



China National Machinery Industry Corporation
2016 Social Responsibility Report



# **About the Report**



January 1, 2016-December 31, 2016. The Report also includes additional contents and data that predates the stated reporting period.

#### Reporting Cycle

This Report is annually published and it is the seventh social responsibility report released by China National Machinery Industry Corporation (hereinafter referred to as "SINOMACH").

#### Reporting Scope

China National Machinery Industry Corporation headquarters and its subsidiaries (see "About Us" for organizational structure).

#### Reporting Data Sources

All data in this Report comes from SINOMACH's statistical reports, financial reports and other official documents, and has been audited by relevant departments.

#### **Compilation Conformance**

Guidelines to the State-owned Enterprises Directly under the Central Government on Fulfilling Corporate Social Responsibilities by State-owned Assets Supervision and Administration Commission of the State Council (SASAC) Sustainability Reporting Guidelines (G4) from Global Reporting Initiative (GRI)

ISO 26000 - Guidance on Social Responsibility (2010) by International Organization for Standardization (ISO) GB/T 36001 Guidance on Social Responsibility Reporting by General

Administration of Quality Supervision, Inspection, and Quarantine of China

(AQSIQ) and Standardization Administration of China

Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises

(CASS-CSR3.0) by Chinese Academy of Social Sciences (CASS)

 ${\it Guidelines on Social Responsibility of Chinese \ Industrial \ Enterprises \ and \ Industrial}$ 

Associations by China Industrial Economic Federation

#### References to SINOMACH

In this Report, "SINOMACH", "Group Corporation", "the Group", "the Company", or "We" refer to China National Machinery Industry Corporation.

#### Access to this Report

This Report is prepared and released in both Chinese and English versions, and is available in paper and electronic formats. If you need the paper version, please contact us. You may visit our website to download the online version.

China National Machinery Industry Corporation

Address: No.3 Danling Street, Haidian District, Beijing

P.C: 100080

Contact Person: He Yuan, Party Committee Department (Corporate Culture

epartment)

Tel.: 86-10-82606741

Fax: 86-10-82688724

E-mail: heyuan@sinomach.com.cn



www.sinomach.com.cn







- Based on the stable triangle, the logo, with the block structure as design element, fully shows SINOMACH's feature as a machinery enterprise, and the sincere, prudential and practical corporate image of SINOMACH.
- The "M" element represents the machinery industry led by SINOMACH. The "M" image also indicates the Group's ambition to revitalize China's machinery industry and become a major player in the world.
- In the logo, the Chinese character "人" ("human being" in English) highlights SINOMACH's peopleoriented philosophy. With talented people gathering together, it contributes to the future development of the machinery industry.
- The triangular shape symbolizes a majestic mountain.
   The "M" element looks like an eagle spreading its wings and soaring at the peak, which implies that SINOMACH challenges itself unceasingly and seeks for new development.
- The logo, with balanced color and perfect symmetry, reflects the unique beauty of harmony and balance as well as the concept of "harmonious SINOMACH".
- The logo's shape is similar to that of the Great Wall, representing Chinese national characteristics. The trapezoid indicates SINOMACH's steadiness, honesty and reliability.



# **CONTENTS**

7		1	1
	L	J	

## **Responsible SINOMACH**

—Deepening Responsibility Management

Social Responsibility Management Model	28
Organizational System for Social Responsibility	29
Management	
Social Responsibility Management Promotion	30
Social Responsibility Material Topics Analysis	32
Stakeholders Communication and Engagement	33

04 Message from the Chairman

Social Responsibility Performance

08 About Us

- 20 Corporate Culture
- 21 Corporate Strategy
- 22 Feature on Responsibility: Promoting Targeted Poverty Alleviation, Exploring SINOMACH Mode

Value-Creating SINOMACH
—Making Contributions to the Real Economy

Stabilizing Operation and Development	36
Strengthening Basic Management	37
Creating Value Hand in Hand	40
Fulfilling the Dream of "Relt and Road"	46

03

## **Innovative SINOMACH**

Driving Reform and Transformation

50 Strengthening Technological Innovation Promoting Management Innovation 59 Deepening Corporate Reform 61 02

# 05

## **Happy SINOMACH**

Building a Harmonious Society

Growing Together with Employees Consolidating Foundation for Development by 78 **Ensuring Work Safety** Seeking Win-Win Cooperation with Partners 81 Promoting Harmony Through Community

## **Green SINOMACH**

—Building a Beautiful China

Building a Green Management Platform Implementing Whole-Process Green Management Practicing the Philosophy of Green and 71 **Environmental Protection** 

88 Outlook

90 Reporting Index

91 Comparison Table with the Ten Principles of **UN Global Compact** 

92 Comparison Table with UN Sustainable **Development Goals** 

94 Feedback Form



Currently, as economic globalization is continuously deepening, and global climate change, environmental pollution, resource shortage, labor-capital contradiction, poverty and disease and other problems are becoming more serious, corporate social responsibility has drawn world-wide attention and become an important part of corporate competitiveness as well as a crucial path to achieve global sustainable development. For a long time, SINOMACH has paid special attention to CSR work, insisted on regarding enhancing sustainability as the core objective, and comprehensively strengthened CSR management to enhance the capability of creating economic, social and environmental value. Looking back on 2016, we endeavored to practice the five concepts of innovative, coordinated, green, open and shared development, gained outstanding achievements in building a "responsible, value-creating, innovative, green and happy" SINOMACH, and made a good start for the 13th Five-Year Plan.

We are dedicated to building a responsible SINOMACH and deepening our responsibility management. We continuously deepen our understanding of CSR, promote the building of "a responsible, value-creating, innovative, green and happy SINOMACH" by focusing on our four main business sectors, and constantly improve the organizational system for CSR management and the CSR committee system in the Group Company. Through strengthening CSR capacity building, carrying out CSR research, building CSR brand and promoting CSR informatization, we continuously innovate in the approaches to integrating the philosophy and requirements of social responsibility into the decision-making and business operation of

the Group Company. We highly value the management of stakeholders, and are devoted to forming a harmonious relationship with stakeholders to seek co-existence and win-win results. In 2016, our social responsibility report was rated "five-star", the highest rating, by CASS, and was awarded "Leading Enterprise" in "GoldenBee CSR Report Roll 2016". Our subsidiaries China Machinery Engineering Corporation, China CAMC Engineering Co., Ltd. and China National Heavy Machinery Corporation, won 7 awards in the Beauty of Chinese Enterprises Abroad —Image of Chinese CSR Along the "Belt and Road" campaign held by China International Contractors Association.

We are dedicated to building a value-creating SINOMACH to contribute to the real economy. Facing sophisticated and severe domestic and international environment and arduous tasks of maintaining reform and development, we take the lead in "economic new normal", focus on our four main business sectors of equipment R & D and manufacturing, project contracting, trade and services and finance & investment, continuously consolidate fundamental management, and accelerate transformation and upgrading. We improve the layout of the industrial chain, and stress the scale effect and synergy to promote the sustainable development and upgrading of China's machinery industry and contribute to the development of the real economy. In 2016, SINOMACH gained operating revenue of RMB 214.16 billion and total profit of RMB 8.666 billion, paid RMB 9.553 billion of taxes and reached a total export-import volume of USD 10.18 billion, ranking No.293 among Fortune Global 500.

We are dedicated to building an innovative SINOMACH to drive the reform and transformation. We closely focus on the objective of "improve the capacity for independent innovation and the core competitiveness to support the rapid, healthy and sustainable development of SINOMACH", adhere to "rebuild advantages to re-innovate, promote transformation and upgrading to start the business once again" and maintain strategyoriented and platform-based construction. We vigorously promote resource integration, reinvigorate trade by promoting science and technology, and create an innovative environment to apply for state-level science and technology projects. We expand fields for our qualifications to promote industrialization of research results and continuously promote scientific and technological innovation, management innovation and the corporate reform to transform the Group Company and provide innovation support for building it into a world-class enterprise with international competitiveness. In 2016, we invested RMB 4.79 billion in scientific and technological innovation, which accounted for 2.23% of the main business revenue; we had 1,453 patents authorized, among which 509 were patents for invention; we won 352 outstanding achievement awards at ministerial and provincial-level, national industrial level or higher, among which 82 were for scientific and technological achievements, and 178 were for survey and design consulting services; we led or participated in setting 725 standards, among which 3 were international standards, and 221 were national standards

We are dedicated to building a green SINOMACH and serving a beautiful

China. We stick to green, low-carbon and sustainable development, strengthen environmental management during production and operation, and use energy, raw materials, land and water responsibly. We depend on technological innovation to realize energy saving and cost-reducing, continuously improve the recycling rate of resources to proactively promote energy saving and emission reduction and realize low-carbon development, with an aim to promote green transformation and upgrading of the Group Company and contribute to building a beautiful China. In 2016, SINOMACH's total energy consumption reached 60.368 tons of standard coal. It emitted 566.3 tons of SO<sub>2</sub> and 85.35 tons of COD.

We are dedicated to building a happy SINOMACH and building a harmonious society. We insist on people-oriented management, advocate sharing development and grow together with our employees. We work with external partners and share development outcomes with local communities to promote the harmonious development of the society. In 2016, there was no major work safety accident in SINOMACH. We gave work safety training to 27,817 person times, granted RMB 3.167 million of loving fund internally and the total investment in social poverty alleviation reached RMB 320 million.

A better future is waiting for us. SINOMACH will further enhance its sense of mission and responsibility and rise to challenges with determination to continuously explore the new situation of reform and development in SINOMACH, and pave the way for the 19th National Party Congress with outstanding achievements!

# Social Responsibility Performance

# **Economic Performance**

	2012	2013	2014	2015	2016
Total assets (RMB Billion)	195.2	234.6	253.13	261.43	272.02
Operating revenue (RMB Billion)	213.9	242.4	249.15	220.80	214.16
Asset-liability ratio (%)	73.8	74.6	74.9	69.8	68.3
Equities attributable to equity holders of the parent company (RMB Billion)	35.26	41.84	45.46	57.74	62.06
Performance assessment by SASAC (level)	А	А	А	А	А
Fortune Global 500 (ranking)	367	326	278	288	293
ENR Top 250 International Contractors (ranking)	24	25	25	27	23
Scientific research investment (RMB Billion )	3.8	4.55	4.4	4.62	4.79
Professional and technical employees	41,466	48,322	49,134	48,043	50,000
Academicians	2	2	2	4	4
Completed national-level research projects	46	70	71	85	74
Awards of provincial or ministerial level or above	258	347	329	306	352
National patents	924	1184	1323	1415	1453
Formulation and revision of national industry standards	593	889	754	659	725
Commercialization rate of research results (%)	_	>95	>95	>95	>95





# **Environmental Performance**

	2012	2013	2014	2015	2016
Environmental protection input (RMB Million)	9.7	11.8	13	19	23.82
Total energy consumption (10,000 TCE)	41.1272	34.2200	28.5700	25.8358	60.3680
Overall energy consumption per ten thousand RMB operating revenue (TCE/10,000 RMB)	0.0072	0.0056	0.0039	0.0036	0.0040
Overall energy saving (10,000 TCE)	_	6.69	13.30	18.77	0.70
SO <sub>2</sub> emission (Ton)	981.2	720.3	599.7	530.7	566.3
COD emission (Ton)	340.87	256.90	44.11	38.84	85.35

Note: before 2016, the environmental performance of CNEG wasn't included the SINOMACH assessment scope of environmental performance.

# 齫

# Social Performance

	2012	2013	2014		2016
Total number of employees	93,660	109,245	109,900	111,603	97,516
Labor contract signing rate (%)	100	100	100	100	100
Work safety input (RMB Million)	304.56	697.59	462.59	485.99	497.49
Work safety hazards fixing rate (%)	>99.00	99.39	99.30	100.00	99.44
Major safety accidents (Cases)	0	0	0	0	0
Employees seriously injured in accidents (Number)	0	2	2	0	0
Dead employees (Number)	0	0	3	2	1
Employees' physical examination rate (%)	100	100	100	100	100
Major complaints from partners (Cases)	0	0	0	0	0
Total taxation (RMB Billion)	9.69	8.99	11.46	9.74	9.553



2016 Social Responsibility Report

China National Machinery Industry Corporation | 07

# **About Us**



# **Company Profile**

Established in January 1997, China National Machinery Industry Corporation (SINOMACH) is a key state-owned enterprise directly under the central government and one of the Fortune Global 500 companies. Based in Zhongguancun, Beijing China's Silicon Valley, SINOMACH has about 110,000 employees, 36 wholly-owned and holding subsidiary companies, 9 listed companies and 249 overseas enterprises and branch organizations.

SINOMACH is a diversified, international and comprehensive group in equipment industry dedicated to providing quality global services. The four main businesses are mechanical equipment R&D and manufacturing, project contracting, trade and services, and finance and investment. These businesses cover key industries of the national economy, including mechanics, energy, transportation, automobiles, light industry, ship building, metallurgy, construction, electric power, environmental protection and aerospace.

For years, SINOMACH has been promoting further improvement and reconstruction of its core competence through technology and management innovation. By accelerating the pace of "Going Global" and deepening strategic transformation, SINOMACH has changed from a traditional management-oriented SOE to a modern enterprise with relatively strong competitiveness, and it has become large-scale centrally-administered SOE with a wide coverage, a complete business chain and strong capacity for comprehensive research and development.

SINOMACH adheres to the corporate philosophy of "work together, win together", and is devoted to developing the corporate culture of "harmony". Centering on the two major business sectors of equipment manufacturing and modern manufacturing services, the Group strives to build a world-class enterprise with international competitiveness, and become a pacemaker in China's machinery industry as well as the driving force for the progress of human civilization.

The number of employees

110,000



The number of listed companies





The number of overseas service agencies over

249





# **Corporate Governance**

SINOMACH is a solely state-owned enterprise registered in accordance with the Company Law of the People's Republic of China. The SASAC performs duties as the contributor of SINOMACH according to law upon the authorization of the State Council. According to Interim Regulations on the Board of Supervisors in State-owned Enterprises, the State Council dispatches a Board of Supervisors to the Group to supervise the maintenance and increase of the value of state-owned assets in the Group.

SINOMACH has established the Board of Directors as the decision-making body, which plays a crucial role in corporate governance and determines key issues of the reform and development of SINOMACH. *The Articles of Incorporation* and *Working System of the Board of Directors* and other documents on corporate governance of SINOMACH elaborate on duties, rights and interests and obligations of the Board of Directors and the General Manager.

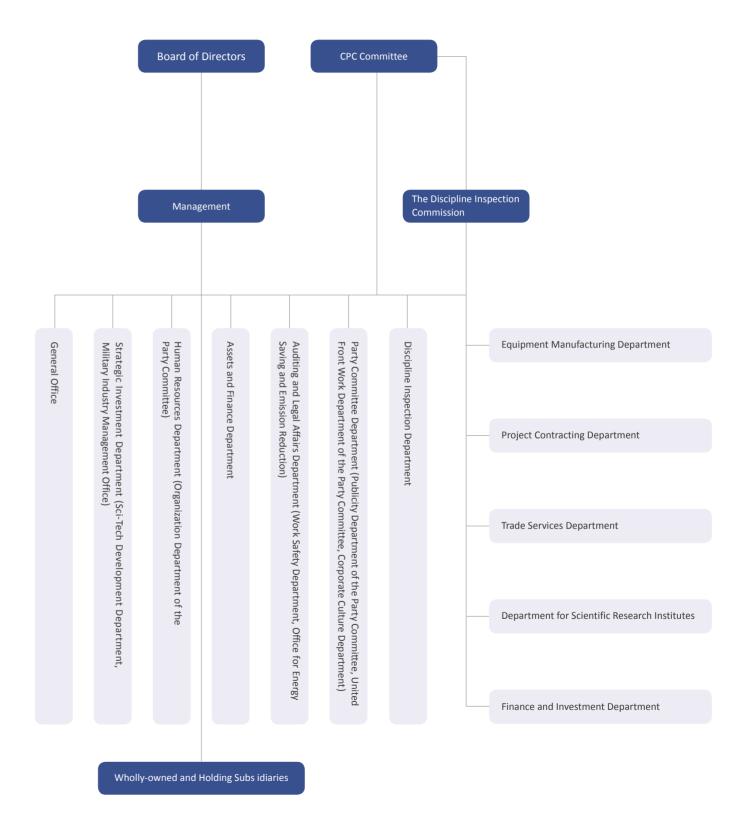
SINOMACH strictly follows the spirit of the Work Conference on Party Building in State-owned Enterprises, and continuously strengthens the organic unification of Party leadership and corporate governance. It has made clear and strengthened the statutory position of the Party organization in SINOMACH's corporate governance structure, and makes sure that the Party organization can have a more systematized, institutionalized and materialized impact on corporate governance.

In 2016, SINOMACH held 12 meetings of the Board of Directors, deliberated and put to vote on 43 proposals and listened to 9 reports. Special committees under the Board of Directors convened 10 meetings in total, six among which were in Remuneration and Evaluation Committee, and four were in Auditing and Risk Management Committee.

Board of Directors				
Ren Hongbin	Chairman			
Shi Ke	Vice Chairman			
Xu Jian	Director			
Zhang Lailiang	Outside Director			
Wu Xiaogen	Outside Director			
Gao Fulai	Outside Director			
	Outside Director			
Su Weike	Employee Director			

Senior Management				
Ren Hongbin	Deputy Secretary of the Party Committee and Chairman			
Shi Ke	Secretary of the Party Committee and Vice Chairman			
Xu Jian	Deputy Secretary of the Party Committee and General Manager			
Sun Derun	Member of the Standing Committee of the CPC and Deputy General Manager			
Zeng Xiangdong	Member of the Standing Committee of the CPC and Deputy General Manager			
Luo Jiamang	Member of the Standing Committee of the CPC and Chief Accountant			
Xie Biao	Member of the Standing Committee of the CPC and Deputy General Manager			
Ding Hongxiang	Member of the Standing Committee of the CPC and Deputy General Manager			
Wang Kewei	Member of the Standing Committee of the CPC and Secretary of Commission for Discipline Inspection			
Liu Jingzhen	Member of the Standing Committee of the CPC and Deputy General Manager			

# **Organizational Structure**



# **Company Timeline**

### • 1997-2002

 China National Machinery Equipment (Group) Corporation (CNMEC) was founded.

• China Perfect Machinery Industry Corp. Ltd. and six other companies became the first batch of subsidiaries of CNMEC.

#### 1999

- Beijing Materials Handling Research Institute and other 20 scientific research institutes were incorporated into CNMEC.
- CMEC and 30 other enterprises were incorporated into CNMEC.

• TRIED and another scientific research institute, Design Research Institute and seven other survey and design companies joined CNMEC.

#### 2001

• There were adjustments in the leading group. Mr. Ren Hongbin was appointed as General Manager of CNMEC.

#### 2002

- The first employee sports meeting was
- The management philosophy of "three transitions" was put forward.
- The development strategy of "regarding project contracting as the main body, and domestic & international trade and high-tech product development & production as two wings" was put forward.



(Group) Corporation was founded.

## 2003-2005

#### 2003

- SINOMACH Finance Co., Ltd. was founded.
- The first SINOMACH Science and Technology Forum was held.
- China Auto CAIEC Ltd. and five other enterprises joined.

#### 2004

- China Automobile Trading Co., Ltd. was incorporated into CNMEC.
- SUMEC Group Corporation was spun off from
- The first General Assembly of Representative Party Members was held.

- Luoyang Bearing Sciences and Technology Co., Ltd. (ZYS) was listed, which was the first listed company in the Group.
- CNMEC was renamed "China National Machinery Industry Group Company" (SINOMACH).
- AE and CNAICO were established.
- The Group's headquarters was relocated to Zhongguancun.
- "Harmony" culture construction was put forward.

2005

## 2006-2008

Love Fund was established.

Ochina Foma (Group) Co., Ltd. and China Ocean Aviation Group Inc. were incorporated

#### 2008

- YTO Group Corporation was incorporated
- SINOMACH donated money and materials worth RMB 4.586 million to regions stricken by Wenchijan earthquake
- The business volume broke RMB 100 billion for the first time.
- SINOMACH was listed among Top 100 companies in the machinery industry and ranked first for the first time.
- The goal of "rebuilding SINOMACH in three years" was put forward.
- The business structure of "three main business sectors" was put forward.

2008

YTO Group Corporation joined SINOMACH.

• 2009-2011

- The Group was renamed "China National Machinery Industry Corporation".
- The first session of the first term of Board of Directors was held.
- China Academy of Agricultural Mechanization Sciences was incorporated into SINOMACH.
- SINOMACH was evaluated as Grade-A Stateowned enterprise by the SASAC.

#### 2010

- The first SINOMACH Corporate Social Responsibility Report was released.
- The goal of "rebuilding SINOMACH in three years" was outperformed in advance.

- SINOMACH was listed among Fortune Global 500 for the first time and ranked 435th
- SINOMACH Capital Management Corporation was established.
- China SINOMACH Heavy Industry Corporation was established.
- The goal of building "a world-class enterprise" was put forward.
- The business structure of "two main areas and three main business sectors" was put forward.

# 2010

Social Responsibility Report was released.



## • 2012-2014

#### 2012

- January 28 was set "SINOMACH Loving Day".
- Chairman Ren Hongbin was elected alternate member of the CPC Central Committee.
- The business volume broke RMB 200 billion for the first time.
- The objective of building a "responsible, value-creating, innovative, green and happy SINOMACH" was put forward.
- The requirement of "quality growth" was put forward.

#### 2013

- SINOMACH and China National Erzhong Group Co. were jointly reorganized.
- SINOMACH Precision Industry Co., Ltd. was established

- China-Belarus Industrial Park was founded
- SINOMACH ranks 278th among Fortune Global 500, the highest ranking ever.

2013

reorganized.

SINOMACH and China

National Erzhong Group

Co. (CNEG) were jointly



2015-2016

established

Ltd. was founded.

was proposed.

2016

SINOMACH Capital Holding Co., Ltd. was

SINOMACH Intelligence Technology Co.,

• The development goals of "starting the

business once again" and "rebuilding an

international SINOMACH" were put forward.

• The "four-wheel-driven" business structure

• Chairman Ren Hongbin was appointed

Chairman of Infrastructure Working Group

• Chairman Ren Hongbin was appointed

Chairman of Infrastructure Working Group.

• "Danling spirit" was put forward.

in B20 Hangzhou Summit.

2016

China National Machinery Industry Corporation | 13

Chairman Ren Hongbin was appointed Chairman of Infrastructure Working Group.



The first SINOMACH Corporate



The Group was renamed "China National Machinery Industry Corporation".



China National Machinery Equipment

Luoyang Bearing Sciences and Technology Co., Ltd. (ZYS) was listed, which was the first listed company in the Group.

# **Global Business Layout**

Who	olly-owned and h
China Machinery Engineering Corporation	CMEC
China CAMC Engineering Co., Ltd.	CAMCE
China Foma (Group) Co., Ltd.	CFMC
China Ocean Aviation Group Inc.	COAGI
China Geo-Equipment Corporation	CGE
China Machinery Industry Corporation	SINOCONST
China National Machine Tool Sales and Technical Service Corporation	CNMTC
China National Heavy Machinery Corporation	СНМС
China National Automation Control System Corp.	CACS
China SINOMACH Heavy Industry Corporation	SINOMACH HEAVY INDUSTRY
SINOMACH Finance Co., Ltd.	SINOMF
SINOMACH Automobile Co., Ltd.	SINOMACH AUTO
China National Automotive Industry International Corporation	CNAICO
SINOMACH Capital Management Corporation	SINOMACH- CAPITAL
China Academy of Agricultural Mechanization Sciences	CAAMS
China IPPR International Engineering Co., Ltd.	IPPR
SINOMACH Science and Technology Research Institute Co., Ltd.	SINOMACH-STRI
China National Erzhong Group Co.	CNEG

nolding enterprises (36)	
YTO Group Corporation	ΥΤΟ
SUMEC Group Corporation	SUMEC
China Perfect Machinery Industry Corp., Ltd.	CPF
China United Engineering Corporation	CUC
China Automobile Industry Engineering Corporation	AE
SIPPR Engineering Group Co., Ltd.	SIPPR
Shenyang Academy of Instrumentation Science Co., Ltd.	SAIS
China General Machinery Research Institute Co., Ltd.	HGMRI
Lanpec Technologies Limited	LANPEC
Luoyang Bearing Science and Technology Co., Ltd.	ZYS
Tianjin Research Institute of Electric Science Co., Ltd.	TRIED
China National Electric Apparatus Research Institute Co., Ltd.	CEI
SINOMACH Intelligence Technology Co., Ltd.	Sinomach Inteltech
Jinan Foundry and Metalforming Machinery Research Institute Co., Ltd.	JFMMRI
Chongqing Materials Research Institute Co., Ltd.	CIMRI
China National Heavy Machinery Research Institute Co., Ltd.	SINO-HEAVYMACH
Guilin Electrical Equipment Scientific Research Institute Co., Ltd.	GLESI
SINOMACH Capital Holding Co., Ltd.	SCHC



# **SINOMACH Global Presence**

By the end of 2016,

SINOMACH has established 249 enterprises and branch organizations in 86 countries and regions across the world.



Senegal/Guinea/Gabon/Congo (Brazzaville)/Ghana/ Cote d'Ivoire/Zimbabwe/Botswana/South Africa/ Sudan/ Niger/South Sudan/Ethiopia/Equatorial Guinea/Kenya/ Cameroon/Angola/Namibia/Mozambique/Nigeria/ Chad/Zambia



### Europe

Ukraine/Russia/Serbia/France/Sweden/Belarus/ UK/Germany



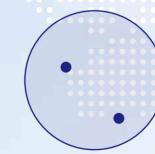
## **North America**

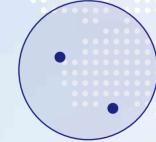
USA/Mexico/Cuba





Turkey/Azerbaijan/Kuwait/Saudi Arabia/Vietnam/ Yemen/Myanmar/Kazakhstan/Uzbekistan/ Indonesia/Turkmenistan/Iran/Mongolia/Kyrgyzstan/ Cambodia/Tajikistan/Singapore/Japan/Hong Kong/ Macau/Laos/Bangladesh/India/Sri Lanka/Thailand/ Malaysia/The Philippines/Iraq/Pakistan





## **South America**

Argentina/Colombia/Ecuador/Bolivia/ Venezuela/Peru/Chile



### Oceania

Australia/Papua New Guinea

16 | 2016 Social Responsibility Report China National Machinery Industry Corporation | 17

# **Roles in Social Organizations**



## Honors and Awards in 2016

China's Top 500
Foreign Trade
Enterprises





ENR Top 250 International Contractors

23<sup>rd</sup>



China's Import and Export Enterprises in the Machinery Industry

st

Fortune Global 500

**293**<sup>rd</sup>



China's Top 500 Enterprises

62<sup>nd</sup>



China's Top 100 Enterprises in the Machinery Industry

st





ENR Top 225 International Design Firms

**58**<sup>th</sup>

Performance Assessment for central SOEs under SASAC for 8 consecutive years

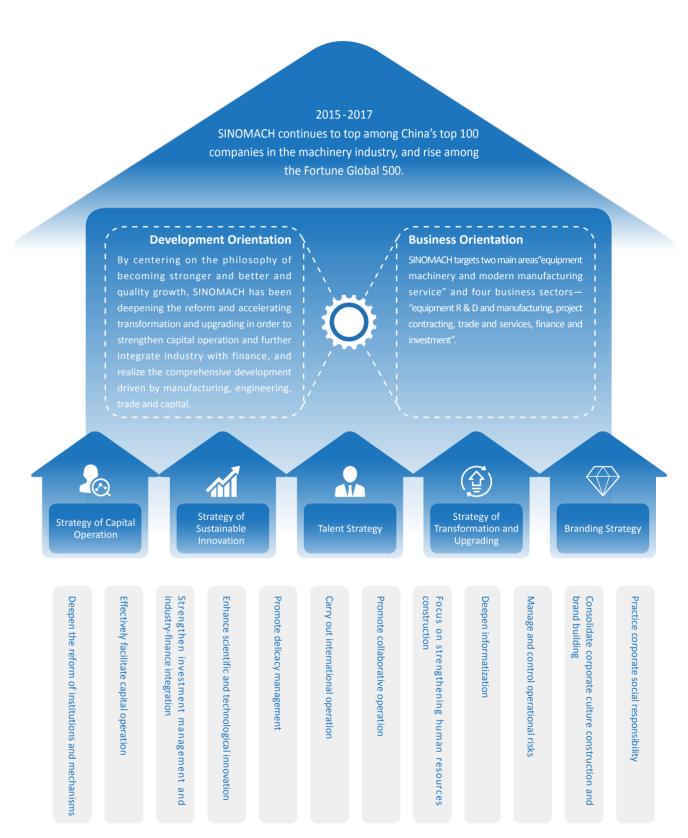




# **Corporate Culture**



# **Corporate Strategy**



# Feature on

# Promoting Targeted Poverty Alleviation, Responsibility | Exploring SINOMACH Mode

SINOMACH implements the national strategy of targeted poverty alleviation and elimination, focuses on the targeted effect and development-oriented poverty relief, and draws on the four approaches of supporting talents, dreams, industries and livelihood, preliminarily forming the SINOMACH mode of "rooted in education, based on industries, drawing on agricultural machinery and total efforts for improving livelihood". We hope to help poverty-stricken areas to enhance their development-oriented poverty relief, improve their capability of independent development and achieve sustainable growth.

In 2016, SINOMACH has implemented fixed poverty alleviation in 21 counties/townships in 11 provinces. SINOMACH has accumulatively invested over RMB 320 million in poverty relief, among which RMB 300 million are for the SOEs poverty alleviation development fund. A total of 57 poverty alleviation projects have been carried out. 17 SINOMACH management leaders with expertise and experience in poverty alleviation have been dispatched, among which ten SINOMACH management leaders were appointed as the first secretary of village committee.

## Poverty alleviation through education Action 1

Poverty alleviation starts from improving literacy. Education is an effective approach to fundamentally block the intergenerational transmission of poverty. SINOMACH draws on the vocational and technical education platform, which covers mechanical production, construction and installation and other technical skills, to launch various free vocational education projects and relevant skill trainings in targeted poverty alleviation counties/townships. Through supporting talents and dreams, the action has injected impetus into poverty alleviation work in impoverished areas.



Poverty alleviation fund

RMB 320 million+



SOEs poverty alleviation development fund

RMB 300 million



▲ SINOMACH holds the kick-off meeting for poverty alleviation through education in Chaotian District, Guangyuan City.

#### Setting up the Incentive Fund

- SINOMACH set up "Incentive Fund for Poverty Alleviation through Education in Chaotian District, Guangyuan City". In 2016, SINOMACH praised and granted fund to 125 students in poverty and ten grassroots
- Establishing a scholarship fund for 963 archived children from poor families in the SINOMACH Lizhi School of Gushi

#### **Conducting skill trainings**

- HGMRI trained teachers from Huaibin Secondary Vocational School for free, which promoted vocational education and indirectly improved local

### **Supporting educational facilities**

- SINOMACH aided Huaibin Vocational School in purchasing practical training equipment.
- While providing aid to construct the SINOMACH Lizhi School, the group equips classrooms with desks and chairs, the library and the reading room with books and relevant facilities, and students' dormitories with beds, quilt covers, sheets, pillowcases, water heaters and washing machines.

Establishing "SINOMACH mode" of poverty alleviation through education

- Low entry threshold for education: About one hundred poverty-stricken students from Chaotian District, Guangyuan City were registered as poverty-Technician College. Zhangjiakou China Geo-equipment Prospecting Engineering with Hebei Institute of Mechanical and Electrical Engineering Technician and
- purchased daily necessities in advance for freshmen from poor families, bore expenses, such as accommodation fees and textbook charges for students in
- Guaranteeing employment after graduation: Subsidiaries of SINOMACH

### Action 2

#### Poverty alleviation through industrial development

SINOMACH not only donated money and supplies to poverty-stricken areas, but also provided them with support in industrial development. Prioritizing industrial development is a long-term mechanism to help poor areas steadily increase their revenues. Based on corporate business and local resource advantages, SINOMACH supports and cultivates industries with local characteristics, and implements targeted poverty alleviation through industrial development to help impoverished areas realize independent development.



Chairman Ren Hongbin conducts poverty alleviation investigation in Chaotian District, Guangyuan City,

Helping Yulin Village, Chaotian District implement comprehensive exploitation and utilization of mountain land, developing efficient and high-quality agriculture.

Supporting poor households in Chaotian District of Guangyuan City to develop industries of Maliu embroidery, bee raising, Rattan pepper planting, etc.

Poverty alleviation through industrial development

Providing financial support to help Sunpeng Village, Gushi County to found lobster breeding cooperatives and construct the chicken house of chicken farms.

Marketing featured agricultural and sideline products of Gushi County, such as eggs and rice oil, to expand sales channels and improve the sales of local products.

HGMRI trained teachers from Huaibin Vocational School to promote vocational education, which has indirectly improved local employment.

#### Supporting the development of Maliu Embroidery and helping publicize the Chaotian District

Maliu Embroidery of Chaotian District, Guangyuan City, Sichuan Province was included in the list of national intangible cultural heritage in 2008. In 2016, Ren Hongbin, Chairman of SINOMACH', proposed the new mode of poverty alleviation through supporting the development of Maliu Embroidery. In this mode, SINOMACH invests in trainings for local left-behind women to teach them basic skills of Maliu Embroidery, and adds SINOMACH elements to the pattern of Maliu Embroidery. The Group purchases all embroidery works at the market price and then gives as gifts to customers, guests and friends home and abroad. By the end of 2016, 16 povertystricken women from Yulin Village, Yudong County, Chaotian District had attended the training and acquired basic skills of Maliu Embroidery. SINOMACH's first purchase order of Maliu Embroidery works was worth RMB 100,000, helping local villagers increase income through manual labor and skills. At the same time, the national intangible cultural heritage of Maliu Embroidery has been promoted and popularized.



Poverty-stricken left-behind women are embroidering.

22 | 2016 Social Responsibility Report China National Machinery Industry Corporation | 23

# Feature on

# Promoting Targeted Poverty Alleviation, Responsibility | Exploring SINOMACH Mode

Poverty alleviation through promoting agricultural mechanization Action 3

Agricultural modernization can accelerate the pace of poverty elimination in poor areas, and agricultural mechanization is the gateway to agricultural modernization. SINOMACH draws on its advantages in agricultural machinery and strength in agricultural machinery products and technologies to actively contribute to realizing agricultural modernization in impoverished areas and developing the unique poverty alleviation mode of reliving poverty through agricultural mechanization.

#### **Establishing Agricultural Machinery Cooperative**

SINOMACH donated agricultural machinery, which was worth over RMB 1 million, to Liuwei Village, Huaibin County, Henan Province, and established Agricultural Machinery Cooperative was established.



**Conducting Agricultural Machinery Project for** Targeted Poverty Alleviation

situation, which actively facilitated the mechanized



#### Conducting Agricultural Machinery R&D Tailored for Local Industries

Considering that walnut is the pillar industry in many impoverished villages in Chaotian District, SINOMACH promoted R&D and application of walnut peeling and drying machine.



▲ SUMEC employees are teaching local villagers in Siyang County to use the multi-



▲ SINOMACH Party Committee Secretary Shi Ke is conducting poverty alleviation investigation in Huaibin County, Henan Province.

#### Action 4

#### Poverty alleviation through improving people's livelihood

Improving the livelihood of people in povertystricken areas is an important work in poverty alleviation and development. SINOMACH has taken actions to solve problems for local people, such as poor power supply, rough roads, unhygienic water and dilapidated houses, and also built highways, dug water wells, renewed dilapidated houses and relocated local people to improve the infrastructure in villages and brought convenience to impoverished local



▲ General Manager Xu Jian conducts poverty alleviation investigation in Gushi County, Henan Province

#### Poverty alleviation through improving people's livelihood

#### **Building beautiful villages**

- The Group provided last-resort support to multiple projects such as renovating the village hall, culture square, road lamp and roads, and managing pools in Liuxu Village of Huaibin County.
- The Group sponsored and helped Sunpeng Village of Gushi build the local cultural public service infrastructure.
- The Group sponsored infrastructure construction in Yulin Village, Chaotian District of Guangyuan City, including roads, the village committee building and road lamps.
- HGMRI supported the targeted poverty-stricken village (Yangzhuang village, Renzhai county, Jieshou city, Anhui province) in building 23 roads with a total length of 13.5 km, finished throughhardening of roads between poverty-stricken villages and conducted activities of afforestation and environmental improvement in these villages.

#### **Making donations**

- SINOMACH Heavy Industry provided financial assistance and daily necessities worth approximately RMB 30,000 for 51 local destitute villagers in the targeted poverty alleviation village (Guanba Village, Lianghe Town, Xuyong County, Luzhou City, Sichuan Province).
- China Perfect Machinery Industry donated RMB 100,000 to the targeted poverty alleviation village (Heping Village, Lyxiang Town, Jinshan District, Shanghai City) as the initial fund of Yichuan Street Community Fund.

## Case

#### Conducting the National Poverty Alleviation Day Campaign of "Delivering Warmth in True Spirit"

October 17, 2016 is the third National Poverty Alleviation Day in China. SINOMACH, SIPPR and CNAICO established the working group on poverty alleviation and attended the flag-raising, opening and donation ceremonies of SINOMACH Lizhi School in Gushi County, Henan Province. SINOMACH donated RMB 700,000 and 1,000 school uniforms to Lizhi School. Moreover, SINOMACH authorized SIPPR to repair and renew water ponds for production in Gushi County. After completion, the water storage and retention of the project can meet the demand of irrigating 1,620 mu land owned by six groups of 844 villagers in two villages-Chenpeng Village and Yang Miao Village, Guantang County, which could improve irrigation conditions and meet the demand of agricultural production.



24 | 2016 Social Responsibility Report China National Machinery Industry Corporation | 25

# **RESPONSIBLE SINOMACH**

Deepening ResponsibilityManagement

Enhancing social responsibility management is necessary for SINOMACH to grow stronger and become a world-class central SOE, and also the intrinsic need for the enterprise to implement corporate strategy and practice corporate value. As a central SOE, SINOMACH shoulders the mission of "guiding the development of the machinery industry and promoting the progress of the human society" endowed by the country and the society. Based on building a responsible, value-creating, innovative, green and happy SINOMACH, SINOMACH has constantly improved social responsibility management. Through cultivating corporate vision and core value that focus on responsibility, SINOMACH has effectively integrated social responsibility into corporate mission and development strategy. With the guarantee of responsibility organizational and institutional construction, SINOMACH has actively explored social responsibility practices with SINOMACH characteristics and promoted the sustainable development of the Group.



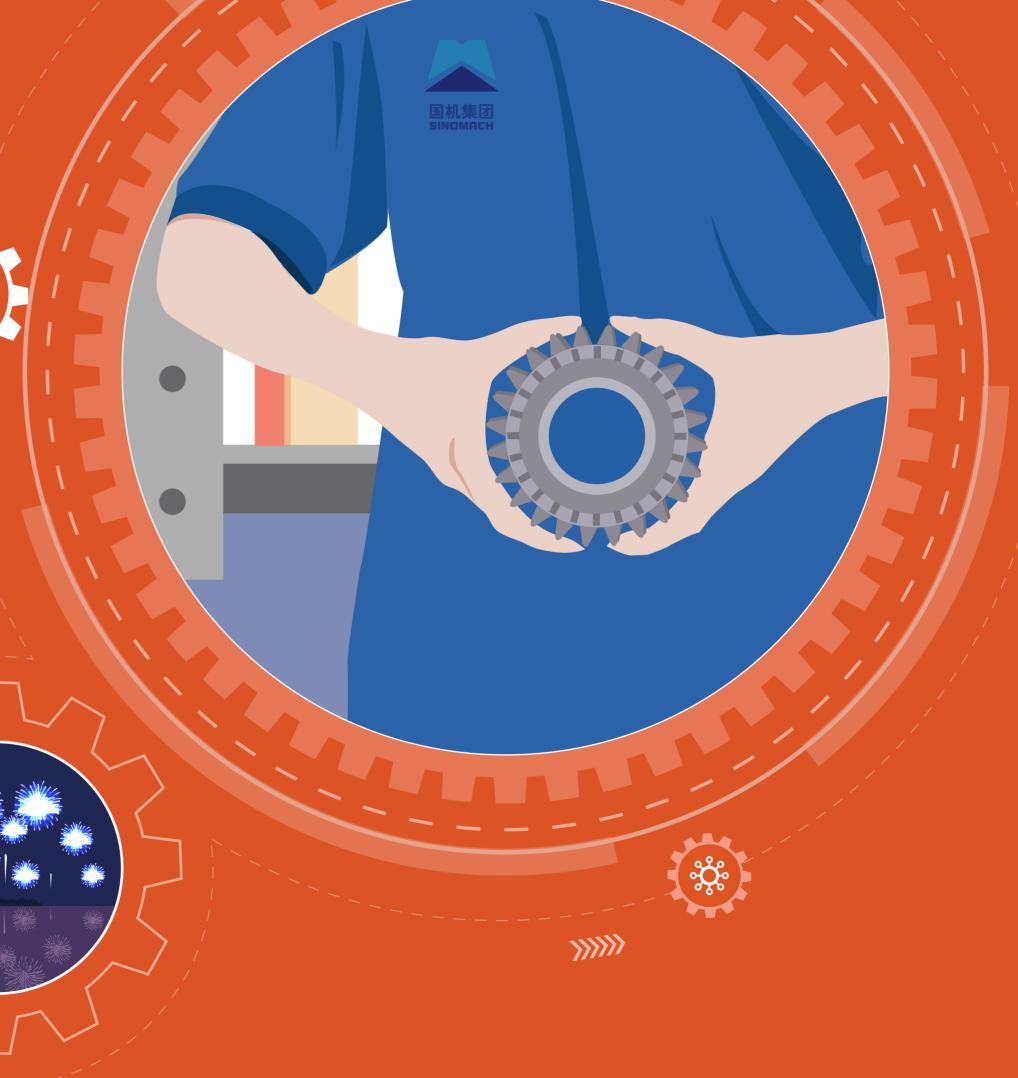
# **Leading Enterprise**

GoldenBee Excellent CSR Report 2016



"The Beauty of Chinese Enterprises Abroad - Images of Chinese CSR Along the Belt and Road" campaign

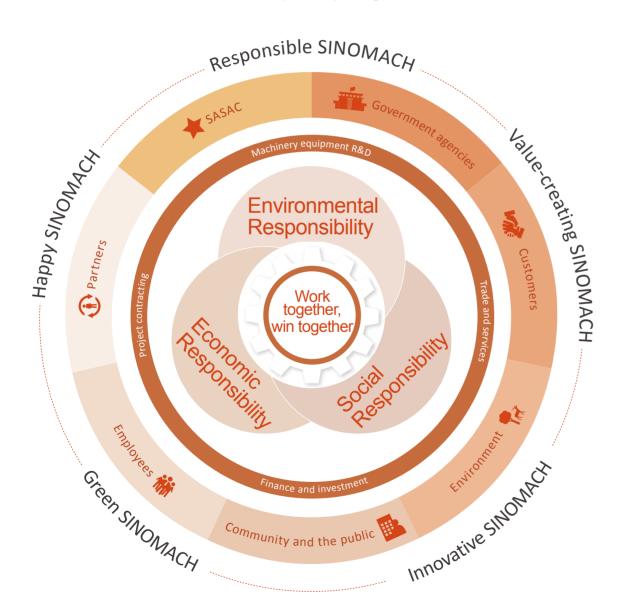
7



# Social Responsibility Management Model

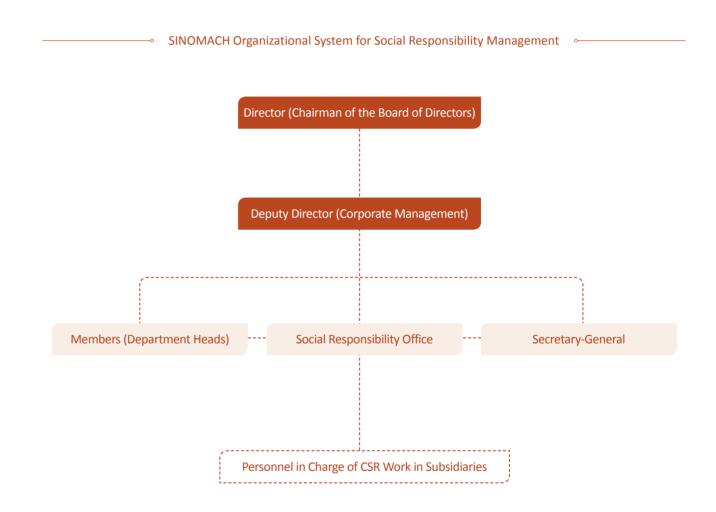
SINOMACH continues to raise awareness and deepen understanding of corporate social responsibility by incorporating social responsibility into its corporate culture and development strategies. We adhere to the core value of "work together, win together", and actively assume our responsibilities for the impacts of our decisions and operations on stakeholders. Focusing on the four major business sectors of "equipment R&D and manufacturing, project contracting, trade and services, and finance & investment", we strive to build a responsible, value-creating, innovative, green and happy SINOMACH. Moreover, we endeavor to create value for stakeholders including the government, employees, customers, partners, the environment and the society, so as to achieve harmonious and sustainable development of the enterprise, nature and society.

SINOMACH Social Responsibility Management Model



# Organizational System for Social Responsibility Management

SINOMACH constantly improves social responsibility management organizational system. We have established and improved the CSR Committee system from organizational structure, functions and responsibilities, and operational mechanism, etc. The CSR Committee is the highest decision-making body for social responsibility and responsible for reviewing and making decisions for all relevant major issues in the Group. The Group's subsidiaries are equipped with specific departments and personnel and have established a social responsibility management system with complete structure, clear hierarchy, smooth flow and efficient operation, providing powerful organizational guarantee for the Group's social responsibility management.



# Social Responsibility Management Promotion

SINOMACH has actively promoted the landing and implementation of China National Machinery Industry Corporation Social Responsibility Strategic Planning. We have constantly innovated in social responsibility concepts and requirements by strengthening social responsibility capability building, conducting research on social responsibility, building social responsibility brand and improving the informatization of social responsibility. We integrate social responsibility concepts and requirements into its decision-making and business operation approaches and methods, laying a solid responsibility management foundation for the Group's stable and sustainable development.

# Strengthening social responsibility capability building

We regularly organize the promotion, communication and training on social responsibility to improve employees' understanding and awareness of social responsibility and their ability of social responsibility management. We also consult external agencies and experts to gain intellectual support for social responsibility practices.

# Conducting research on social responsibility

By benchmarking against advanced enterprises' practices in social responsibility management, we timely find our disadvantages in social responsibility practices and make improvements, and conduct researches on social responsibility to explore new ways and models and further innovate social responsibility management.

# © Expanding social responsibility communication

We summarize the excellent concepts and practices in social responsibility, actively take part in the communication and exchange activities of sustainable development industries, and attend industrial forums and symposiums to enhance communication with stakeholders, and publicize the Group's excellent social responsibility experience and practices to build good partnerships.

In 2016, CMEC, CAMC and CHMC won 7 awards in the Beauty of Chinese Enterprises Abroad ——Image of Chinese CSR Along the "Belt and Road" campaign held by China International Contractors Association.

# (2) Improving the informatization of social responsibility

We continue to strengthen the informatization of social responsibility and improve social responsibility management system, social responsibility publicity system, social responsibility information reporting system and so forth; we constantly improve the social responsibility column by enriching the content and ensuring timely information release. In this way, the disclosure of social responsibility information has been fully improved and relevant knowledge has been publicized, thus strengthening the interaction with stakeholders.

# Building social responsibility brand

We have substantially promoted the responsibility branding projects and taken flexible and diverse forms to keep enhancing responsibility branding from social responsibility concepts, excellent practices, contributions to social and environmental sustainability and other aspects. We try to build a responsible brand inside the Group through publishing corporate journals and operating the "Happy SINOMACH" QQ group. We also present our responsible image to the society through mainstream media, and improve our influence in social responsibility field through using various international platforms.

SINOMACH and some of our subsidiaries actively publish social responsibility reports to disclose social responsibility information and enhance communication with all stakeholders. Since releasing the first social responsibility report in 2010, we have published six reports in total, providing objective and comprehensive disclosure of our social responsibility practices and performance from some aspects, including how to build a responsible, value-creating, innovative, green and happy SINOMACH. In 2016, the SINOMACH Social Responsibility Report 2015 was rated a five-star report and was awarded as an excellent corporate social responsibility report by Research Center for Corporate Social Responsibility, Chinese Academy of Social Sciences (CASSCSR). The Report 2015 was also awarded as GoldenBee 2016 Excellent CSR Report • Leading Enterprise. CMEC Social Responsibility Report 2015, which was compiled by the Group's subsidiary-China Machinery Engineering Corporation (CMEC), won the award of GoldenBee 2016 Excellent CSR Report • Overseas Responsibility Information Disclosure Award and has won the award of GoldenBee Excellent CSR Report for three consecutive years.

The highest rating by

Five-star \*\*\*





▲ Associate Counsel of the Promotion Bureau of SASAC Jin Siyu and General Manager of SINOMACH Xu Jian release SINOMACH Social Responsibility Report 2015.



▲ The cover of SINOMACH Social Responsibility

30 | 2016 Social Responsibility Report China National Machinery Industry Corporation | 31

# Social Responsibility Material Topics Analysis

Based on extensive communication with stakeholders, SINOMACH constantly encourages stakeholders to participate in CSR management, and identifies material topics that have great impact on the company's sustainable development in accordance with national policies, industrial characteristics, social responsibility standards and the Group's practical conditions. Moreover, SINOMACH keeps improving and upgrading to ensure that the Group fulfills social responsibility comprehensively and scientifically.

#### **Material topics identification**

Based on the principles of "sustainability context" and "stakeholder inclusiveness" as well as information from multiple resources, SINOMACH lists material topics and defines their scopes.

#### References

#### Macro-background

National policies Concerns of the media and the public Industrial development trends Scientific research reports

# Strategic planning of enterprise development

Enterprise development goals, strategies, policies, enterprise risk analysis and KPI performance assessment report

#### Communication with stakeholders

Interviews with functional departments, investigation and surveys in subsidiaries

#### Policies and voluntary standards

Guidelines to the State-owned Enterprises Directly under the Central Government on Fulfilling Corporate Social Responsibilities

GB/T 36001 Guidance on Social Responsibility Reporting

Guidelines on Social Responsibility of Chinese Industrial Enterprises and Industrial Associations

Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises (CASS-CSR 3.0)

Sustainability Reporting Guidelines (G4)

ISO 26000 Guidance on Social Responsibility (2010)

#### **Main Topics**

Transformation and upgrading
Scientific and technological innovation
Sound operation
Law-abiding behaviors
Corporate governance
Environmental protection
Product quality
Employees' development
Employees' rights and interests

Customer services Work safety

Social welfare Community development
Industrial development Partners and cooperation

#### **Prioritization of topics**

By analyzing the importance to the company's sustainable development and to stakeholders, SINOMACH prioritizes material topics from economic, environmental, and social aspects.

- Validating material topics
- Deciding the degree of disclosure
- Prioritizing the topics





#### **Review of topics**

Reviewing material topics both internally and externally

Reviewed by the Board of Directors and the CSR Committee Reviewed by operating departments Reviewed by external agencies



#### **Continuous improvements**

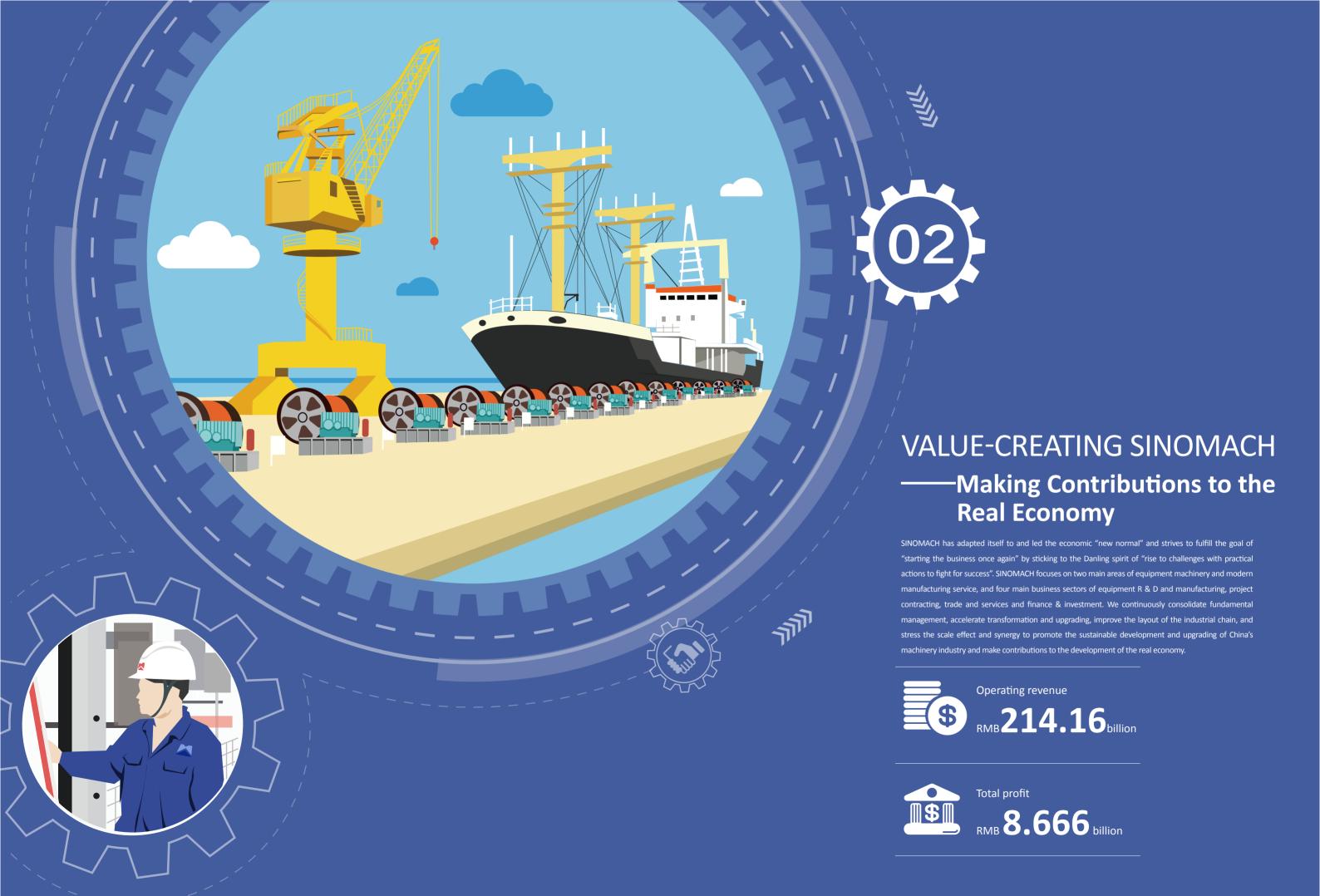
Continuously optimizing and improving the material topics based on previous reviews

Setting new performance targets Initiating new CSR projects Communicating with stakeholders

# **Stakeholders Communication and Engagement**

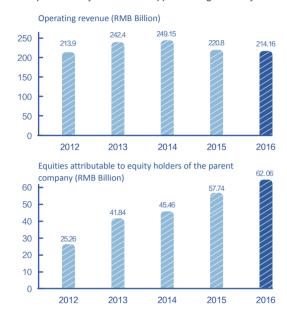
SINOMACH attaches great importance to the communication with stakeholders and strives to build various kinds of stakeholder communication platforms and channels. SINOMACH actively learns about and responds to stakeholders' expectations and demands in order to ensure their rights to know, to supervise and to participate, so as to build a harmonious relationship with stakeholders, continuously improve social responsibility performance and realize the win-win development with stakeholders.

Stakeholders	Expectations and Demands	Communication Approaches	Practices
Governments	Supporting macro-regulation     Employment promotion     Tax payment according to law     Local economic development promotion	Top management meetings Communications and exchanges Information reporting Conferences participation	<ul> <li>Job creation</li> <li>Tax payment</li> <li>Social wealth creation</li> <li>Local infrastructure improvement</li> <li>Local industries development</li> </ul>
SASAC	Compliance with laws and regulations     Value maintenance and appreciation of assets     Work safety     Environmental protection	Featured report     Information reporting     Conferences participation     Company announcement	Lawful and trust- worthy operation     Steady development     Stronger work safety management     Ecological environment protection
Community, the Public and NGOs	Improving community environment     Respecting community culture     Supporting public welfare	Community publicity     Community communication meeting     Community seminar	Participating in community building     Social welfare actions
Customers	Honoring commitments     Providing premium and quality products     Open communication channels	<ul><li>Business meeting</li><li>Service hotline</li><li>Business visits</li></ul>	Honoring contracts     Providing quality products and services     Improving service system
Employees	Occupational health and safety protection Shared growth Salary and welfare security Humanistic care Employee localization	<ul> <li>Employees' Representative Congress</li> <li>Petition</li> <li>Making company affairs public</li> <li>SINOMACH News</li> <li>Social responsibility report</li> <li>Chairman mailbox</li> </ul>	<ul> <li>Providing labor protection equipment and facilities</li> <li>Broadening employees' career development channels</li> <li>Education and training</li> <li>Competitive remuneration</li> <li>Employee care</li> <li>Enhanced overseas staff management</li> </ul>
Environment	Energy conservation and emissions reduction     Economical use of resources     Ecological protection     Environmental charity	Strengthening information disclosure     Regular reporting energy saving and emissions reduction information	<ul> <li>Green environmental management</li> <li>Green design</li> <li>Green product</li> <li>Green project</li> <li>Green environmental protection</li> </ul>
Suppliers/ Contractors	Fair competition     Integrity     Information confidentiality	Supplier conference     Bidding information disclosure     Strategic cooperation     Cooperation agreement	<ul><li> Equal consultations</li><li> Honoring contracts</li><li> Responsible sourcing</li></ul>
Partners	Regular communication     Long- term stable relationship	<ul><li> Top management visiting</li><li> Strategic cooperation</li></ul>	Integrity and law observance     Mutual benefit and win- win results
Peers	Fair competition     Promoting industrial development	Strengthening communication within the industry     Attending industrial forums and meetings     Paying exchange visits	Safeguarding healthy industrial development     Participating in industrial standards development     Promoting industry exchanges and cooperation
Media	Information disclosure and transparency	Company website     Social responsibility report     Company announcement     Interview     Press conference	<ul><li>Setting up news spokesman system</li><li>Disclosing information timely</li></ul>



# **Stabilizing Operation and Development**

Against the backdrop of the slow global economic recovery and China's transformation of economic growth driver, SINOMACH has always persisted in seeking growth while ensuring stability, actively responded to the economic downturn, and promoted quality growth. In 2016, SINOMACH gained operating revenue of RMB 214.16 billion and total profit of RMB 8.666 billion and paid RMB 9.553 billion of taxes, which comprehensively reached the appraisal targets set by the SASAC and made a good start for the 13th Five-Year Plan.



Case



### CNEG successfully turns losses into profits in three years

Since its restructuring, CNEG has firmly seized the historic opportunity of the supply-side structural reform and taken measures of "going private, debt restructuring, allocating redundant personnel, vitalizing assets, renovating the systems and mechanisms, and promoting innovation-driven development" to give full play to internal and external opportunities, take both strengths and shortcomings into consideration and make comprehensive policy planning. As a result, CNEG turned the business around in three years and achieved operating revenue of RMB 8.29 billion in 2016, and a total profit of RMB 525 million. Its major economic operation indicators all ranked high in the industry, and became a model case in SOEs' supply-side structural reform.



▲ On December 26, 2016, SINOMACH held the 11th Enlarged Meeting of CNEG Renovation and Rejuvenation Leadership and Working Group, which marked the accomplishment of the goal "turning losses into profits in three years".

# Strengthening Basic Management

SINOMACH attaches great importance to the improvement of corporate management and explores ways to establish a suitable management and control system. It has constantly improved the management system, optimized the management procedures and adjusted the key elements of management. Moreover, SINOMACH has enhanced strategic management and financial management, implemented overall risk management and persisted in law-abiding and compliant operations to constantly promote informatization and corporate management, providing guarantee for the Group's stable development.

# Promoting strategic management

Through organizing strategy seminars, enhancing strategic research, improving strategic management and control and strengthening strategic cooperation, SINOMACH constantly improves its strategic management. In 2016, SINOMACH adapted itself to new situations, new changes and new requirements of domestic and foreign macro-economy and industrial development. Based on the Group's practical conditions, SINOMACH compiled SINOMACH 13th Five-Year Development Plan and specified the development orientation, strategic guideline and major tasks of SINOMACH during the 13th Five-Year Plan period, pointing out the development direction of SINOMACH during the period.

Key actions of strategic management

### **Strategy seminars**

 Holding special seminars on the "Internet Plus", development of scientific research institutes, internationalized operation, collaborative innovation of automobile business, etc.

#### Strategies research

 Conducting research projects of Research on SINOMACH Research Institutes Development Countermeasures and SINOMACH Strategic Management and Control, completing the Group's 13th Five-Year Development Plan, and formulated the Three-year Rolling Path Plan of SINOMACH 2016-2018.

Strategic management

#### Strategic management and control

 Strengthening reviewing of strategic plans of the second-tier subsidiaries. The strategic plans of 18 enterprises under SINOMACH need to be inquired and reviewed by the Standing Committee of the Board of Directors authorized by the Group's directors.

### Strategic cooperation

 Signing strategic cooperation agreements with over ten enterprises, including SINOPEC, AECC, CGN, CIIC, Guangdong government and Hunan government.

China National Machinery Industry Corporation 37

# Strengthening financial management

Closely focusing on the goal of corporate strategic development, SINOMACH keeps improving the basic financial management system and enhancing cost management and overall budget management in order to improve the Group's abilities in financial management. SINOMACH deeply promotes cost reduction and efficiency improvement, combines management improvement with the practice of increasing revenue and decreasing expenditure and refined management, and realizes cost control, efficiency improvement and profit growth. In 2016, the Group achieved RMB one trillion in centralized capital settlements, with a fund concentration rate of over 70%. The finance company handled loans and discount loans of RMB 15 billion for SINOMACH member companies and saved RMB 300 million of financial expenses of the year. SINOMACH was awarded the honorary title of Advanced Company for Financial Information Management in 2016 by the Ministry of Finance.

#### Deepening capital management

• Enhancing the analysis, supervision and early alarm of budget implementation and special fund management, strictly implementing expense management of the headquarters, and constantly improving the Group's overall budget management

• Successively completing the review and registration of nearly 100 assessment projects related to integration and restructuring of internal and external resources of CMEC and CMCEC and the listing of SUMEC

Enhancing the assessment of property rights

#### Optimizing the financial information system

• Ensuring the normal operation and meeting the needs of 1,500 accounts in over 800 enterprises and institutes under SINOMACH

# Enhancing the application of overall budget management

· Strengthening the strategic cooperation between the headquarters of SINOMACH and banks. The Group's credit granting scale has exceeded RMB 300 billion, and its financing capability is further improved. SINOMACH applied for state-owned capital operation budget and sought for more national financial assistance, supported subsidiaries to develop multiple financing channels such as equities issuance and private

# (2) Improving risk management and control

SINOMACH constantly improves risk management and control, substantially promotes the building of the overall risk management system, improves the risk alarm mechanism and strictly prevents investment and financial risks.

#### Establishing the overall risk management system

SINOMACH published the amended version of Regulations on SINOMACH Overall Risk Management. Through special trainings, detailed guidance and special registration, SINOMACH has established a hierarchical risk accountability mechanism to hold relevant employees accountable. SINOMACH conducts different levels of supervision in key risk areas, deepened vertical supervision and enhanced the effect of early alarm. Based on the measures such as settlement approval, collection of pension and enterprise annuity, and risk management, SINOMACH constantly urges subsidiaries to refine key internal measures.

#### Controlling investment risks

SINOMACH formulated the Regulations on Postassessment Management of Investment Projects and improved the full lifecycle management of investment projects. In 2016, SINOMACH conducted assessment for two projects, i.e. YTO Heilongjiang Modern Agriculture Equipment Base and China Foma Ningxia Zhengi 30MW photovoltaic power station, which improved the management capability.

#### Preventing financial risks

SINOMACH organized management and liquidation experience exchange of pension and enterprise annuity, formulated special appraisal plans for pension and enterprise annuity, made in-depth researches and analyses of main enterprises with improper practices in pension and enterprise annuity, and organized subsidiaries to conduct comprehensive verification of accounts. In 2016. COAGI collected RMB 580 million of debt, which considerably prevented risks.

# Adhering to law-abiding and compliant operation

SINOMACH has constantly promoted legal compliance and adheres to corporate governance according to laws and honest operation. Sticking to lawful and trustworthy operations, SINOMACH strengthens the supervision on auditing and inspection to promote the enterprise's healthy running, and actively promotes anticorruption activities to ensure the enterprise's stable development. In 2016, SINOMACH organized 25 main auditing projects, covering 104 second-tier subsidiaries and their branches and assets worth RMB 92 billion. A total of 185 major issues were disclosed, 233 auditing suggestions were put forward, and 465 control defects were detected, which ensured the overall risks were within a controllable range.

# **Auditing inspection**



# Legal service



## Supervision and inspection



## Discipline governance and accountability



- · Implementing overall auditing inspection in major subsidiaries, major investment projects, major assets, and major operation management activities
- Completing the Group's internal control assessment report of the
- Organizing special inspection of high-risk investment business in
- Establishing and improving compliant auditing mechanism and system
- Improving the competence of legal consultants team and legal working system
- Enhancing management and disposal of legal disputes
- Carrying out procurement supervision and inspection in CNEG and urging rectification, cutting RMB 100 million in annual cost
- Carrying out inspection in three overseas project, further implementing the principle of "one post, two kinds of responsibilities" in overseas engineering projects, and putting forward improvement requirements on strengthening project control and risk prevention
- Conducting specific inspection over institutional improvement of the Group's headquarters and subsidiaries, further improving management regulations and procedures, strengthening the execution of the systems and continuously enhancing the level of enterprise management

- Signing the Liability Statement on Party Discipline and Clean Governance Construction, and carrying out inspection and supervision in this realm
- · Persistently implementing the eight-point guidelines issued by the CPC leadership. and continuously correcting formalism, bureaucratism, hedonism and extravagance
- Strictly executing disciplines governance and holding relevant people accountable, and punishing behaviors that violate the disciplines or

# Improving informatization management

SINOMACH has constantly enhanced informatization management, actively participated in designing the plan of the informatization system of SASAC state-owned assets supervision, and specified key aspects of the Group's informatization work which need to be optimized and improved. SINOMACH launched the new generation of informatization infrastructure and information security guarantee system based on cloud computing. Moreover, SINOMACH promoted the expansion, upgrading and optimization of the Group's site collection, integrated information management platform, collaborative working group and visible commanding and coordinating system. All these efforts have provided guarantee for considerable reduction of comprehensive costs, improvement of collaborative work and business innovation.



▲ SINOMACH is holding a meeting on Party construction and anti-corruption

# Creating Value Hand in Hand

Keeping up with the times, SINOMACH constantly optimizes its product portfolio and business structure, striving to achieve development in smart manufacturing and high-end equipment, etc. SINOMCH keeps enhancing collaboration between four major businesses, i.e. equipment R&D, project contracting, trade and services, finance and investment, forming overall advantages in the Group. In 2016, the value of newly signed contracts in SINOMACH was worth USD 43.9 billion, up 13.1% year on year .

Newly signed contract value

**43.9** billion **5** 



# © Equipment manufacturing boosts industrial upgrading

SINOMACH is one of the most important R&D and equipment manufacturing enterprises in China's machinery industry and a major national equipment production base. With powerful technical R&D capability, SINOMACH constantly enhances design and R&D, and substantially develops the smart manufacturing of SINOMACH. SINOMACH manufactures products with high added value and core competitiveness, and has filled the gaps of many domestic technologies, equipment and products. SINOMACH continuously promotes the resource integration of major equipment business and agricultural equipment business sectors. In 2016, SINOMACH completed assets adjustment and auditing assessment before the restructuring of SINOMACH Heavy Equipment, and also achieved substantial progress in resource integration of food crop harvest machinery.

#### Five segments of SINOMACH machinery equipment

- YTO unveiled China's first driverless tractor—"Dongfanghong" LF954-C.
- The first generation of 60-Ps machinery designed for fruit gardens came off the assembly line.
- CAAMS completed the upgrade of 4GL-120 cutting sugarcane harvester.
  - Agricultural machinery

- The Two-roller Bar Straightening Machine designed and produced by SINO-HEAVYMACH broke foreign trade
- CNEG participated in the building of ship lift at Three Gorges Dam, the world's most difficult and largest ship lift, and officially put it into trial.
  - Heavy equipment

 Single products occupied the largest domestic market, such as the complete set of artificial board equipment, sander, chipper, flaker, polisher and thermofiner.

Forestry machinery

#### **Project machinery**

- SINOMACH Heavy Industry tried to design the wheel dozer with the largest power.
- SINOMACH Heavy Industry developed the hydraulic scraper.
- Five new products of SINOMACH Heavy Industry were exhibited at bauma China 2016 in Shanghai.

## **Geology Equipment**

· Three core businesses have been formed, namely geology equipment manufacturing and marketing service, domestic and foreign trade and services, project construction and complete set of services. Four core products have been designed, namely drilling and detector machinery, drilling and detector tools, borehole geophysical instrument, and analytical instrument.



▲ The neutron absorption plate rolling technology of SINO-HEAVYMACH breaks foreign trade monopoly.



The invention of the first set of detachable ropeway core components assembly line produced by BMHRI promotes the high-end development of China's ropeway industry.

#### Case

Serving the development of China's nuclear power industry

With technical capability in areas such as large nuclear forgings production, CNEG made great efforts in product R&D and improved the capability of independent development to boost the comprehensive domestic production of national nuclear power construction and contribute to the strategic security of national energy. In 2016, CNEG made significant achievements in promoting China's nuclear power industry:

CNEG signed the contract of three 1-million kWh nuclear power generator turbines in Tianwan No. 5 and No. 6 Projects and CGN Strategic Spare Parts Project was producing nuclear power turbines in projects such as Hongyan River No. 5, No.6 and Fuqing No.6 Projects.

CNEG successfully manufactured the first set of CPR 1000 voltage regulator traveling-wave tube (TWT), marking that China started to be able of manufacturing this product independently.

The CAP 1400 Core Makeup Tank manufactured by CNEG was rated as "excellent" in performance indicators, and "qualified" in hydrostatic test, and was spoken highly of by State Bureau of Nuclear Safety and State Nuclear Power Engineering Company. The product was a great breakthrough and the first full-set nuclear power equipment of its kind.

CNEG successfully casted the 550-ton rotation shaft of Tianwan Nuclear

The L001B elbow (first piece) of the CAP 1400 main pipe's hot section in Unit 1 of SNPDRI Pressurized Water Reactor Demonstration Project undertaken by CNEG was rated qualified in all indicators, making a breakthrough in CAP 1400 main pipe technologies and laying a solid foundation for the construction of the demonstration project.

CNEG successfully finished evaluating the technology of "Hualong No.1" main pipe products, marking that China has mastered the production technology of Hualong No.1 main pipe.



▲ The evaluation piece of Hualong No.1 main pipe

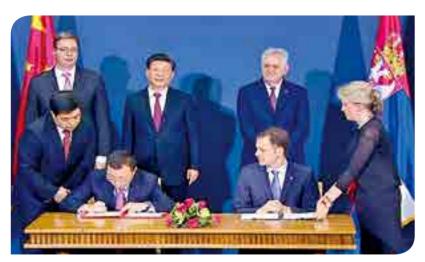


▲ CPR1000 voltage regulator traveling-wave tube

40 | 2016 Social Responsibility Report China National Machinery Industry Corporation | 41

# Project contracting drives product export

SINOMACH provides engineering construction services to the global market, covering the whole industrial chain such as engineering project development, investment and financing, engineering planning, survey, design and construction, complete sets of equipment, and operation and maintenance management. In 2016, SINOMACH actively conducted EPC+ business and promoted the development of businesses such as the construction of industrial parks. SINOMACH ranked 23rd among 2016 ENR Top 250 International Engineering Contractors, and ranked 58th among 2016 ENR Top 225 International Engineering Design Firms.



▲ Chinese President Xi Jinping and Serbian President Tomislav Nikolic witness CMEC's signing of the Belgrade Sewage Treatment Plant Project.



▲ Chinese President Xi Jinping and Cambodian Prime Minister Samdech Hun Sen witness CHMC signing the cooperation agreement of the Phase II project of Cambodian power transmission and 2016 ENR Top 250 International **Engineering Contractors** 

**23** rd



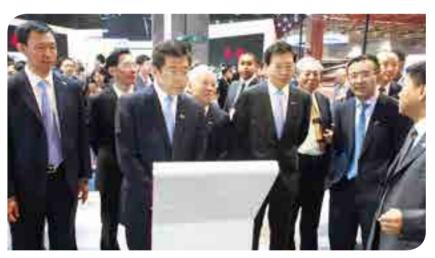
2016 ENR Top 225 International Engineering Design Firms

58 th



# Trade and services optimizes resources allocation

Trade and services is SINOMACH's traditional business sector. Based on the four major businesses of automobile trading, mechanical and electrical products trading, other trading and services such as exhibitions, SINOMACH has actively introduced in advanced technology and equipment abroad and exported Chinese premium mechanical and electrical products to the international market, meeting customers' needs and gaining a systematic service advantage. In 2016, SINOMACH ranked 16th among China's Top 500 Foreign Trade Enterprises with a total export and import volume of USD 10.18 billion with a year-on-year increase of 2.3%.



China's Top 500 Foreign Trade Enterprises

**16** th



▲ Chairman Ren Hongbin attendes the 6th China (Macau) International Automobile Exposition in 2016.



▲ Dongfanghong tractors are prepared for being exported to Cuba at Huangdao Port in Qingdao.

# Capital operation improves structural layout

SINOMACH has constantly improved the "SINOMACH Capital Platform". It promotes the development of finance and investment sectors with industrial development and in return boosts industrial development with financial capital. SINOMACH enhances the capabilities of collaborative service and value creation, continuously promotes the transformation into the "four-wheel-driven" business structure, making manufacturing, engineering, trading and financial capital drive the development and further realize the balanced development of all business sectors. Through pooling premium resources into listed companies, SINOMACH strives to build a stronger and better listed company platform with centralized resources and pivotal support. In 2016, SINOMACH issued company equities of RMB 2 billion. SINOMACH AUTO raised RMB 1.07 billion in IPO. SINOMACH's asset-backed securitization rate reached 52.76%.

Company equities issued

RMB 2 billi



The asset-backed securitization rate

**52.76** %





# External merger & acquisition and restructuring

- Actively promoting the restructuring of SINOMACH and China Hi-Tech Group Corporation (CHTC).
- SUMEC Machinery & Electric Co., Ltd. merged and acquired Germany Metesa GmbH.
- SUMEC Textile & Light Industry Co., Ltd. acquired shares of BB Corporation in the US.
- China Automobile Engineering Corporation merged and acquired Germany Feinoba GmbH.





#### Internal capital operation

- CMEC successfully completed the restructuring with China National Complete Engineering Corporation (CCEC), easing the industrial competition.
- SUMEC acquired shares of SINOMACH Changlin Company Limited and officially entered the capital market.
- The equity structure of YTO was streamlined and YTO financial shareholders exited.
- Through SINOMACH AUTO's non-public offerings and restricting project financing of Changlin Company Limited, RMB 2.57 billion of external financing was obtained.



## Case

#### Successfully conducting relevant foreign exchange business

Upon the approval of Beijing Foreign Exchange Office of State Administration of Foreign Exchange (SAFE), SINOMACH obtained the qualification of centralized operation of foreign exchange capital from transnational companies. SINOMF also obtained the qualification of foreign exchange surrender and centralized operation of foreign exchange capital from transnational companies. SINOMF uses systems of three partner banks, including Industrial and Commercial Bank of China (ICBC), Bank of China (BOC) and China Construction Bank (CCB), to carry out centralized operation of the Group's foreign exchange capital and establish two onshore and offshore foreign exchange capital pools and two-way channels. All these efforts have laid a solid foundation for effective integration of foreign exchange capital, improvement of utilization efficiency and reduction of foreign exchange capital risks in the future.

# Strategic emerging industries promote business growth

SINOMACH follows national strategies including "Made in China 2025", the Development Plan for National Strategically Emerging Industries during the 13th Five-Year Plan Period and the "Internet Plus". Taking its practical conditions into account, SINOMACH focuses on key areas such as high-end computer numerical control machine tools and robots, aerospace equipment, marine engineering equipment, energy-saving and new energy automobile, electrical equipment and agricultural machinery. SINOMACH constantly optimizes the transformation and upgrading and focuses on key projects to promote itself into a world-class high-end equipment manufacturer. Moreover, SINOMACH explores businesses in emerging industries with great potential, such as health industry and cultural service industry, and actively cultivates new business growth points.



▲ The agreement on the cooperation project of China-Israel Robot Research Institute, co-built by Guangzhou Mechanical Engineering Research Institute (GMERI) of SINOMACH Intelligence Technology Co., Ltd., is officially signed.



▲ Linhai New Energy Electrical Automobile Corporation under CFMC opens its first direct-sale store.

# Fulfilling the Dream of "Belt and Road"

SINOMACH actively implements national strategies such as the Belt and Road Initiative and interconnectivity with neighboring countries, effectively draws on the two markets and two kinds of resources. SINOMACH overseas business has become the pioneer and leader of internationalized operation in the industry, covering from general trade, complete sets of equipment to project general contracting, overseas investment operation and overseas merger & acquisition. The Group's overseas revenue accounts for over 60% of the total, ranking top among central SOEs and enterprises in the industry.

## Expanding overseas business

SINOMACH makes great efforts to promote international production capacity and equipment manufacturing cooperation and further expands overseas business. In 2016, CNMTC actively expanded Russian markets; GLESI achieved preliminary development results in countries such as India and Brazil; CHMC signed the agreement on the coal-burning power generation project in Laos; CPF signed the agreement on the potash fertilizer plant project in Belarus; CMEC signed the general contracting agreement on the expansion project of the 650-MW gas turbine combined-cycle power station in Basra, Iraq. The number of newly signed contracts gained a year-on-year increase of 57.6%. There were 270 overseas complete engineering projects in 35 countries along the Belt and Road, with a total of contracting volume of USD 17.9 billion.



▲ SASAC leaders are visiting China-Belarus Industrial Park.

The contracting volume along the Belt and Road

JSD **17.9** billion (\$

Newly signed overseas contracting volume

**57.6**% year-on-year increase







For more information, please scan the QR code

Promotion Video of China-Belarus Industrial Park

#### SINOMACH has a favorable foundation for Going Global

SINOMACH has strong systematic integration capability and can provide customers with a package of solutions

SINOMACH has a group of international talents who have a good command of international market rules, domestic and foreign production capacity layout and industrial equipment product characteristics

SINOMACH accumulates abundant experience in internationalized operation management and has improved operation management and risk prevention and control system

# © Case

#### The Belt and Road Pakistan THAR coalfield and power station project

In May 2016, CMEC Pakistan THAR coalfield and power station project was launched. As the prioritized project of the Belt and Road China-Pakistan Economic Corridor (CPEC) Energy Planning, the project was the first completed integrated coal power project, ushering in a new situation of Pakistan's more independent and more stable utilization of local coalfield resources to solve electricity shortage.



CAMC seized the business opportunities in countries along the Belt and Road and achieved rapid growth in contracting volume. As an important project for strategic implementation along the Belt and Road, China-Belarus Industrial Park has attracted eight enterprises to enter and signed agreements of intention with over 30 enterprises. Among them, China Merchants Group and Xinzhu Corporation have started construction in the park.

IPPR actively promoted the restructuring with Belarus National Design Institute, ushering in a new situation of internationalized operation.

CMEC established Singapore Regional Center and Dubai Regional Center, promoted the regionalization and localization of project contracting business, and made full use of corporate advantages in overseas financing, procurement and channels to integrate regional premium resources and enhance cooperation with leading enterprises in the industry, thus laying a solid foundation for entering the high-end market.

CHMC further strengthened the operation management and risk control of BOT project , realizing double targets of work safety and power generation task .

# ② Deepening international communication

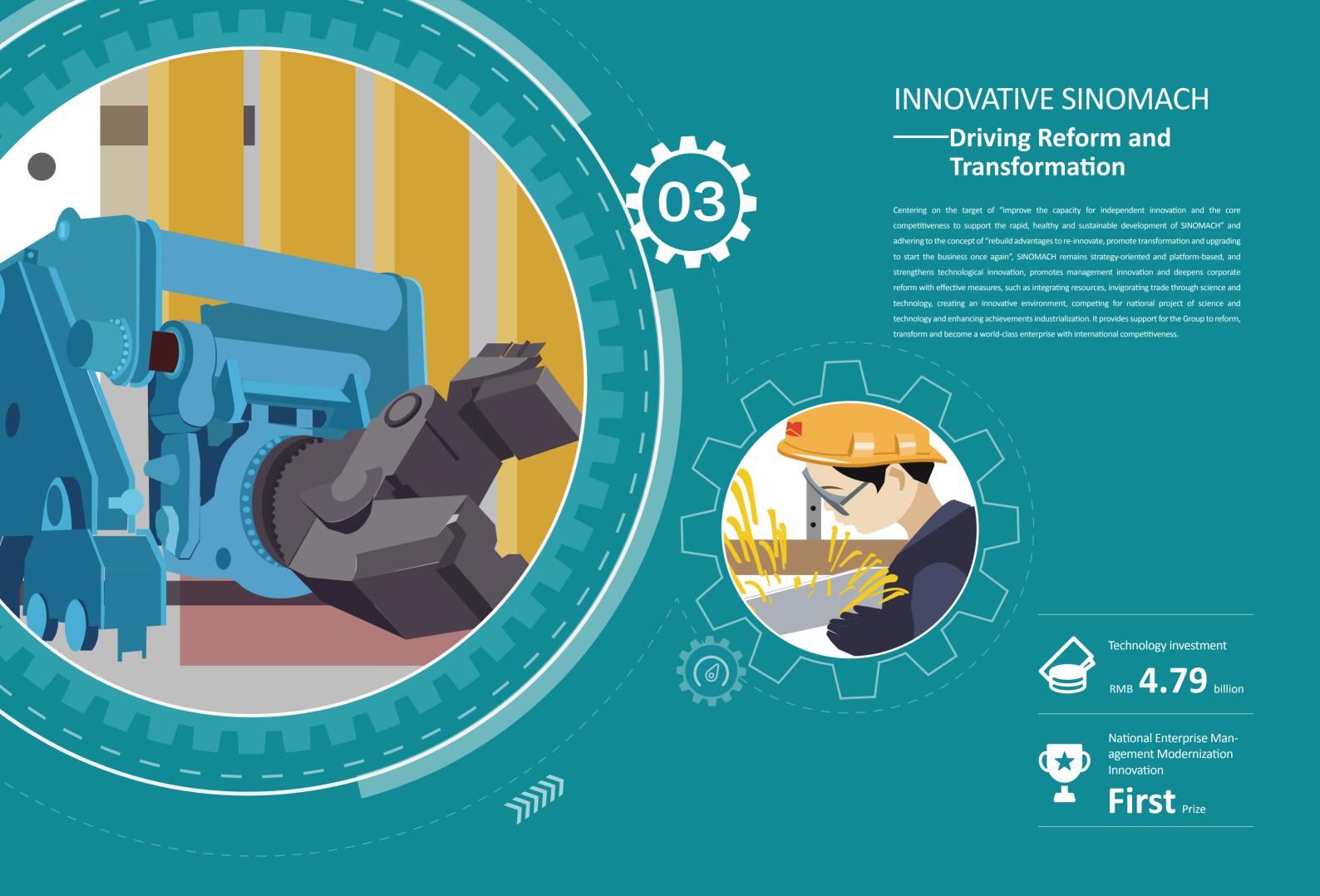
With a global vision, SINOMACH is committed to serving the construction along the Belt and Road. SINOMACH has established inclusive cooperation platforms, actively organized and participated in relevant international forums, meetings and activities in the industry to enhance interaction and communication and constantly improved the right of speech and influence in the international market, contributing to the industry's sustainable development.



▲ Chairman Ren Hongbin is appointed Chairman of Infrastructure Working Group in B20 Hangzhou Summit.



▲ Chairman Ren Hongbin is invited to the 2016 Annual Meeting of Boao Forum for Asia.



# **Strengthening Technological Innovation**

We continuously strengthen the leading role of technological innovation in SINOMACH's comprehensive innovation. Centering on technological innovation, we continuously improve the innovation system and independent innovation capability, to push forward the integration of technological innovation and mass innovation, promote innovation-driven development and give full play to first-mover advantages.

# (2) Improving the technological innovation system

We further perfect the technological innovation system and mechanism, improve the market allocation mechanism of innovation resources, incentive mechanism for R&D personnel and talent cultivation and flow mechanism to invigorate technological innovation and tap the creative potential. We also build a new multi-level system that covers strategic decision making, strategy execution and product and technology development. We actively cultivate a national scientific research institute and a service platform, and explore ways to establish a strategy-guided and market-oriented technological innovation system which integrates enterprise, university, research, trading and financing, so as to lay a solid foundation for enhancing independent innovative capability and accelerating the industrialization of technological innovation achievements.

 SINOMACH Technological Innovation System **Products and Technology Strategic Decision-Making Strategic Execution Level Development Level** • The highest decision-making · Central research institute R&D platforms and institutes body of SINOMACH consists and overseas R&D institute (including national-level R&D of the General Manager's institutes) owned by SINOMACH provide a high-level strategic Office and the Science and execution platform for second-tier subsidiaries. Technology Committee. fully utilizing scientific and technological resources.

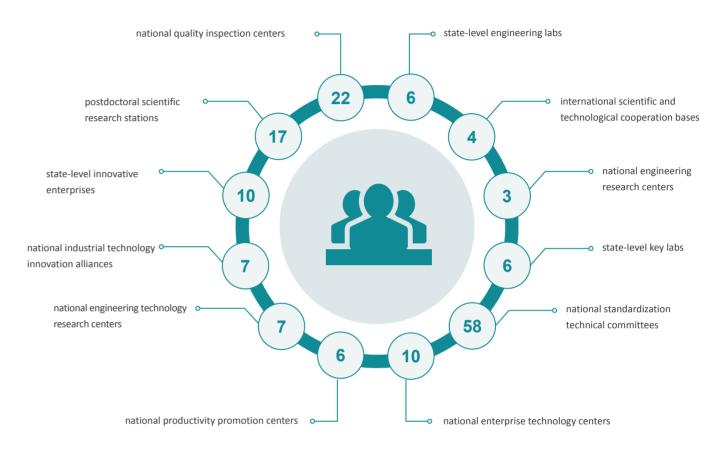
Platform of Sci-tech Innovation

We push forward the establishment of R&D and service platform to improve R&D infrastructure. In 2016, six more platforms were approved, including CEI Basic Public Services Platform of Industrial Technology, SUMEC Engineering Research Center, AE National Engineering Laboratory, HGMRI Basic Public Service Platform for Industrial Technologies and National Scientific and Technological Service Industry Pilot Project, GMERI National Enterprise Technology Center and CMRI National Enterprise Technology Center and several more platforms..

Mass Entrepreneurship and Innovation

We encourage the development of new technologies, new products, new businesses and new models to build the new engine for development, and guide our subsidiaries to launch business and start innovation in various forms. Innovative and entrepreneurial platforms were built and put into operation, including TRIED Intelligent Electric Co-working Space, AE Intelligent Manufacturing Robotic Co-working Space, YTO Dongfanghong Model Innovation Workshop, CEI Enterprise Incubating Mechanism, Zhongzhuang Construction CMEC High-tech Industry Incubator, etc.

#### SINOMACH National Technological Innovation Service Platforms



# (2) Improving capacity for technological innovation

SINOMACH consistently enhances its capacity for independent innovation. While ensuring comparatively high S&T investment, we, supported by talent cultivation, promote innovation in technologies and products and carry out state key projects to strengthen IPR protection and boost corporate transformation, upgrading and quality improvement.

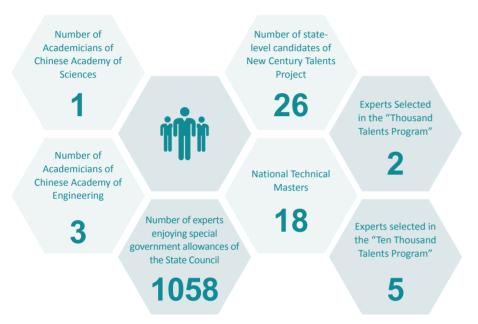
#### Increasing S&T investment

By sticking to the policy of "R&D investment brings benefits", SINOMACH continues to increase investment in scientific and technological innovation. We establish a diversified technology input system covering Innovation Investment Fund for Central SOEs, Government-led Fund, VC Fund and Private Equity Fund, to improve the allocative efficiency of high-tech investment. In 2016, SINOMACH input RMB 4.79 billion in S&T innovation, which accounted for 2.23% of the operating revenue.



#### Cultivating talents in S&T innovation

SINOMACH vigorously promotes the building of S&T talent teams at all levels. By establishing the chief expert system, we aim to guide our subsidiaries to open up career development channels for talents and gradually form a multi-level S&T talent team consisting of Group-level chief experts, chief experts in different business sectors and experts in all fields, so as to build a high-level talent team to provide intelligence support for the Group's development.



Case

Three SINOMACH employees included in the second batch of "Ten Thousand Talents Program" as leading talents in scientific and technological innovation

In September 2012, National High-level Personnel of Special Support Program was officially launched. It is a key state-level talent program of same importance as "Thousand Talents Program" (which aims to attract overseas high-level talents). The program's overall goal is to select about ten thousand high-level talents in innovation and entrepreneurship in ten years, and give them special support. As "Thousand Talents Program" is facing overseas talents, "Ten Thousand Talents Program" is facing domestic talents, and will cultivate and support these talents. The two programs will be implemented simultaneously. In 2016, 3 experts from Chinese Academy of Agricultural Mechanization Sciences, China National Heavy Machinery Research Institute Co., Ltd. and HGMRI were selected as leading talents in scientific and technological innovation in the second batch of "Ten Thousand Talents Program, which further strengthened the science and technology talent team of the Group.

#### Carrying out state-level key research projects

We give full play to the Group's role as a platform and actively carry out state-level key research projects to constantly improve our technological innovation ability and level, vigorously promote the construction of "Innovative SINOMACH", and strongly support the industry's S&T progress as well as China's innovation-driven development. In 2016, we organized the application of eight batches of 35 state-level projects including those in the "State-level Key R&D Plan", and were granted nearly RMB 200 million of the government fund.

The number of finished and accepted state-level projects

0

The amount of granted government fund

Ne



Projects Initiated and Approved
68 projects were approved, including
"Development of New Agricultural Environment-friendly Engine", "Research
and Development of Intelligent and Efficient Cotton Harvest Technology
and Equipment" and "Systematic Application Research and Demonstration
of Intelligent and Innovative Manufacturing Method of Agricultural
Equipment". "Systematic Application Research and Demonstration
of Intelligent and Innovative Manufacturing Methods of Agricultural
Equipment" was the only approved project among all SASAC-recommended
projects focusing on innovative methods.

Finished and Accepted Projects 90 state-level key projects were finished and accepted, including "Metal Extrusion/Forging Equipment and Technological Innovation Platform Construction", "Research on Key Technologies in Underwater Separator", "Intelligent Agricultural Technology and Equipment", etc.



General manager Xu Jian leads the team to participate in the oral defense for the National Science and Technology Award.

## © Case

#### National major science and technology project – "large forging manipulator" checked and accepted

The major national sci-tech specific project led by SINO-HEAVYMACH—"3000kN/7500kNm large forging manipulator", was checked and accepted. The full-hydraulic forging manipulator using modern control technology is a kind of giant heavy load robot and an important corollary equipment of free forging press, which is difficult to develop due to complex structure and multiple movements, poor working conditions, complex stress, high control accuracy requirement and large clamping tonnage. Based on the research and development platform of the State Key Laboratory, SINO-HEAVYMACH made full use of its own accumulation and strong development and innovation capacity, jointly tackled key problems with partners and developed a new type of structure for large forging manipulator. There were 17 authorized patents

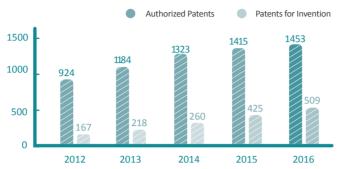


for invention, 9 patents for utility models and more than 30 published papers in science and technology. As the largest full-hydraulic forging manipulator in the world today, it marked the significant improvement of domestic production capacity of large and super-large forged piece and played an important role in supporting and promoting China's manufacturing of large forged piece and large forging equipment technology to surpass the world advanced level.

#### Strengthening intellectual property protection

We continue to strengthen IPR creation, utilization, management, protection and relevant services. Through taking measures. including improving the intellectual property protection system. we continuously enhance IPR protection. In 2016, SINOMACH applied for 1,766 patents, including 711 patents for invention, and authorized 1,453 patents, including 509 patents for invention.





#### Case

**ZYS selected into National Pilot Program of Operation of Patents** 

National Pilot Program of Operation of Patents is an important measure to implement the innovation-driven development strategy. Centering on the key link of the construction of IPR power and with in-depth implementation of the pilot project of patent navigation, we strive to cultivate enterprises with ownership of core patents, strong patent operation capability and a strong influence on the industrial development. ZYS was successfully selected into the new batch of national pilot enterprises of operation of patents, marking a new achievement of ZYS in IPR management. Patent operation benefit will play a supporting role in industrial development of enterprises. That ZYS was included as pilot enterprise laid a solid foundation for patents to lead the enterprise towards high-tech, highadded-value development.

# Leading technological progress in the industry

SINOMACH gives full play to its technological advantages and R&D power in agriculture and forestry machinery, engineering machinery, heavy equipment and geotechnological engineering equipment to continuously strengthen its leading role in the industry. By adopting means of original innovation of core technologies, participation in the formulation of major industry standards and increasing industrial cooperation and exchanges in science and technology, it has filled the blankness in relevant sectors and greatly contributed to the progress in technological development in China's machinery industry.

#### Strengthening R&D of core technologies

SINOMACH proactively strengthens research and development in cutting- edge technologies, key generic technologies, strategic emerging industries and major technologies to provide technical support and driving force for its upgrading and transformation. In 2016, SINOMACH won 352 outstanding achievement awards at provincial/ministerial level or nation-wide industrial level, among which 82 were scientific and technological awards, and 178 were survey, design, or consulting awards



 "SINOMACH Science and Technology Innovation Project" wins the Second Prize for National Scientific and Technological Progress as a corporate technological innovation engineering project.

The "China National Machinery Industry Corporation Technological Innovation Engineering Project" declared by SINOMACH was awarded Second Prize of National Scientific and Technological Progress Award. Through implementing innovative engineering, the project innovatively established an integrated research and development system of "three levels and nine fields", a diversified and continuous input mechanism led by "feeding science and technology through boosting trade", and a multi-dimensional and multi-layer incentive mechanism integrating economic, political cultural, social and ecological progress, and an industrial development pattern of "five methods and five approaches". The project also helped form a market-oriented and technology-guided layout with business synergy and innovative development, closely connecting science, industry, trade and finance.

The "high temperature/ super-high temperature coating material technologies and equipment" project joined and completed by CAAMS won First Prize of National Technological Invention Award. The project filled in blankness in China's high-pressure turbine blade field, developed and manufactured the key equipment in coating production with China's proprietary intellectual property right, which greatly secured the service life and reliability of blades of aviation engines. The research result of the project has been produced in batches and applied in China's high-end aviation engines.

## Case

#### Riser hammer wins National Casting Equipment Innovation Award

Traditional foundry enterprises usually removed the impact of riser casting operation with a hammer, cutting or driving lift heavy metal block. There were many disadvantages in doing so. In order to solve the problems of low efficiency, poor security, high energy consumption of traditional methods and negative influence on quality that results in repair welding and waste, JFMMRI and China Machinery Industrial Products Co., Ltd. (CMIPC), a subsidiary of CMEC, co-developed the "riser hammer". Riser hammer adopts international advanced technology, and combats the riser by controlling the great impact caused by rapid intake and exhaust of the cylinder. It is safer, more accurate, environmentally friendly and high-efficient, and greatly improves the working efficiency and output, effectively reduces the cost and improves economic efficiency. This product has a great market potential. In 14th China International Casting Exhibition held in 2016, the product won the National Casting Equipment Innovation Award.



#### Case

#### SINOMACH holds the first "SINOMACH Intelligence Cup" Industrial Robot Skill Competition

At present, China is advancing towards "Made in China 2025". SINOMACH plays a leading role in equipment manufacturing, especially in intelligent manufacturing. In November 14, 2016, the first "SINOMACH Intelligence Cup" Industrial Robot Skill Competition was hosted by SINOMACH Labor Union and organized by Sinomach Inteltech.

Intelligence Technology organized relevant visiting and trainings before the competition and provided plenty guidance as well as assistance in transportation, installation and commissioning of equipment for participants. Afterwards, the organizing committee arranged visiting activities of 2016 Chinese (Guangzhou) International Robot & Intelligent Manufacturing Exhibition. The Competition was of great significance to promote development



of the Group's intelligent manufacturing sector, and showed the applications of robots and the ability of robot R&D and manufacturing. Meanwhile, through exchanges among enterprises, operation and application levels of robot were further improved, which was conducive to inspiring and mobilizing the enthusiasm and wisdom of the Group's technical workers in order to make greater contributions to intelligent manufacturing as well as "Made in China 2025" strategy.

### Participating in the formulation of important industry standards

We attach great importance to playing a leading role in the industry, and actively preside over or participate in the formulation and revision of national and industry standards to promote the research and formulation of major industry, national and international standards. In 2016, we presided over or participated in the formulation and revision of 725 national and industry standards, among which 3 were international standards and 221 were national standards.

# International, national and industry standards presided over and participated by SINOMACH



• The industry standard *Continuous* Flat Hot Press (LY/T 2730-2016) formulated by CFMC as the first formulating unit was issued and carried out, which filled the blankness in industry standard.



- The formulation and revision of five national standards in the household appliances industry led by CEI reflected CEI's strength and level of technological research in electrical engineering and apparatus.
- Two national standards, General Technical Specifications of Heavy Steel Free Forgings and General Technical Specifications of Heavy Steel Casting led CNEG, were approved.



• Experts from Shenyang Vacuum Technology Institute of SAIS participated in the proposal of the first international standard in vacuum technology (vacuum technology - standardized measurement method of the performance of vacuum pump performance standard - Part 3: The specific parameters of the mechanical booster vacuum pump). The program was approved, symbolizing a breakthrough in China' formulation of international standards in vacuum technology.

#### Deepening technological exchange and cooperation in the industry

By constructing a technological exchange platform to facilitate technical exchange and co-working in R&D of major projects, SINOMACH constantly carries out technological exchange and cooperation with counterparts and academic institutions and actively joins in industry associations, societies and standardization committees to further push forward industrial exchange and cooperation with collaborative wisdom and strength.



▲ The 11<sup>th</sup> SATEC Forum on Innovative and Intelligence Manufacturing is held in SINOMACH

#### Case

#### Carrying out in-depth cooperation with ASME

In 2016, American Society of Mechanical Engineers (ASME), supported by HGMRI, established Chinese International Working Group of ASME Boiler and Pressure Vessel Code Volume VIII Committee (ASME BPVC VIII). ASME Chinese International Working Group, a branch of the ASME Committee, is a platform for Sino-US pressure equipment industry to carry out technical exchange and discussions on standards and plays an important role in enhancing product quality, promoting economic construction, ensuring production safety and eliminating technical barriers for both sides. The establishment of ASME BPVC VIII China International Working Group is significant to enhance the technical level, expand the international influence and improve the interconnectivity regarding Sino-US pressure vessel standards and provides strong support for the progress of standard formulation in China and ASME.

#### Case

#### SUMEC-HUAWEI Joint Innovation Center of Energy and Internet of Things established

SUMEC and HUAWEI signed a comprehensive cooperation agreement focusing on all-round cooperation in global energy market, smart photovoltaic power plant solutions, joint technological innovation and channel resources. The two sides set up a joint innovation center, which serves as a platform for carrying out technological R&D collaboration in development and application of key parts as well as in the solutions of intelligent photovoltaic power plant and the technology of Internet of things for energy. Both sides will jointly upgrade the intelligent level of photovoltaic power station and promote the healthy development and technological progress in the industry.



▲ Launch of SUMEC-HUAWEI Joint Innovation Center of Internet of Things for Energy

China National Machinery Industry Corporation 57

# Accelerating industrialization of research achievements

Adhering to the philosophy of combining "innovation" with "industrialization", we endeavor to make breakthroughs and master the core and key technologies, and also focus on the industrialization of research achievements in order to accelerate transformation and upgrading. We also set up a platform for the transformation of technological innovation and constantly improve the mechanism. We rely on large engineering project to realize rapid transformation of research achievements, meet the demands of the market and serving the national defense industry by rapidly launching new products and new technologies, thus continuously increasing the transformation rate of research achievements. In 2016, the overall transformation rate surpassed 95%.

## 🂢 Case

#### China's first driverless tractor successfully developed and manufactured

YTO successfully developed China's first driverless tractor equipped with China III engine, power reversing gearbox, electronic suspension system and a series of information and control systems. The automatic steering system realizes automatic steering within the prescribed area; the VCU is able to automatically control the engine speed, vehicle direction, brake and electronic suspension; the radar and vision measurement system realize the recognition and measurement of geographic information; the remote video transmission system can send the image signal captured by the vehicle-mounted camera to the terminal and display it; the monitoring display system can be used to display vehicle information and set the working mode; the remote control system can realize the vehicle's remote operation.



 "Dongfanghong" LF954-C driverless tractor is demonstrating its field operation.

## Case

#### The brake disc of high speed railway officially put into manned commercial operation

In 2016, K68 brake disc of EMU with a speed of 250km per hour, supplied by CMIPC, a subsidiary of CMEC, was officially put into commercial manned operation. Four series brake discs of 200-350 km/h high-speed railway, EMU and high-speed locomotive were successfully developed by CMIPC, followed by brake disc products provided for 380-kilometer per hour EMU brake system.



## © Case

#### 36MN alumina ceramic powder extrusion machine shut down foreign monopoly

36MN alumina ceramic powder extrusion machine is an important equipment for production in nuclear industry and military industry, mainly for the production of protection plates for nuclear reactor. 36MN alumina ceramic powder extrusion machine with independent IPR produced by SINO-HEAVYMACH utilized a number of independent innovative technologies of SINO-HEAVYMACH. Online mold heating system is used for the first time, and improves the accuracy of the extrusion cylinder temperature control. The successful operation of the machine unit, which helps the domestic industry get rid of the monopoly of aluminum matrix ceramic composite powder extrusion equipment and extrusion process of European and American nuclear industrial power, reduces the production cost of



similar products in China and promotes technological improvements in China's special material extrusion equipment and extrusion process.

# **Promoting Management Innovation**

We further promote management innovation, keep improving management and control of the company, and accelerate innovation of business models. With an efficient, quality-based and development-oriented management, we strive to give full play to all sources of all innovation, invigorate all innovation and continue to promote the innovative development of the Group. In 2016, the SINOMACH won the First Prize for National Enterprise Management Modernization Innovation.

National Enterprise Management
Modernization Innovation





# Improving management and control of the Group

SINOMACH keeps a foothold in its practical condition as an "industry carrier" of nearly one thousand enterprises, continuously promotes, improves quality and efficiency and enhances the supply-side structural reform. Through simplifying the management hierarchy, reducing legal entities and other initiatives, we continuously improve the ability and efficiency of control management of the Group. We speed up the liquidation of invalid assets as well as the disposal of "zombie companies" and actively carry out special governance methods towards difficult enterprises. We also organize relevant companies to draft management implementation plan and make clear solution measures, plans and objectives. In 2016, we accomplished the special management of one "zombie companies", two extra-difficult enterprises supervised by SASAC, four "zombie companies", and four companies in extreme poverty disposed independently by the corporates, which reached the goal as scheduled.



▲ SINOMACH 2016 Annual Meeting on "Streamlining the Structure and Promoting Healthy Development" is held in YTO.

# Innovating business modes

SINOMACH continues to accelerate the business model innovation, enhances business restructuring, and optimize the layout of the market, thus significantly enhancing the competitiveness. In 2016, CMEC signed a joint venture agreement with Ascendas Group with the help of IEC-APRC. The two groups co-developed the industrial park project in India, Malaysia, Indonesia, Burma and other countries. COAGI actively implemented the "Going Global" strategy, and signed an agreement with Pakistan on Pakistan Karachi nuclear power plant water supply and drainage project. SUMEC promoted the new energy full-industrial chain business model for the application of the terminal side, firmly established and implemented "Products, equipment, engineering trade +EPC+ project transfer and operation + distribution" business mode, so as to enhance the differentiated ability of business operation.

We actively explore innovative marketing model under the background of the "Internet Plus", integrate online and offline marketing resources, and strive to improve the application level of the Internet in expanding the market and helping traditional industries develop new markets. CMEC-CMK cross-border e-commerce runs well, and the framework of the CAMCE e-commerce platform has begun to take shape.

#### **⊚**<sup>©</sup> Case

Creating a new model of "Internet + automobile services and trade"

SINOMACH-AUTO reached a vehicle e-commerce strategic agreement with Aliqiche.com. The two sides will carry out comprehensive strategic cooperation in automotive sales and services, exploring and creating a new mode of "Internet+ automobile service and trade". The cooperation between SINOMACH and Aliqiche.com will integrate SINOMACH's advantages in the past more than 20 years with Aliqiche.com's advantages in "Internet Plus" platform and big data.

The sale of first batch of the eighth-generation Sonata has been officially launched in the Tmall store and a new brand of automobile spare parts – "AE import and export" has also opened in the official flagship store in Tmall. At the same time, car-leasing and second-hand car departments of SINOAUTO will add flagship stores or specialty stores to platforms like "Tmall" and "Taobao", starting the new



"O2O" marketing mode. In future leasing industry, SINOMACH will make full use of the Aliqiche.com's financial services and credit system innovation mode. The two companies will co-develop a "Convenient Renting and Buying" products that includes car renting, after-rental services and second-hand car trading. In addition, both enterprises will discuss about carrying out cooperation in the "Fast auto loan", auto logistics services and other areas.

# © Case

Leading the bearing industry into the "Internet Plus" era

The Bearing Science & Technology Co Ltd (ZYS) and Romax Technology co-developed RomaxCLOUD, which was based on big data and cloud computing and is the only collaborative innovation platform for digital bearing design and simulation analysis platform in China's bearing industry. RomaxCLOUD, with its advanced "Internet Plus Industrial Design", is the only collaborative innovation platform for digital bearing design and simulation analysis platform in China's bearing industry and is able to carry out bearing parametric design, professional (optimization) analysis and efficient simulation, breaking through the technical bottleneck of traditional design of bearing industry and digital analysis system. It leads the bearing industry into the "Internet Plus" era of intelligent collaborative design.

# **Deepening Corporate Reform**

SINOMACH continues to deepen the reform as a SOE. Centering on the shareholding reform of all subsidiaries, improving incentive and restraint mechanisms, and the mixed ownership system reform, we actively promote the implementation of relevant reforms, and guide the Group's operation mechanism to become more flexible and efficient with higher quality, efficiency, fairness and sustainability.

# Promoting the corporate restructuring

Improve The Modern Enterprise System

We constantly improve the modern enterprise system on the basis of the market economy, which takes the enterprise legal system as the main body and the company system as the core so as to establish a system with clear property rights and responsibilities, separated government functions from corporate management and scientific management.



# Improving the corporate governance structure

- Finish the reform in the corporate system of Linhai Group
- Start the reforms in state-owned enterprises such as CUC, CACS, AE Auto Parts and Tianjin Engineering Machinery Institute



# Deepening the reform of the "three systems"

- Scale up efforts in reforming the HR management of leaders
- Improve the comprehensive evaluation system
- Adhere to the long-term talent-selecting mechanism which combines organization investigation and competitive selection
- © Establish and perfect the wage decisionmaking and increase mechanisms in adapting to the basic labor market and in accordance with economic benefit and labor productivity rate



# Exploring ways to establish a tolerant mechanism

- Explore ways to establish a tolerant mechanismregarding fault-tolerant as the key
- Actively create an atmosphere of wanting to, planning to and being good at reform

Promote Mixed Ownership System Reform

Based on the Group's practical situations, CEI launched the Interim Measure of Employee Stock Ownership Pilot , which clearly showed the direction and norms for the reform. By seizing the opportunity to timely launch the application of employee stock ownership pilot (ESOP) project, the company became one of ten pilot ESOP organizations under the SASAC.

# Solving historical problems

We promote all-round separation and transfer of "SINOMACH three supplies and one management" and has formulated a work plan to further standardize the transfer of assets, performance determination, declaration of state-owned capital fund and other work procedures. Based on the work of pilot provinces and cities, we promote the separation and transfer in non-pilot areas. By the end of 2016, we had finished 30% of the program involving RMB 600 million, with a grant of RMB 250 million, and finished the settlement of employees concerning the reform of enterprises under the administration of the district authorities or higher levels, with 6 companies included into the plan of rebuilding local shanty towns.



 The signing ceremony on the separation and transfer of gas supply function in CNEG living area



for the sustainable development of enterprises. SINOMACH adheres to green, low-carbon and sustainable development, strengthens environmental management in production and uses embrace clearer water and bluer sky with all the stakeholders



Total energy consumption

**60.368** TCE



Added value of energy consumption every RMB 10,000

0.216 TCE /RMB 10,000



# **Building a Green Management Platform**

SINOMACH regards environment protection and building green enterprises as its duties, strictly complies with relevant national laws and regulations on energy saving and emission reduction and energy consumption quota. We has formulated the 13th Five-Year Plan on Energy Saving and Environmental Protection, and has been constantly improving the organizational system for environmental protection and energy saving & emission reduction, optimizing the environmental management system and building a green management platform. In 2016, SINOMACH's total energy consumption reached 60.368 TCE. The overall energy consumption of RMB 10,000 of output value is 0.1912 TCE/RMB 10,000. The overall energy consumption per RMB 10,000 of operating revenue is 0.004 TCE/RMB 10,000. The overall energy consumption per RMB 10,000 of added value is 0.216 TCE/RMB 10,000. The emission volume of SO<sub>2</sub> is 566.3 tons, and the emission volume of COD is 85.35 tons.



We carry out systematic and standardized management of energy saving and emission reduction and have formulated a series of rules and regulations and carried out research on the system of energy-saving standards.

**Rules and Regulations** 

We set up leading groups on energy saving and emission reduction both in the Group and second-tier subsidiaries to build a leadership and management system for energy saving and emission reduction from top to bottom.

**Organizational Structure** 

The Group signed the Responsibility
Agreement on Energy Saving
and Emission Reduction Targets
Assessment with second-tier
subsidiaries and assigned targets
to lower subsidiaries and urged
implementation.

Assessment, Rewards and Punishments

SINOMACH Green Management System



Three systems of SASAC energy saving and emission reduction

ISO14000



#### **Green Construction**

**SINOCONST:** Vehicle washing equipment

**SINOCONST:** Building Information Model (BIM) Technology

**SINOCONST:** Close-knit mesh



#### **Green Technology**

toilets during rush time of the construction of eco-friendly waterborne industrial coatings

CEI: Synchronous Rectification Technology

IPPR: Comprehensive Auxiliary Projects of Wuxiang Lake in Nanning (Northern district)

**HGMRI:** Key technologies in lightweight designing and manufacturing of heavy pressure vessels



#### **Green Design**

**SIPPR:** The manufacturing project of ultra-low emission treatment equipment of industrial flue gas

**SIPPR:** Elderly Service Center of ZhengDong New District, Zhengzhou

**AE:** Solar energy as the power for air conditioning





#### **Green Engineering**

CMEC: China Machinery International Engineering Technology Research Center and Auxiliary Engineering (CMIE) Project

**CMEC:** CMEC-GL 80MW photovoltaid power generation project in Leping

**TRIED:** High-efficient grid-connected photovoltaic power generation system



#### **Green Products**

**SUMEC:** Supply units of the largest ground-based PV power plant in Yachimata, Chiba, Japan

CAAMS: Chain-and-slat turner

**CAAMS:** Organic fertilizer processing equipment



#### **Green Manufacturing**

CFMC: Linhai 301 electric car

YTO: Reuse-water treatment equipment

YTO: Wet sand dehydration

**HGMRI:** Stepless flow regulation system in large-scale reciprocating compressors

# Implementing Whole-Process Green Management

SINOMACH incorporates the philosophy of environmental protection into the design, production, R&D and promotion of products. Through scientific management and technological progress, we strive to minimize environmental pollution and energy consumption to build a Green SINOMACH.

# Promoting green design

Taking local natural resources, social culture and customer demand into consideration, SINOMACH promotes the overall utilization of green technologies, and carries out detailed design to raise energy utilization efficiency and minimize energy consumption.



▲ SIPPR's project of the manufacturing ultra-low emission treatment equipment for industrial flue gas

#### Case Yi Cheng

#### Yi Cheng Times Plaza pre-certified Gold Level by LEED

Yi Cheng Times Plaza was pre-certified Gold Level by LEED. As the project's three-star Green Building design and operation consultant, IPPR took the proprietor's demand into account and made comparison among a number of green technology plans to select the optimal plan, in order to minimize energy consumption while ensuring the comfort and user-friendliness of the building. In addition, IPPR was in charge of the specific design of the project's energy and environment management system to ensure the building's future potential in energy saving, and realize big-data analysis of energy consumption and quality management, which solved the common problem of quantitative management in a building's full life-cycle management.



# (2) Implementing green production

Aiming to protect the ecological environment and save resources, we strive to improve the utilization rate of resources, reduce waste emission and continue to increase investment in ecological protection to reduce the environmental impact of production as much as possible and aim to form an atmosphere that facilitates resource conservation and environmental protection, and maximize the effect of environmental protection.



During production, YTO adopts wet sand dehydration equipment to reduce energy loss.

China National Machinery Industry Corporation 67

enterprises.

#### Innovating in green technology

SINOMACH strives to conduct independent research and development of equipment manufacturing in areas such as new energy (solar power, wind power, waste-to-energy and biomass power generation), nuclear energy (nuclear power, nuclear fuel industry), energy saving and environmental protection (such as sewage treatment and solid waste treatment) and other industries. We actively participate in the R&D and manufacturing of PV modules and other equipment, promote the transformation and upgrading of products and technology, and vigorously develop low-carbon, clean and efficient model for production and operation.

#### Case

Woteer's "zero-emission" project wins Global Industrial Water Project of the Year

In 2016, on the 10th Global Water Summit, Woteer under CAMCE built a "zero-emission" waste water desulfuration system for Changxing Power Plant of China Huaneng Group, which won Global Industrial Water Project of the Year. It was the first time for a Chinese environmental technology company to won such an international prize in water treatment.

The "zero emission" project was the world's first industrial wastewater treatment project in which forward osmosis technology was commercialized. 100% of the waste water could be recycled and reused in the system which separates crystallized salt from waste materials in the waste water. It greatly lowers the investment and operation cost. The project is under fully automatic control, more convenient for operation and maintenance of equipment. The system is a combination of Woteer's unique pre-processing technology and the innovative forward osmosis technology, treating the waste water with high COD and salt, and realizing "zero-emission" of water desulfuration in electric power industry, serving as a good example in "zero-effect" waste water treatment among industrial enterprises.



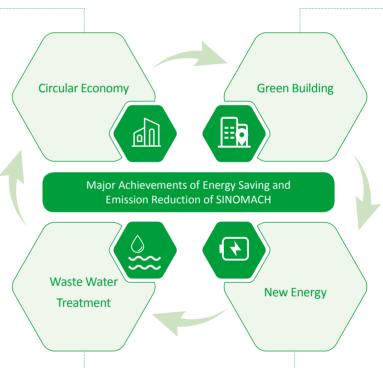
▲ GME uses waste water treatment technology to alleviate environmental burden.

#### Carrying out energy saving and emission reduction

To practice social responsibility of energy saving, emission reduction and carbon emission reduction, we promote energy saving and emission reduction index assessment, continue to carry out activities of the Energy Saving Week, pay attention to raise public awareness on energy saving and environmental protection and encourage the research and development, demonstration and promotion of new technologies, pushing forward the enterprise to achieve green development. In 2016, we drafted SINOMACH Energy Saving and Emission Reduction Plan (2016-2020), and finished the performance appraisal work of 2016's targets in energy saving and emission reduction in 39 second-tier subsidiaries.

Vkan Certification & Testing CO., Ltd. (CVC), a subsidiary of CEI, upgraded and transformed the driving motor test bench of electric car, integrating the original 200KW testing system that uses frequency conversion feedback as the loading mode, in which accompanying motor was used as the power generator and electricity can be sent back to the tested motor, and energy can thus be recycled.

IPPR, SIPPR and CUC not only have won many national awards in green building, but also highlighted the idea of energy saving, environmental protection and economic construction in their overall construction plans.



Woteer, a subsidiary of IPPR, adopts the process system of "coagulation plus filtration" characterized by low input, low operating energy consumption, anti-corrosiveness and anti-incrustation. The system almost reaches zero emission with the operating cost of 0.375 RMB per ton of water, realizing the low-cost recycling of waste water.

CFMA launched the New Energy Electric Car Incubator Plan. By the end of 2016, several series of products including No. 301, No. 401 new energy electric vehicles and electric CUV were produced, which were characterized by low cost and zero emission. Compared to general cars and motorcycles, these vehicles have distinct advantages in energy saving and environment protection.

China National Machinery Industry Corporation | 69

## Promoting green application

Apart from implementing energy saving and emission reduction in operation, we proactively provide our customers with green, safe, healthy, environment-friendly and quality products and services. By promoting green and environment-friendly services, we call on the machinery industry and the whole society to work together towards green development.

#### Developing green and eco-friendly products

We strengthen S&T innovation, accelerate R&D and marketing of high-efficient energy-saving products. Through building industrial technology alliance and tackling challenges together, we proactively improve construction technology, perfect techniques workflow, and use advanced and environment-friendly constructing equipment to reduce resources and energy consumption as well as pollutant emission and bring comprehensive benefits to the environment.

#### Case

SINOMACH takes the lead in promoting the development of agricultural electric motors

In September 2016, we led the special project of "Developing New Energy-saving and Environment-friendly Agricultural Electric Motors" under the key R&D plan "Intelligent Agricultural Equipment" in the 13th Five-Year Plan. The joint implementation team consists of 156 members from 14 key universities, institutes and backbone enterprises in China. The project, centering on the imminent need in high-efficient and eco-friendly agricultural power and equipment, aims to prioritize the development of the key generic technology in manufacturing fuel-saving, low-noise and low-pollution agricultural diesel machines, develop core spare parts and improve the intelligent management of agricultural machines. It also will develop high- or medium-power energysaving and eco-friendly agricultural diesel machines in accordance with Stage IV Limits and Measurement Methods for Exhaust Pollutants from Diesel Engines of Non-road Mobile Machinery in China and Stage IV Non-road Emission Standards in Europe to break through the monopoly of foreign technology and improve the overall technological level and international competitiveness of domestic agricultural diesel machines.

### Carrying out environment-friendly engineering projects

To comply with the trend of reforms in energy consumption and environmental protection technologies, we develop an energy-saving and environment-friendly business mode, actively participate in eco-friendly construction projects home and abroad, and ensure energy, land, water and material conservation and environmental protection to make great contributions to improving the environment with actions.



▲ The Leping 80MW photovoltaic power generation project undertaken by CMEC

## Practicing the Philosophy of Green and Environmental Protection

We advocate green and energy-saving office, publicize knowledge on low carbon and environment protection, and implement the philosophy of green development in every part of work and life. The Group encourages employees to carry out water and electricity conservation as well as green commuting, take part in public welfare activities related to environmental protection, and be the participants, advocators and promoters of environment protection.

## ⟨⊙⟩ Implementing green office

We actively guide our employees to implement "Green Office", encourage them to save and protect resources and energy, and start protecting the environment from every detail in life.Implementing all-round Green Office and building green, energy-saving offices.



## Participating in public welfare activities on environmental protection

Building a low-carbon society requires the participation and actions of the general public. We organize and encourage employees to participate in various environmental protection activities and publicize the importance of environmental protection to raise public awareness of environmental protection and guide the public to consume in a greener way.



▲ The Cambodian Project Department of CHMC participates in the activity of planting trees

#### Case

#### Green Exhibition for Low-carbon Environmental Protection

From June 30 to July 4, 2016, the 8th Hohhot International Automobile Exhibition was held in Inner Mongolia International Conference and Exhibition Center. In response to the philosophy of low-carbon, environmental protection and green growth in the exhibition industry advocated in Several Suggestions by the State Council on Further Promoting Reform and Development of the Exhibition Industry, CNAICO, as the host, avoided using excessive materials and promoted and operated the exhibition through various means of the new media, bringing brand new values and experience to exhibitors, the media and the audience.



70 | 2016 Social Responsibility Report China National Machinery Industry Corporation | 71

# **HAPPY SINOMACH**

-Building a Harmonious Society

No enterprise can exist or gain development on its own. Only through joint growth with employees, partners and communities can an enterprise stay sustainable prosperity. SINOMACH sticks to being people-oriented and advocates sharing. We grow together with employees, cooperate with internal and external partners for win-win outcomes and share development fruits with communities to contribute to building a harmonious society.



Identification of hidden dangers in work safety

27671



Rectification of hidden dangers in work safety

27515



## **Growing Together with Employees**

Employees are the most precious treasure for an enterprise. SINOMACH attaches importance to the individual value of employees, protects their interests and rights and promotes their growth. The Group strives to build harmonious labor relations with employees to improve their happiness, and create a "community of shared interests" with them. The SINOMACH culture unites our employees and we share development fruits with them. By the end of 2016, SINOMACH has 109,013 employees in total, among which 97,516 are on the job, 9,070 are new employees and 26,914 are female. Female managers account for 33.6% of the management board. Employees' satisfaction degree has stayed relatively high for years.



## Protecting employees' rights and interests

SINOMACH strictly abides by national and local laws and regulations, and international conventions. The Group's labor policy highlights equality and non-discrimination and the Group treats employees equally regardless of their nationalities, races, religious beliefs, genders or ages. The Group prohibits child labor and forced labor, and emphasizes on protecting employees' individual information and privacy, sets up a linkage mechanism between wages and corporate performance to provide employees with competitive salary and welfare, and values employees' health and adopts various measures to ensure their occupational health as well as safeguard their mental and physical health and safety. The Group has established the system of Worker Representative Congress and a disclosure system of corporate affairs to guarantee employees' rights to know, to participate, to express and to supervise in corporate management. By the end of 2016, SINOMACH has a 100% signing rate of labor contracts, 100% coverage of social insurance, 100% establishing rate of labor unions in second-tier subsidiaries and 100% coverage of physical examination.

Signing Rate of Labor

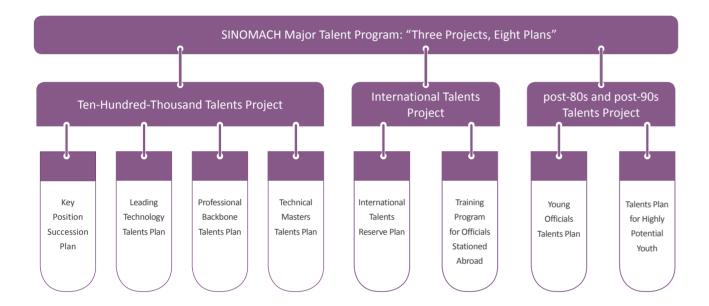
100 %





## Stimulate employee motivation

SINOMACH regards talents as the primary source for supporting development and vigorously implements the strategy of building the enterprise stronger through cultivating talents. The Group continues to improve the talent cultivation mechanism and incentive measures, implements the talent team plan and carries out talent selection and recommendation, so as to get enough intelligent support and talent support for business development. The Group also optimizes its training system and is committed to building a solid and wide platform for employees' career development to increase their sense of pride and achievement. In 2016, SINOMACH pushed forward the construction of internal training system through carrying out 31 training sessions with 36 person-times of lecturers and three rounds of selection and recommendation of multi-level talents including chief experts and technicians.





▲ SINOMACH Lecture on Trainings at Stanford University and University of California at Berkeley

## Caring for employees' life

SINOMACH values humanistic care and resolves employees' concerns by helping those in need, organizes activities in various forms, and creating a healthy, comfortable and harmonious working atmosphere. The Group shares development fruits with employees and helps them balance work and life.





## Consolidating Foundation for Development by Ensuring Work Safety

SINOMACH adheres to the guideline of "safety first, prevention foremost and comprehensive governance", takes the opportunities of the "Work Safety Month" and "Work Safety Tour" to establish relevant regulations and systems, which improves the work safety management system, promotes the construction of safety culture, raises employees' safety awareness and emergency management capacity, strengthens work safety responsibility and further guarantees stable development of the enterprise.

## Laying a solid foundation for production management

SINOMACH continues to strengthen construction of the work safety management system and the organizational system by optimizing the safety management mechanism, increasing investment in work safety and standardizing and specifying work safety objectives and responsibility. In 2016, SINOMACH compiled and implemented the SINOMACH Work Safety Plan and revised the *Evaluation Plan on Work Safety Responsibility Objectives* to continue the accreditation, upgrade and re-evaluation of work safety standards. By the end of 2016, 140 enterprises were accredited as having reached the work safety standards, among which 2 reached the first class, 76 reached the second class and 62 reached the third class.

Enterprises accredited as having reached the work safety standards

140

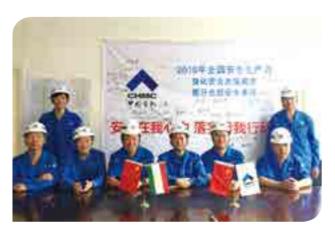


## Improving employees' quality and capacity of work safety

SINOMACH values the cultivation of employees' capacity of work safety and pushes forward the construction of safety culture. Through carrying out regular activities such as the "Work Safety Month" and "Work Safety Tour" and safety publicity, education and training covering all employees, the Group has strengthened their sense of safe development, improved their alertness and emergency handling capabilities, and enhanced their quality and capacity of work safety. By the end of 2016, SINOMACH carried out 1,979 emergency drills, increasing 227 over last year. 27,817 person-times participated in the emergency management training, increasing 43% with 8,380 person-times over last year.



▲ SINOMACH Work Safety Workshop



 $\blacktriangle$  Work safety signing ceremony at the CHMC Tajikistan aluminum project site

#### Special safety campaign

• Through carrying out the 2016 "Work Safety Month" and "Work Safety Tour", SINOMACH was awarded "Excellent Organizer" by the Office of Work Safety Commission under the State Council, and the YTO Group won the title of "Outstanding Enterprise"

#### Safety documents compilation

- Compiling the Briefing on Work Safety
- Compiling the SINOMACH Compilation of Work Safety Accidents and Emergencies
- Printing and distributing the Research Report on Safety Culture Construction in Chinese Enterprises and the Typical Cases of Safety Culture Construction in Chinese Enterprises

Safety Culture Construction

#### Safety education and training

- Organizing the "Training Course for Work Safety Management"
- Organizing the lecture on Experience Exchange in Safety Check and Troubleshooting and Fixing Hidden Dangers
- Making SINOMACH Safety Culture Publicity and Education Video
- Convening a specific video conference on work safety

#### Safety culture policies

- Incorporating subsidiaries' performance in safety culture construction into the annual evaluation of the Group's work safety objectives
- Including safety culture construction as one of the major missions in corporate work safety in the 13th Five-Year Plan
- Distributing Guidelines on Promoting Safety Culture Construction

#### 

#### A special "Pre-shift Meeting"

In the "pre-shift meeting" in the morning of July 26, workers in YTO (Luoyang) Flag Auto-body Corporation under YTO Group gathered in front of the door of the exhibition hall of Plant No. 1. The first stop of "I Want Safety" speech tour, hosted by the Department of Safety and Environmental Protection of YTO and the Youth League Committee and organized by YTO Speech Association, was held here.

Speakers told stories about people and things around them to stress the importance of safety. Zhang Lijuan mentioned she had a classmate and friend who was inflicted irreversible harm both physically and mentally due to an accident. The audience were deeply impressed by her touching speech, and many even wetted their eyes. Liu Jiawei and Zhou Tian told every colleague the importance of rules and regulations through sharing their experiences. Most accidents came from habitual violation of rules. Employees should not be shaken by the idea "we will be safe just as usual", which would cause harm and damage. Zhou Tian even shouted "Work safely! Please wear labor protection appliances!" loudly for three times at the end of his speech to remind people that ordinary work necessities might be the best "protection umbrella" in emergencies.

In half an hour, speakers told one story after another to make their fellow workers believe that safety lies in details. It's everybody's business, the foundation of production and operation, and an important element to bond every family. After the speech, some workers said such pre-shift meeting was impressive, and the safety education was more convincing than previous ones that simply reiterated "paying attention to safety". This form of activity could make everyone keep the importance of safety deep in mind and be more careful at work.

## Holding relevant personnel accountable in work safety

SINOMACH actively organizes safety activities to guarantee employees' occupational health. The Group carries out evaluation and assessment on its work safety responsibility objectives, makes greater efforts to manage major hazard sources and remove hidden dangers, and organizes special improvement campaigns to prevent and control production risks and improve the Group's safety guarantee capacity. In 2016, SINOMACH carried out nine work safety checks, mutual checks, and special inspection campaigns. The Group's headquarters sent inspection groups 13 times to monitor and examine work safety in 28 production sites of 16 subsidiaries home and abroad, and organized a special check over the implementation of the *Occupational Health Management Regulations*. By the end of 2016, it has removed altogether 27,671 hidden dangers, and rectified 27,515 hidden safety problems with a rectifying rate of 99.44%.

Rectifying rate of hidden safety hazards

99.44 %

## Emphasizing overseas safety

While implementing the "Going Global" strategy, SINOMACH always gives high priority to the operation safety of overseas projects and the life and property security of overseas employees. The Group establishes and improves the whole-process risk prevention and control mechanism in overseas projects to improve safety management and build a long-term work safety mechanism in synchronization with the domestic one. In 2016, SINOMACH held a "Training Lecture on Overseas Public Safety Management", established a work safety blacklist of constructors or labor subcontractors and a recording system of safety management plans for overseas projects, and released safety warnings in time. The all-round risk prevention system would reduce safety risks as much as possible.



▲ SINOMACH Overseas Project Department is carrying out a learning activity on work safety.

## Seeking Win-Win Cooperation with Partners

SINOMACH adheres to the core value of "work together, win together" and emphasizes on being responsible to stakeholders and customers, partners and peers. With the aim to create a sustainable and responsible value chain and improve the overall level of the industry, SINOMACH attaches importance to improving the value of its products and services to meet customers' diverse demand, and to deepen communication with other enterprises for coordination, cooperation and win-win growth.

## Creating value for customers

Based on customer demand, SINOMACH builds capacity in professional production and delicate customer services through quality management to improve its competitiveness, satisfaction degree of customers and reputation of products. The Group creates quality projects and offers tailored services to realize customers' value, meet their expectation and guarantee win-win cooperation.



▲ SINOMACH products receive high acknowledgement from Thailand customers.

#### Case

#### YTO technicians serve customers in zero distance to improve product performance

On September 29, 2016, technicians from the Quality Department, Product Department and Technology Department of No. 4 Assembly Plant and No. 2 Assembly Plant of YTO visited customers in Xiaozhai Village, Mengjin County, Luoyang City to check the usage of Dongfanghong tractors. User Ma Xiaole and two other villagers showed them the farming process of tractors and machine tools and told them the advantages and disadvantages of the products in farming. Technicians from No. 2 Assembly Plant of YTO Group drove the tractor to check its deficiencies in operation. Two hours of driving and deep communication with users helped technicians find deficiencies in design and improve the products according to different terrains and farming environments.

#### © Case

#### HGMRI improves service quality to create a technology service brand in key areas

Technology service is an important element in science and technology supply. HGMRI carries out researches on fundamental theories, applied basic technologies and the full chain of product assembly and manufacturing and emphasizes improving technology services to create a technology service brand in key areas.

Building a first-class service system: In the field of pressure vessels, HGMRI establishes a whole life-cycle open service system that integrates quality and safety and creates a quick response service group composed of hardworking, courageous and capable employees. The system covers standards, materials, design, manufacturing, inspection, evaluation, failure analysis and emergency rescue.

Providing a "one-stop" quality testing service solution: In testing electromechanical products, CGMRI actively provides "one-stop" services based on product examination and testing through prioritizing instrument measurement, testing capacity evaluation, standard drafting and participation, expert services in special technologies, accreditation and market analysis, etc.

## © Creating a responsible value chain

SINOMACH creates an open, fair and just bidding and tendering environment, strengthens communication with suppliers and standardizes supply chain management. It gives priority to improving suppliers' sense of responsibility and capabilities, and is dedicated to creating a sustainable value chain with partners to improve its capacity to serve customers upstream and downstream and cooperate harmoniously with all suppliers. In 2016, the Group basically finished construction of the purchasing management system and the information management platform for general procurement. It also set quantitative performance evaluation indicators for subsidiaries to reach the goals of 60% internet procurement, 60% centralized procurement and 50% open purchasing.



▲ The first overseas entity of SUMEC Textile & Light Industry Corporation— Phase One (Yangon) of Myanmar Win-Win Clothing Factory

## Sticking to mutual interests and win-win cooperation

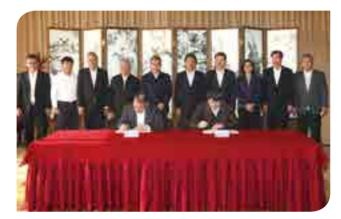
SINOMACH strategically values partnerships. Internally, the Group uses business joining meetings, experience exchange meetings and other forms to coordinate business and share resources among segments; externally, the Group promotes strategic cooperation by strengthening cooperation with stakeholders such as the government, financial institutions and partners. In 2016, SINOMACH signed strategic cooperation agreements with over ten companies including SINOPEC, AECC, CGN, CIIC, Guangdong government and Hunan government to complement each other's advantages and share interests.



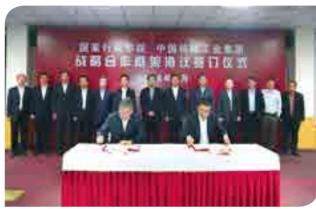
▲ SINOMACH is signing a strategic cooperation agreement with the People's Government of Hunan Province.



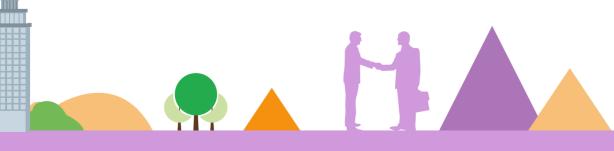
▲ SINOMACH is signing a cooperation agreement on the die forging industry with the Aviation Industry Corporation of China.



▲ SINOMACH is signing a strategic cooperation agreement with the China General Nuclear Power Corporation.



▲ SINOMACH is signing a strategic cooperation agreement with the Chinese Academy of Governance.







## **Promoting Harmony through Community Building**

SINOMACH actively performs its social responsibility to promote social development and improve people's life. It attaches importance to the influence of project construction and operation over neighboring communities. By considering local residents' concerns and demand and combining industrial characteristics of the project, the Group improves community infrastructure, innovatively carries out public welfare activities and participates in major community activities to facilitate to build a harmonious community.

## Community engagement and development

Corporate development requires the support of communities and community growth also requires the support of enterprises. SINOMACH actively communicates with communities including listening to residents' demand, resolving their difficulties, and improving their lives. The Group helps to improve the community's economy, culture & education and infrastructure construction to co-create and share the harmonious and happy communities.

#### Offering jobs

SINOMACH closely follows local residents' employment situation, gives priority to them while employing workers, and directly offers job opportunities to local communities. The Group provides the society with education and professional skill training to help community residents acquire practical techniques and find jobs. In 2016, SINOMACH worked actively to support Tibet through employment and provided Tibetan university students with over 200 related jobs.

#### Creating social wealth

SINOMACH increases investment in communities and actively performs its duty to pay taxes. It focuses on promoting localization of institutions, employees and procurement and invigorates local economic development with projects to help improve the community's development capacity. In 2016, the Group paid a total tax of RMB 9.553 billion.

## Improving infrastructure

SINOMACH sees community as the home of the enterprise so it continues to improve community environment and uses its resources to improve local infrastructure. It feeds back local communities in electricity, transportation, farmland water conservancy, etc. to improve local residents' welfare and enhance the local sustainable development capacity.



▲ Premier Philémon of Cameroon is visiting the Limbe Stadium built by CMEC.



A total tax in 2016

President Correa of Ecuador is visiting CAMC's Portoviejo Hospital construction project.

## Being enthusiastic in public welfare

SINOMACH sticks to sharing development fruits with the society and joins in hands with partners of all circles to establish a platform for public welfare activities. It actively helps poverty alleviation, aid those in trouble, carry out volunteer activities, and join in emergency rescues and welfare donation activities to proactively honor its care and responsibility for local communities. In 2016, the Group's headquarters invested RMB 10.50 million in poverty alleviation, Big Love Foundation donated RMB 500.000 and Belarus donated USD 100.000.

#### Supporting cultural education

Education is the foundation of national revival and social progress. Joining in hands with all sectors of the society, SINOMACH invests human and financial resources to improve the educational environment and contribute to the development of education.



▲ CAMC donates teaching appliances to two primary schools located in the Yan river farmland irrigation project area in Sri Lanka.



Tanzanian President Magufuli is speaking at the groundbreaking ceremony of the China Library project donated and jointly supervised by China at the University of Dar es Salaam.

#### © Case

#### Continuing to help Xiyao Yinqiao Hope Primary School in Guangxi

GLESI continues to help Xiyao Yinqiao Hope Primary School in Guilin, Guangxi Province with a total investment of RMB 2.1 million. Since 2013, GLESI has finished demolishing the school's dangerous buildings and built a four-story complex building with a floor area of 983 square meters, and bought supporting facilities. GLESI has always been investing in faculty and poverty-stricken students. It sends two groups (two persons in each group) of outstanding young teachers to Xiyao Primary School every semester and sets up a scholarship foundation to give award to poverty-stricken students excellent in character and learning. Such help greatly improves the school's teaching environment and education quality, and widely broadens teachers' and students' horizons.



#### Emergency and disaster relief

Responsibility comes first when facing disasters. When major disasters come, SINOMACH will give full play to its professional advantage and experience to carry out on-site rescue immediately to reduce losses, contribute to emergency repair and reconstruction and help disaster victims rebuild their homes.



▲ The Ecuador branch of CAMC is actively engaged in earthquake relief.



▲ YTO Diesel Corporation sends two Dongfanghong diesel machines to the front line of the disaster-stricken Funing County, Yancheng City of Jiangsu Province overnight, sending the most needed power generating equipment to that area and facilitating emergency rescue and disaster relief work.

#### Case

#### CAMC gives quick response to disaster relief work in Belarus

On July 13, 2016, a large area of Belarus was hit by a storm and many residences and industrial and agricultural buildings were damaged. CAMC's China-Belarus Industrial Park project was also impacted. After hearing the news, CAMC dispatched its engineering machinery facilities in Belarus to clear trees and collapsed buildings on the roads. SINOMACH and CAMC respectively donated USD 100,000 and USD 50,000 to the government of Minsk to support the post-disaster reconstruction.



▲ CAMC representatives stationed in Belarus are interviewed by local mainstream media

66

At our most difficult times, our Chinese friends gave us timely assistance. The donated USD 150,000 will be used to relieve disaster in Smalyavichy Raion, Minsk Oblast.

——Shapiro, Governor of Minsk Oblast, Belarus

"

#### Organizing volunteer activities

Holding the spirit of dedication and serving, SINOMACH voluntarily takes part in public welfare and charity activities. We systematically organizes voluntary services including the regular "Leifeng Month", sending volunteers to communities and offering help to the vulnerable to pass on warmth and hope.



▲ CUC actively carries out activities to care for left-behind children.

# Outlook



CSR Fields	CSR Commitments	CSR Actions
Responsible SINOMACH	<ul> <li>Optimizing the social responsibility management model</li> <li>Improving the social responsibility management system</li> <li>Promoting social responsibility management</li> <li>Standardizing stakeholder management</li> </ul>	<ul> <li>Strengthening social responsibility informatizatization</li> <li>Strengthening social responsibility information disclosure</li> <li>Building a corporate social responsibility brand</li> <li>Conducting specific researches on social responsibility</li> <li>Participating more deeply in industrial communication and discussion</li> </ul>
Value-creating SINOMACH	<ul> <li>Strengthening management foundation to improve management level</li> <li>Continuing steady operation to guarantee performance growth</li> <li>Optimizing resource integration to jointly create value</li> </ul>	<ul> <li>Improving the management system and continuing to promote strategic, financial, overall risk and informatization management</li> <li>Optimizing product and business structures and further developing high-end intelligent industries</li> <li>Deepening business synergy to improve the Group's overall competitiveness</li> </ul>
Innovative SINOMACH	<ul> <li>Continuing to strengthen science and technology innovation</li> <li>Promoting management innovation</li> <li>Deepening corporate reform</li> </ul>	<ul> <li>Improving institutions and mechanisms and creating a science and technology service platform</li> <li>Increasing investment in scientific and technological innovation to strengthen technological research and development</li> <li>Participating in formulating industrial standards and leading industrial development</li> <li>Innovating in business models and accelerating transition and upgrading</li> </ul>
Green SINOMACH	<ul> <li>Improving green management system</li> <li>Encouraging green design</li> <li>Implementing green production and operation</li> <li>Adhering to promoting green applications</li> <li>Saving energy and reducing emission</li> <li>Advocating green and environmental protection activities</li> </ul>	<ul> <li>Optimizing the environment management system and creating a green management platform</li> <li>Innovating in traditional designs, manufacturing technologies and production models to promote green manufacturing and achieve whole-process green management</li> <li>Guiding employees to promote green office and participating in various environmental protection activities to guide the public towards green consumption</li> </ul>
Happy SINOMACH	<ul> <li>Protecting employees' rights and interests and growing together with them</li> <li>Strengthening work safety to eliminate hidden dangers</li> <li>Cooperating with partners and seeking win-win results</li> <li>Establishing a harmonious community through being devoted to public welfare</li> </ul>	<ul> <li>Improving the salary incentive system and the talent training system to create a talent growth platform</li> <li>Improving the work safety system to construct safety culture by screening and eliminating hidden dangers, strictly controlling accidents and building and improving the risk control mechanism of overseas projects</li> <li>Deepening coordination with stakeholders to create value and a responsibility value chain for customers</li> <li>Practicing targeted poverty elimination in certain regions by promoting local communities' cultural and educational development and improving community infrastructure</li> </ul>

## **Reporting Index**

	Table of contents	CASS- CSR3.0 indicators	GRI (G4) indicators	Page	
About this Rep	port	P1.1-P1.5\P2.3\G1.3\M1.3	23\28\30-31	Second Cover	
Message from	n the Chairman	P3.1-P3.2\P5.1	1-2	P4-P5	
		P5.2\M1.4-M1.6\M2.4\M2.8- M2.9\			
		M2.14\M3.2- M3.3\S1.5\S1.7\S2.1- S2.2\ 9-10\EC1-EC3\EC7\EN3\EN5\			
Social Respon	sibility Performance	\$2.22\\$2.26\\$3.4-\$3.7\E1.5-E1.7\E2.3-		P6-P7	
		E2.4\E2.19			
About Us		P4.1-P4.4\P4.6-P4.7\P5.2-P5.3\M1.1	3-10\13-14\16-17\34\38-39\41-48	P8-P19	
Corporate Cul	ture	G1.1	56	P20	
Corporate Stra	ategy	G1.3-G1.4		P21	
Feature on Re	sponsibility	P5.1		P22-P25	
	Social Responsibility Management Model	G1.1\G4.1		P28	
	Organizational System for Social Responsibility Management	G2.1-G2.5	34\45	P29	
Responsible SINOMACH	Social Responsibility Management Promotion	G1.2\G1.4\G4.3\G6.1-G6.4	29	P30-P31	
	Social Responsibility Material Topics Analysis	P2.1-P2.3\G1.3	18-19\35	P32	
	Stakeholders Communication and Engagement	G2.2\G5.1-G5.6\G6.1-G6.4	24-27\37\ 49-50 \ 57-58	P33	
	Stabilizing Operation and Development	M1.4-M1.6	EC1	P36	
Value-	Strengthening Basic Management	G4.4\M3.2\M3.4\S1.1-S1.4\S1.6	SO3-SO5\SO7-SO8	P37-P39	
Creating SINOMACH	Creating Value Hand in Hand	M2.7		P40-P45	
	Fulfilling the Dream of "Belt and Road"	S1.6	EC7-EC8\16	P46-P47	
	Strengthening Technological Innovation	M2.7-M2.10\M2.12	EC4	P50-P58	
Innovative SINOMACH	Promoting Management Innovation	M2.7\S1.6		P59-P60	
Sirvolvii (Ci i	Deepening Corporate Reform	M1.1		P61	
	Building a Green Management Platform	E1.1\E2.1-E2.4\E2.11\E2.13\E2.18-E2.19	EC2\EN3\EN5-EN7\EN21\EN27	P64-P65	
Green	Implementing Whole-Process Green	E1.13\E2.5\E2.7-E2.11\E2.13-E2.14\E2.18\	EN12\EN27	D00 D70	
SINOMACH	Management	E3.2\E3.4-E3.5\E4.1-E4.3	EIVIZ\EIVZI	P66-P70	
	Practicing the Philosophy of Green and Environmental Protection	E1.3\E1.6\E1.8\E1.10-E1.12\E2.15\E4.5	EN27	P71	
	Growing Together with Employees	P4.5\S1.7\S2.1\S2.3\S2.5\S2.6\S2.9\S1.17-	11\EC3\EC5\LA4\LA10\LA16	P74-P77	
	Growing rogether with Employees	\$1.18\\$1.20-\$2.22\\$2.24-\$2.29\\$4.10	THEODIEOGIE THE TOLE TO		
Happy SINOMACH	Consolidating the Foundation for Development by Ensuring Work Safety	S3.1-S3.5		P78-P80	
SINOIVIACIT	Seeking Win-Win Cooperation with Partners	G3.2\M2.1\M2.3\M2.5\M3.1-M3.8	12\EN32-EN33\LA15\PR3\PR5\PR8	P81-P83	
	Promoting Harmony through Community Building	\$1.6\\$4.1\\$4.4-\$4.5\\$4.7-\$4.9\\$4.11\\$4.13-\$4.14	EC6-EC7\EC9\SO1-SO2	P84-P87	
Outlook		A1		P88-P89	
Reporting Index		A3	32	P90	
Comparison Compact	Table with the Ten Principles of UN Global	G1.2		P91	
•	Table with UN Sustainable Development	G1.2		P92-P93	
Feedback Form		A4		P94	

# Comparison Table with the Ten Principles of UN Global Compact

UN Global Compact's Ten Principles		Progress in 2016		
Ų ≡ Human Rights	Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights	Respecting and safeguarding internationally recognized norms and standards to protect human rights and integrating respect for human rights and labor practices principle into corporate strategy and daily operation		
	Principle 2: Make sure that they are not complicit in human rights abuses	Establishing and improving the labor union system to promote democratic communication and participation		
	Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining	Resolutely eliminating child labor, forced labor and compulsory labor		
	Principle 4: The elimination of all forms of forced and compulsory labor	Sticking to equal and law-abiding employment, and eliminating all		
Labor	Principle 5: The effective abolition of child labor	forms of employment discrimination		
	Principle 6: The elimination of discrimination in respect of employment and occupation	Sticking to equal and law-abiding employment, and eliminating all forms of employment discrimination		
	Principle 7: Businesses should support a precautionary approach to environmental challenges	Attaching great importance to low-carbon and environmental protection and being devoted to the integration of environmental protection and corporate strategy		
Environment	Principle 8: Undertake initiatives to promote greater environmental responsibility	Strengthening technological innovation, vigorously promoting the use of new energy, practicing green design and constructing green		
	Principle 9: Encourage the development and diffusion of environmentally friendly technologies	projects to push forward green environmental protection and enhance environment performance		
Anti- Corruption	Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery	Deepening punishment and prevention system building, and establishing a long-term anti-corruption mechanism		

# Comparison Table with UN Sustainable Development Goals

UN Susta	ainable Development Goals	SINOMACH Action Framework	SINOMACH Typical Measures and Actions
No Poverty	End poverty in all its forms everywhere	Sticking to the basic national strategy or targeted poverty alleviation and elimination; helping all poverty-stricken regions and population become moderately prosperous by 2020 through targeted poverty alleviation and pairing assistance	Deepening poverty alleviation through education, industrial development, agricultural industrialization and improving people's livelihood     SINDMACH sent six employees to alleviate poverty in targeted regions, one to Tibet to take a temporary post, and two of the doctorate service team to Xinjiang and Guizhou respectively to take temporary posts
2 Zero Hunger	End hunger, achieve food security and improved nutrition and promote sustainable agriculture	Strengthening "intelligent manufacturing in SINOMACH", enhancing independent innovation capacity in mechanics, and improving competitiveness	Release China's first driverless tractor "Dongfanghong" LF954-C The first generation of 60-Ps machinery designed for fruit gardens came off the assembly line Upgrading the 4GL-120 cutting sugarcane harvester
3 Good Health and Well-Being	Ensure healthy lives and promote well-being for all at all ages	Valuing employees' health, practicing occupational health and safety measures, and safeguarding employees' mental and physical health and safety	Establishing and improving employee welfare and health examination system, with 100% coverage of social security and 100% rate of receiving health examination
4 Quality Education	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	Improving educational environment and giving more children in poverty-stricken regions the access to quality education	Actively alleviating poverty through education and improving education in poverty-stricken regions by fighting for free education policies for poor students, helping constructing education infrastructure and donating teaching supplies
5 Gender Equality	Achieve gender equality and empower all women and girls	Eliminating gender bias and promoting gender equality	Sticking to employment equity and eliminating gender discrimination Providing equal pay to female and male employees Paying attention to protecting female employees' rights and interests, organizing brisk walking activities on each year's Women's Day"
6 Clean Water and Sanitation	Ensure availability and sustainable management of water and sanitation for all	Optimizing the environment management system and building a green management platform covering the whole process of designing, production, R&D and promotion	Woteer under CAMC used the "coagulation and clarification + filtration" technology to recycle sewage at a low cost of about RMB 0.375/ton and has realized the low cost of sewage resourcelized utilization
7 Affordable and Clean Energy	Ensure access to affordable, reliable, sustainable and modern energy for all	Developing an energy-saving and environmentally- friendly industrial model and carrying out new energy and nuclear energy projects to optimize the energy mix	CMEC-GL took over a photovoltaic power generation project in Leping with a capacity of 80MW TRIED developed a highly efficient grid-connected photovoltaic power generation system
Decent Work and Economic Growth	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	Sticking to employment equity and eliminating discrimination due to religion, race or skin color; strengthening communication and exchange with suppliers and creating a responsible value chain	Basically completing construction of the purchasing management system and the general procurement platform     Signing strategic cooperation agreements with over 10 companies and organizations to complement advantages and share interests with stakeholders
9 Industry, Innovation and Infrastructure	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	Strengthening safety management and control in project construction; continuing to increase investment in research and development	<ul> <li>Increasing investment in scientific and technological innovation. In 2016, RMB 4.79 billion was invested in scientific and technological innovation, accounting for 2.23% of the main business income</li> </ul>
10 Reduced Inequalities	Reduce inequality within and among countries	Proactively shouldering social responsibilities of local regions where overseas projects operate and conducting overseas public welfare activities	Donating USD 150,000 to support Belarus in post-storm reconstruction     Donating teaching supplies to two primary schools at the place of the Yan river farmland irrigation project in Sri Lanka

UN Sustainable Development Goals SINOMACH Action Framework	SINOMACH Typical Measures and Actions
Make cities and human settlements inclusive, safe, resilient and sustainable inclusive, and make cities and human settlements inclusive, safe, resilient and sustainable inclusive.	YTO Diesel Engine Co., Ltd sent two Dongfanghong diesel engines to the disaster front line in Funing County, Yancheng City of Jiangsu Province overnight, sending the most needed power generating equipment to support emergency rescue and disaster relief work     CAMCE Ecuador took an active part in helping earthquake relief
and Production  Figure sustainable consumption and  Using resources and energy highly efficiently and	CAAMS developed organic fertilizer processing equipment to process urban domestic waste and produce organic fertilizer CEI upgraded and reformed the testing table of electric car motors and used the testing motor as a generator. Electricity will be directly transferred to the testing motor to realize energy recovery
Reducing the influence of production and operation on the environment through adopting	Using close-knit mesh during project construction to reduce the influence on the environment Continuously organizing Energy Saving Week and paying attention to energy saving and environmental protection publicity  CFMC launched the New Energy Electric Car Incubator Plan and has produced several series of products including No. 301 and No. 401 new energy electric vehicles and electric CUV by the end of 2016
Life Below Water  Conserve and sustainably use the oceans, seas and marine resources for sustainable development  Conserve and sustainably use the oceans, seas and marine resources for sustainable development  Implementing the "Made in China 2025" strategy and promoting industries related to marine resources development	Actively developing the marine engineering equipment industry and promoting marine resources development
Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss  Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	Actively conducting public welfare activities of planting trees and protecting the ecological environment where projects are located
Institutions for sustainable development, provide Opposing bribery in business and strengthening	Organizing and convening meetings on combating corruption and upholding integrity and carrying out specific inspections on system construction     Strengthening compliance inspections over corporate business activities, and improving advance evaluation, in-process control and afterwards supervision over legal risk prevention of major matters to guarantee that legal risk prevention covers the whole project process and to build "law-abiding SINOMACH"
Strengthen the means of implementation and revitalize the global partnership for with neighboring countries, and vigorously expanding the present market: carrying out wide	<ul> <li>As an important project along the Belt and Road, China-Belarus Industrial Park has attracted eight enterprises to enter the park and has signed intention agreements with over 30 enterprises.</li> <li>Participating in international conferences such as the B20 Summit and the 11th EU-China Business Summit</li> </ul>





2016 Social Responsibility Report \_\_\_\_\_ China National Machinery Industry Corporation | 93

## Feedback Form

#### Distinguished readers

Thank you for reading this report. We expect you to share your opinions and suggestion over this report to help us improve report compilation and our social responsibility performance. You are welcomed to fill in the following questionnaire and send it to us through the contact at the bottom of this page. We are grateful for your support for SINOMACH's social responsibility work!

SINOMACH

September 2017

1. Which of the following stakeholder are you? ☐ Shareholder	□ Employee	□ Cu:
6	17	

1.Which of the following stakeholder are you	? 🗆 Shareholder	$ \square \; Employee$	$ \square \ \text{Customer}$	$\ \ \Box \ \ \text{Supplier/Contractor}$	$ \  \   \Box  Government$	□ Peer	□ Community/the Public
□ Industrial association/NGO □ Media □ C	Others (Please spe	ecify)					

2.Generally, what do you think of this report? ☐ Very Good ☐ Good ☐ Fairly Good ☐ Poor ☐ Very Poor

3.Please evaluate the repor:

**Choice Questions** 

Evaluation Dimension	Very Good	Good	Fairly Good	Poor	Very Poor
Information Disclosure					
Formant Design					
Readability					

4.Which chapter meets your demand most? (You may choose more than one answer) 🗆 Message from the Chairman 🗆 Social Responsibility Performance 🗀 About Us
□ Feature on Responsibility □ Responsible SINOMACH—Deepening Responsibility Management □ Value-Creating SINOMACH—Making Contributions to the Real Economy
□ Innovative SINOMACH——Driving Reform and Transformation □ Green SINOMACH——Building a Beautiful China □ Happy SINOMACH——Building a Harmonious Society
□ Outlook □ Others (Please specify)
5. Which topics interest you the most? (You may choose more than one answer)
□ Employment promotion □ Paying taxes according to the law □ Legitimate and compliant operation □ Work safety □ Environmental protection
□ Community construction □ Social welfare □ Occupational health and safety □ Salary and welfare □ Career development □ Care for employees
□ Employee localization □ Energy saving and emission reduction □ Saving resources □ Ecological protection □ Environmental protection □ Fair competition
□ Honesty and credibility □ Information privacy □ Industrial communication
6.What other opinions or suggestions do you have on the report or our CSR performance?

#### Contact Us

China National Machinery Industry Corporation Address: No.3 Danling Street, Haidian District, Beijing, P.R.China Contact person: He Yuan, Party Committee Department (Corporate Culture Department) Tel.: 86-10-82606741

Fax: 86-10-82688724

E-mail: heyuan@sinomach.com.cn



Scan and comment online





Work Together, Win Together



### China National Machinery Industry Corporation

Address: No.3 Danling Street, Haidian District, Beijing, P.R.China

P.C: 100080

Tel.: 86-10-82688888 Fax: 86-10-82688811

Website: www.sinomach.com.cn



SINOMACH WeChat





