management; Low-Carbon Operation to Protect Environment

Social

General Disclosure & KPI	Indicator Description	Chapter References
<b>Aspect B1: Employment</b>		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare.	NEW JOURNEY: SHARING A HARMONIOUS HOME - Employee Development to Promote Well-being
KPI	B1.1 Total workforce by gender, employment type (for example, full- or part-time), age group and geographical region.	2020 Key Performance Indicators- Key Social Indicators
	B1.2 Employee turnover rate by gender, age group and geographical region.	Will improve the data collection and disclose it in the future.
<b>Aspect B2: Health and Safety</b>		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards.	NEW JOURNEY: SHARING A HARMONIOUS HOME - Joint Management of Quality and Safety
KPI	B2.1 Number and rate of work-related fatalities.	2020 Key Performance Indicators - Key Social Indicators
	B2.2 Lost days due to work injury.	2020 Key Performance Indicators - Key Social Indicators
	B2.3 Description of occupational health and safety measures adopted, and how they are implemented and monitored.	NEW JOURNEY: SHARING A HARMONIOUS HOME - Joint Management of Quality and Safety
<b>Aspect B3: Development and Training</b>		
General Disclosure	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.	NEW JOURNEY: SHARING A HARMONIOUS HOME - Employee Development to Promote Well-being
KPI	B3.1 The percentage of employees trained by gender and employee category.	Will improve the data collection and disclose it in the future.
	B3.2 The average training hours completed per employee by gender and employee category.	Will improve the data collection and disclose it in the future.
<b>Aspect B4: Labour Standards</b>		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child and forced labour.	NEW JOURNEY: SHARING A HARMONIOUS HOME - Employee Development to Promote Well-being
KPI	B4.1 Description of measures to review employment practices to avoid child and forced labour.	NEW JOURNEY: SHARING A HARMONIOUS HOME - Employee Development to Promote Well-being
	B4.2 Description of steps taken to eliminate such practices when discovered.	NEW JOURNEY: SHARING A HARMONIOUS HOME - Employee Development to Promote Well-being
<b>Aspect B5: Supply Chain Management</b>		
General Disclosure	Policies on managing environmental and social risks of the supply chain.	NEW JOURNEY: SHARING A HARMONIOUS HOME - Joint Management of Quality and Safety
KPI	B5.1 Number of suppliers by geographical region	2020 Key Performance Indicators - Key Social Indicators
	B5.2 Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, and how they are implemented and monitored.	NEW JOURNEY: SHARING A HARMONIOUS HOME - Joint Management of Quality and Safety

General Disclosure & KPI	Indicator Description	Chapter References
<b>Aspect B6: Product Responsibility</b>		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress.	SUSTAINABLE MANAGEMENT – Compliance Management; NEW JOURNEY: SHARING A HARMONIOUS HOME - Joint Management of Quality and Safety  MCC complies with the Advertising Law of the People's Republic of China and formulated MCC Group and MCC Brand Management Measures, MCC Brand Identification Manual and other documents to regulate the use of corporate trademarks.
KPI	B6.1 Percentage of total products sold or shipped subject to recalls for safety and health reasons.	Not applicable
	B6.2 Number of products and service related complaints received and how they are dealt with.	NEW PATTERN: FOCUSING ON HIGH-QUALITY DEVELOPMENT - Upholding the Dual Circulation Economy; 2020 Key Performance Indicators - Key Social Indicators
	B6.3 Description of practices relating to observing and protecting intellectual property rights.	NEW ENERGY: INNOVATION SPARKS VITALITY Establishing Platform for Openness and Win-win Cooperation
	B6.4 Description of quality assurance process and recall procedures.	NEW JOURNEY: SHARING A HARMONIOUS HOME Joint Management of Quality and Safety
	B6.5 Description of consumer data protection and privacy policies, and how they are implemented and monitored.	SUSTAINABLE MANAGEMENT – Compliance Management
<b>Aspect B7: Anti-corruption</b>		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to bribery, extortion, fraud and money laundering.	SUSTAINABLE MANAGEMENT – Compliance Management
KPI	B7.1 Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases.	2020 Key Performance Indicators - Key Social Indicators
	B7.2 Description of preventive measures and whistle-blowing procedures, and how they are implemented and monitored.	SUSTAINABLE MANAGEMENT – Compliance Management
<b>Aspect B8: Community Investment</b>		
General Disclosure	Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests.	NEW JOURNEY: SHARING A HARMONIOUS HOME Society Contribution and Value Creation
KPI	B8.1 Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport)	NEW JOURNEY: SHARING A HARMONIOUS HOME - Society Contribution and Value Creation
	B8.2 Resources contributed (e.g. money or time) to the focus area.	2020 Key Performance Indicators - Key Social Indicators



## SSE - Guidelines of SSE for Environmental Information Disclosure of Listed Companies Index

Disclosure Requirements	Page Reference
1. Company environmental protection policy, annual environmental protection objectives and results	NEW MISSION: LEADING THE GREEN FUTURE - Strict and Solid Environmental Management; 2020 Key Performance Indicators - Key Environmental Indicators
2. Total annual resource consumption of the company	2020 Key Performance Indicators - Key Environmental Indicators
3. Environmental protection investment and development of environmental technology	NEW MISSION: LEADING THE GREEN FUTURE - Green Transformation to Bring an Ecological Future
4. The type, amount, concentration and destination of the company's emissions	NEW MISSION: LEADING THE GREEN FUTURE - Low-Carbon Operation to Protect Environment; 2020 Key Performance Indicators - Key Environmental Indicators
5. Construction and operation of environmental protection facilities of the company	NEW MISSION: LEADING THE GREEN FUTURE - Low-Carbon Operation to Protect Environment
6. Company's waste treatment and disposal in the production process, waste products recycle and comprehensive utilization	NEW MISSION: LEADING THE GREEN FUTURE - Low-Carbon Operation to Protect Environment
7. Voluntary agreements signed with the environmental protection authorities on the act of improving the environment	There was no record in 2020.
8. The company rewarded by the environmental protection authorities	There was no record in 2020.
9. Other environmental information voluntarily disclosed by the company	2020 Key Performance Indicators - Key Environmental Indicators



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