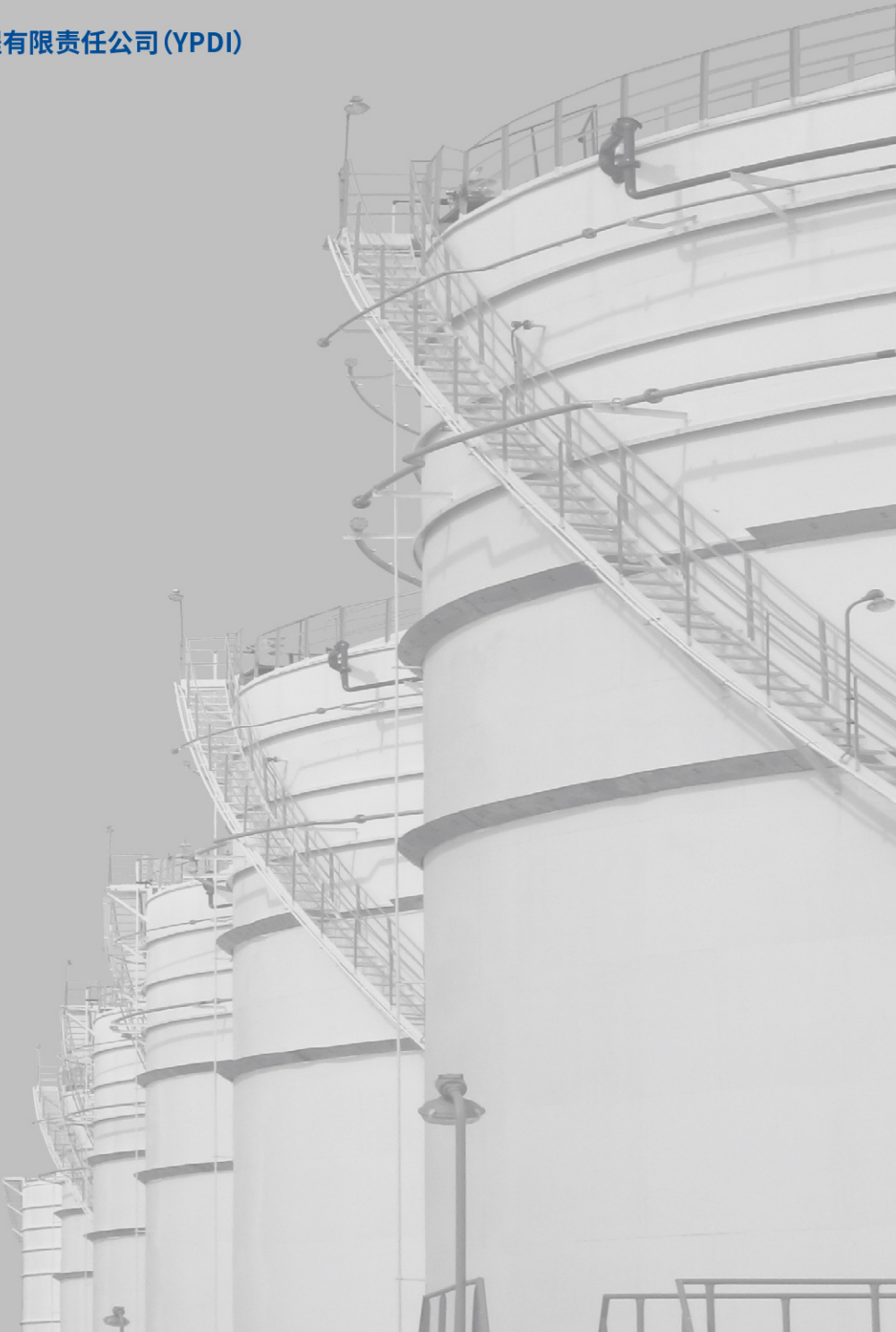


CIMC EnTech

中集安瑞科工程科技有限公司
CIMC Enric Engineering Technology Company Limited

原南京扬子石油化工设计工程有限责任公司 (YPDI)



CIMC ENRIC

中集安瑞科

中集安瑞科控股有限公司（3899.HK），香港联合交易所主板上市公司，是中国国际海运集装箱（集团）股份有限公司（中集集团，股票代码：000039.SZ）能源化工和食品装备产业平台，立足能源、化工、食品装备行业，为客户提供运输、储存、加工的关键装备、工程服务及系统解决方案。

CIMC Enric Holdings Ltd., in short CIMC Enric, is a company listed on the Hong Kong Joint Stock Exchange Main Board (3899.HK), and is a division of China International Marine Containers (Group) Co., Ltd (in short CIMC, 000039.SZ), providing energy, chemical and liquid food equipment manufacturer and engineering services. We provides the customers with key equipment for transportation, storage and processing as well as engineering services and integrated solutions.



CIMC ENRIC
中集安瑞科

自 2007 年加入中集集团以来，中集安瑞科已拥有 10 余个产品品牌，一万多名员工遍布中国、德国、荷兰、丹麦及比利时等国家 20 多个制造基地和国际领先的研发中心，营销网络遍布欧洲、南美、中亚、东南亚及中国、泰国、尼日利亚、巴基斯坦、乌兹别克斯坦等地区和国家，并向北美等其他区域延伸。2021 年，公司营业收入人民币 193 亿元。

Since 2007, CIMC ENRIC has now established more than 10 brands, operating more than 20 manufacturing bases and internationally advanced R&D centers in China, Germany, the Netherlands, Denmark and Belgium. The sales network covers Europe, South America, Central Asia, Southeast Asia as well as China, Thailand, Nigeria, Pakistan and Uzbekistan, and is currently expanding in North America. In 2021, the company achieved a total sales income of 19.3 billion RMB.

经过多年的快速发展，中集安瑞科已经成为业内具有领先地位的集成业务服务商与关键设备制造商。

Following several years of swift development, CIMC Enric has grown into a leading player in the industry as a provider of integrated services and manufacturer of key equipment.

- TOP 1

世界第一
In the world

ISO 液体罐箱产销量
Production and sales of ISO liquid tanks
- TOP 1

世界第一
In the world

高压运输车产销量
Production and sales of high pressure gas storage and transportation equipments
- TOP 1

中国第一
In China

低温运输车及低温储罐市场占有率
Business scale of cryogenic facilities
- TOP 3

中国前三
In China

LNG 接收站大型储罐市场占有率
Business scale of large-scale storage tanks for LNG terminal
- TOP 3

中国前三
In China

LNG 加气站模块化产品市场占有率
Business scale of modular products for LNG filling station
- TOP 3

中国前三
In China

CNG 加气站市场占有率
Market share of CNG gas station

中集安瑞科相关成员结构
Related member companies in CIMC Enric



CIMC EnTech 技术力量雄厚，专业配置齐全。

With strong technical force and complete disciplines.

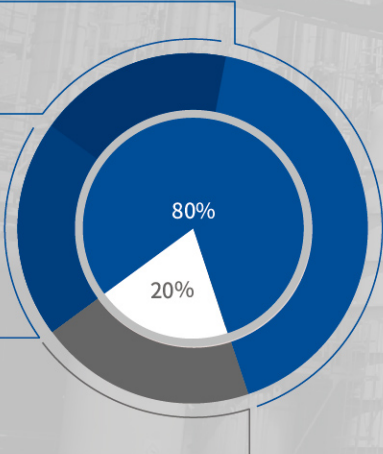
三十余年间，CIMC EnTech 先后完成了聚乙烯、聚苯乙烯、延迟焦化、催化裂化、低温贮运（国内首套）、空分、液化天然气工厂及接收站、大型罐区等各种类型的大中型石油化工装置设计、大量的石油化工单项工程设计以及多个工程项目管理、工程总承包等，有 30 余项工程设计和技术开发项目获得国家和省部级奖励。

In recent more than 30 years, CIMC EnTech has accomplished many medium and large-sized petrochemical plants/units such as polyethylene, polystyrene, delayed coking, catalytic cracking, cryogenic storage & handling (the first local tank), air separation, LNG plant and terminal, large tank farm, with flexible business modes of E, EPC, PMC, EPCM. More than 30 projects of engineering design and technology development have been awarded provincial, ministerial and national prizes.

员工 260 余名 260 more staff

各类专业工程技术人员占总数的 80%以上
above 80% engineering and technical personnel

| | |
|---|------|
| 工程师 Engineers | 100+ |
| 高级工程师 Senior Engineers | 80+ |
| 勘察设计注册工程师、 注册咨询（投资）工程师、 注册建造师 various registered engineers of Exploration & Design, Consulting (Investment) and Construction | 70+ |
| 其他 Others | |



中集安瑞科工程科技有限公司 (CIMC EnTech)，原南京扬子石油化工设计工程有限责任公司 (YPDI)，前身为扬子石化设计院，成立于 1983 年，隶属于中国石化集团，1993 年被建设部批准为甲级设计院，现为中集安瑞科控股有限公司成员企业。中集工程是以技术为先导，以设计为龙头，集咨询、研发、设计、采购、施工管理、设备制造、开车指导等多业务于一体的，具有项目管理承包和工程总承包综合能力的公司。中集工程持有甲级工程设计、乙级固废处理、乙级市政公用设计资质证书，工程咨询单位甲级资信证书，对外承包工程资格证书和三类压力容器，压力管道特种设备设计许可证。

CIMC Enric Engineering Technology Co., Ltd (in short CIMC EnTech), formerly Nanjing Yangzi Petrochemical Design Engineering Company Limited, in short YPDI, was established in 1983 and part of Sinopec for more than twenty years. YPDI was approved as the design institute with Class A Qualification in 1993 by the Ministry of Construction and became a member of CIMC Enric in 2011. With technology as the prerequisite and design as the lead, YPDI is a company with comprehensive competence of PMC and EPC, integrating consultation, research & development, design, procurement, construction management, equipment manufacturing and start-up service, etc. as its principal businesses. CIMC EnTech has been approved for Class A qualification certificate for engineering design and engineering consultation as well as Design Licenses of Special Equipment of Pressure container and Pressure Pipe.

中集工程以石油化工和清洁能源工程咨询、工程设计、工程承包为主业，将秉承“诚信为本、以质取胜、科学规范、精益求精”的质量方针，本着“精心、协作、求实、创新”的企业精神和“客户的成功就是我们发展的动力源泉”的服务理念，向客户提供优质服务。

Taking engineering consultation, design and contracting in petrochemical and clean energy industries as its principal businesses, upholding the quality policy of “Regard good credit as the base, Win through high quality, Act in scientific and standardized manner, Keep improving”, fostering the Enterprise Spirit of “Careful, Collaborative, Practical-minded and Innovative” and adhering to the philosophy of “Our customer's success is the motivation power of our development”, CIMC EnTech is willing to provide its customers with high-quality service.

资质及认证

Recognition and Qualification



营业执照
Business license



化工石化医药行业 甲级
专项 / 环境工程设计 / 固体废物处理处置工程 乙级
行业 / 市政公用 / 城镇燃气工程 乙级
Chemical / Petrochemical / Pharmaceutical
Engineering Design Class A Qualification



工程咨询单位“石化、化工、医药”专业甲级资信
(中国工程咨询协会颁发)
Class A qualification certificate for engineering
consultation in petrochemical, chemical and
pharmaceutical industries, evaluated by China
National Association of Engineering Consultants
(CNAEC).

CIMC EnTech 于 1997 年通过质量体系认证并保持至今；于 2004 年通过环境管理体系和职业健康安全管理体系（HSE 管理体系）认证并保持至今。

CIMC EnTech passed the quality system certification in 1997 and kept it valid till now. And in 2004, CIMC EnTech passed HSE management system certification and kept in valid till now.



GB/T 19001 / ISO9001 质量管理体系
GB/T 19001-2016/ISO 9001:2015 Quality Management System
HSE 管理体系
GB/T 45001-2020/ISO 45001:2018 GB/T 24001-2016/ISO 14001:2015
Occupational Health & Safety Management System
Q/SHS 0001.1-2001 Environmental Management System



特种设备设计许可证
(压力管道、压力容器)
Special Equipment
(Pressure Pipeline,
Pressure Container) Design
License



高新技术企业证书
High-tech enterprise certificate

公司荣誉

Honors And Awards

CIMC EnTech 在工程设计和技术开发应用方面获得的荣誉
CIMC EnTech has received honors and awards for
engineering design and technology development & application.

- 国家优秀设计奖 (1993)
- 中国建筑工程鲁班奖 (1996)
- 科技进步三等奖 (1997)
- 1999 年度化学工业优质工程奖
- 国家第八届工程设计优秀软件银奖 (2004)
- 2008 年交通运输部优秀水运工程咨询成果二等奖
- 2010-2011 年度中石化优秀工程设计三等奖
- 2012 年度江苏省“优秀工程设计”二等奖
- 2012 年度江苏省“优秀工程设计”三等奖
- 2012 年度中石化优质工程奖
- 2014 年度江苏省“优秀工程设计”三等奖
- 2016 年度中石化优质工程奖
- 2020 年度江苏省第十九届“优秀工程设计”三等奖**
- 2020 年度江苏省第十九届“优秀工程设计”二等奖**

- National Excellent Design Prize in 1993
- Luban Prize of Chinese Construction Engineering
- The Third Prize of Science & Technology Development
- High Quality Project of Chemical Industry in 1999
- The Eighth Silver Award for Excellent Software in Engineering Design (2004)
- The Second Prize of Excellent Marine Traffic Engineering for Consultation Achievement, awarded by Ministry of Transportation in 2008
- The Third Prize for Sinopec Excellent Engineering Design (2010-2011)
- JiangsuExcellent Engineering Design (The Second Prize awarded in 2012 and 2020, The Third Prize awarded respectively in 2012 ,2014 and 2020)
- Sinopec High Quality Project (awarded respectively in 2012 and 2016)



业务范围

Business Scope



CIMC EnTech 工程领域涵盖储运工程、低温工程、环保工程、天然气工程、石油化工、精细化工、园区规划、公用工程等多方面。

三十多年的发展，大量工程业绩和良好服务提升了 CIMC EnTech 在业界知名度和口碑。

CIMC EnTech provides customized solutions to clients in sectors of petrochemicals, fine chemicals, storage and handling engineering/facilities, cryogenic engineering, environmental protection engineering, natural gas engineering, master planning and utility engineering for chemical industry park, etc.

Over the past thirty years, a large number of achievements and good services have significantly promoted the popularity and reputation of CIMC EnTech.

经营项目

Business Items

- 技术咨询和技术服务
Technical consultation and technical service
- 工厂规划
Factory (plant) planning
- 可行性研究
Feasibility study
- 总体设计
Overall design
- 工程总承包
Engineering, procurement, construction contracting (EPC)
- 工程设备、材料采购服务
Equipment and material procurement service
- 工程基础设计和详细设计
Basic / Detail engineering design
- 化工机械设备设计
Chemical mechanical equipment design
- 压力管道和压力容器设计
Pressure pipe and pressure container design
- 工程计算机软件开发和应用
Computer software development and application in engineering
- 计算机系统集成及网络工程
Computer system integration and network engineering
- 新技术开发
New technology development

发展战略和规划

Development Strategy and Planning

公司未来五年的发展愿景：在以天然气为基础的清洁能源领域，成为国际领先的工程服务和整体解决方案的提供商；在石油化工领域成为国内工程服务第二梯队中的领先企业。

The Company's development vision for the next five years: to become an international leading provider of engineering services and overall solutions in the field of clean energy based on natural gas; to become a leading enterprise in the second echelon of domestic engineering services in the field of petrochemical industry.

碳捕集类 CCUS

CCUS 作为国际上通行的碳减排技术之一，主要优点是减排潜力大、可促进煤等化石能源的清洁利用，较符合我国国情。从行业上看，CCUS 可应用于电力、能源以及减排难度较大的制造业等行业的减排。

贯彻落实新发展理念，响应国家应对气候变化政策的政治要求，中集工程将持续关注 CCUS 领域的技术发展方向，积极践行绿水青山就是金山银山的发展理念。

As one of the most popular carbon emission reduction technologies in the world, CCUS has great potential for emission reduction and can promote the clean use of fossil energy such as coal, which is more in line with China's national conditions. From the industry point of view, CCUS can be applied to the emission reduction of power, energy and manufacturing industries which are more difficult to reduce emissions.

To implement the new development concept and respond to the political requirements of the national policy on climate change, CIMC EnTech will continue to pay attention to the direction of technological development in the field of CCUS and actively practice the development concept that green mountains are golden mountains and silver mountains.

制氢 Hydrogen production

焦炉煤气生产 LNG 及氢气是一种符合能源改革和环保标准的高效能方案，中集工程在相关领域已经耕耘数年。

中集安瑞科执行董事兼总经理杨晓虎先生认为，焦炉气制 LNG 或制氢市场前景广泛，我国焦炉气资源量约 1800 亿方 / 年，其中用于制 LNG 的资源量仅约 150 亿方，行业还存在巨大的发展空间。中集安瑞科启动**焦炉气制液化天然气 (LNG) 联产氢气项目**，是公司向 LNG 及氢能产业链上游生产领域拓展作出的积极探索，将帮助集团在清洁能源产业生态链的布局更加完善。

The production of LNG and hydrogen from coke oven gas is a highly efficient solution in line with energy reform and environmental protection standards, and CIMC Engineering has been working in related fields for several years.

Mr. Yang Xiaohu, Executive Director and General Manager of CIMC Enric, believes that the market of LNG or hydrogen production from coke oven gas has broad prospects. The resources of coke oven gas in China are about 180 billion cubic meters per year, of which only about 15 billion cubic meters are used to produce LNG. There is still a huge space for development in the industry. CIMC Enric started **the project of cogeneration of hydrogen from coke oven gas to liquefied natural gas (LNG)**, which is an active exploration made by the company to expand the upstream production field of LNG and hydrogen energy industry chain, and will help the group company to improve the layout of the ecological chain of clean energy industry.

绿色甲醇 Green methanol

甲醇是清洁的含氢含氧液体燃料，绿色甲醇可通过生物质能源、绿氢捕获二氧化碳或可再生能源等多种方式获得。

中集工程计划采用高倍率循环流化床生物质高效气化技术生产绿色甲醇，通过生物质气化、水汽变换制氢，进而合成甲醇。

中集安瑞科执行董事兼总经理杨晓虎先生认为，“目前全球绿色甲醇仍处于发展初期，在双碳背景下，我国绿色甲醇产业发展潜力巨大。中集安瑞科以科技进步、产品创新助力清洁能源更安全、更经济、更广泛的应用。围绕这些方向，绿色甲醇作为氢能产业链的延伸，有较好的市场前景。中集安瑞科将建设大规模**绿色甲醇战略示范项目**，是我们在可再生清洁能源行业的一大跨越式突破。

Methanol is a clean liquid fuel containing hydrogen and oxygen. Green methanol can be obtained by biomass energy, green hydrogen capturing carbon dioxide or renewable energy.

CIMC EnTech plans to use high-rate circulating fluidized bed biomass gasification technology to produce green methanol, through biomass gasification, water vapor conversion to produce hydrogen, and then synthesize methanol.

Mr. Yang Xiaohu said, At present, the global green methanol is still in the early stage of development, and under the background of double carbon, China's green methanol industry has great potential for development. CIMC Enric promotes the safer, more economical and wider application of clean energy with scientific and technological progress and product innovation. Around these directions, green methanol, as an extension of the hydrogen energy industry chain, has a good market prospect. CIMC Enric will build a large-scale **green methanol strategic demonstration project**, which is a great breakthrough in the renewable clean energy industry.

环保工程 Environmental Protection Engineering

低温贮运 Cryogenic Storage and Handling



- 1 大连恒力5万立方低温乙烯储罐项目 (EPC), 于2019年11月7日成功投产。
50,000m³ ethylene cryogenic storage tank of Dalian Hengli (EPC), started producing on November 7, 2019.
- 2 欧德油储(南京) 50,000m³低温液氨储罐项目, 获得2020年度江苏省“优秀工程设计”二等奖。
50,000m³ liquid ammonia cryogenic storage plant of Oiltanking Nanjing Co., Ltd., won **Jiangsu Excellent Engineering Design The Third Prize in 2020**.
- 3 连云港荣泰化工仓储有限公司商储罐区工程(二期)低温罐区低温丙烷/丁烷储罐项目 (EPC): 1座80,000m³低温丙烷储罐, 1座80,000m³低温丁烷储罐, 于2020年中交。
1*80,000m³ cryogenic propane storage tank/1*80,000m³ cryogenic butane storage tank of Lianyungang Rongtai Petrochemical Storage Co., Ltd., completed in 2020.
- 4 浙江嘉化低温罐区项目 (EPC) (1座150,000m³低温丙烷混凝土全防罐、1座150,000m³低温乙烷/乙烯混凝土全防罐), 于2021年竣工。该项目为目前国内直径最大LPG低温储罐。
Zhejiang Jiahua Cryogenic Tank Farm Project (EPC) (1 x 150,000m³ cryogenic propane storage tank, 1 x 150,000m³ cryogenic ethane/ethylene storage tank), completed in 2021. The project is currently **the largest diameter LPG cryogenic tank in China**.
- 5 广西华谊氯碱化工有限公司5万方低温乙烯储罐项目 (EPC), 目前正在建设中。
50,000m³ ethylenecryogenic storage tank project (EPC) of Guangxi huayi chlor-alkali chemical co., ltd, currently in construction.

- 扬子石化10,000m³低温乙烯贮存装置 (国内首套低温贮存装置)
10,000m³ ethylene storage plant of YPC, **the first cryogenic storage facility in China**
- 新浦化学(泰兴)有限公司40万立方米轻烃仓储项目, 包括2座120,000m³混凝土全包容乙烷低温罐、1座120,000m³混凝土全包容丙烷低温罐、2座3000m³丙烯球罐、2座2000m³混合C4球罐、2座2000m³裂解汽油内浮顶罐、12座250m³立式液态甲烷罐及9套槽车装卸系统等, 于2017年完成设计。项目获得2020年度江苏省“优秀工程设计”三等奖。
400,000m³ storage project for light hydrocarbon of Sinpo

Chemical (Taixing) Co., Ltd., including 2×120,000m³ ethylene cryogenic storage tanks, 1×120,000m³ propane cryogenic storage tank, etc., completed engineering design in 2017. Won **Jiangsu Excellent Engineering Design The Third Prize in 2020**.

□ 日照岚明化工有限公司2×20,000m³低温乙烯装置及配套设
施工程 (PMC)
2×20,000m³ ethylene cryogenic storage plants of Rizhao
Lanming Chemical Co., Ltd. in Shandong. (PMC)

- 1 金宏气体(嘉兴)有限公司年产20万吨食品级二氧化碳8万吨干冰建设项目
Jinhong Gas (Jiaxing) Co., Ltd. annual output of **200,000 tons of food-grade carbon dioxide 80,000 tons of dry ice construction project**
 - 2 泰州石化VOC处理装置
VOC treatment plant (Taizhou Petrochemical)
 - 3 金浦锦湖200m³/h中水回用装置
200m³/h wastewater treatment system (Nanjing KUMHO GPRO Chemical Co., Ltd.)
 - 4 华润海丰碳捕集测试平台项目
Carbon capture test platform (CR Power)
 - 5 扬子石化三轮改造污水处理及废水回用配套工程, 获得2016年度中石化优质工程奖
Renovation of sewage treatment and wastewater reuse (YPC), won Sinopec High Quality Project Award in 2016.
- 扬子石化VOC治理项目
VOC treatment plant (YPC)
 - 兰州石化300t/h凝结水处理回用制脱盐水装置
300t/h salt-removal water unit using recycled steam condensate (Lanzhou Petrochemical)
 - 扬子石化危险废物中转堆场改造项目
Renovation project of transfer yard for hazardous waste (YPC)
 - 扬子石化PTA装置节能改造项目尾气处理包
Tail gas treatment for energy saving of PTA unit (YPC)



天然气调峰库 / 天然气接收站终端
LNG Storage and Peak Shaving Terminal



- 1 深圳市天然气储备与调峰库工程项目（EPC）：LNG 装 / 卸船（1 只 90,000m³LNG 船）、LNG 储存（规模 80,000m³ 的预应力混凝土全容罐）、LNG 气化外输、LNG 槽车外输。于 2017 年建成中交。
Shenzhen LNG Storage and Peak Shaving Terminal EPC Project, including 80,000m³ storage tank and 90,000m³ LNG loading and unloading ship, etc., completed in 2017.
- 2 南通港吕四港区广汇能源 LNG 分销转运站 160,000m³ 储罐扩建项目（EPC）：1 座 160,000m³ 全容式储罐、公用工程及配套基础设施。于 2018 年 11 月 21 日竣工投产。
Nantong Lvsì Port Guanghui Energy LNG Distribution Terminal Expansion EPC Project, including 160,000m³ full containment tank, public utilities and supporting infrastructures, started producing on 21st, Nov., 2018.
- 3 内蒙古汇能煤化工有限公司煤制天然气项目 120,000m³LNG 储罐 EPC，于 2021 年机械竣工。
120,000m³ LNG Storage Tank EPC Project for Coal-to-Natural Gas Project of Inner Mongolia Huineng Coal Chemical Industry, completed in 2021.
- 4 浙江舟山国际航运船舶液化天然气（LNG）加注站试点项目（EPC），包括 2 座全包容 160,000m³ 储罐，于 2018 年 10 月 19 日正式投入运营。浙江舟山液化天然气（LNG）接收及加注站二期项目（EPC），项目范围包括 2 座全包容 160,000m³ 储罐，于 2021 年机械竣工。
Zhejiang Zhoushan International shipping LNG refuelling station pilot Tank EPC project, including 2×160,000m³ tanks, started producing on 19th, Oct., 2018. Zhejiang Zhoushan International shipping LNG refuelling station pilot Tank EPC project (phase2), including 2×160,000m³ tanks, completed in 2021.
- 5 惠州 LNG 接收站项目储罐 EPC，建设中。
Huizhou LNG Receiving Station Project Storage Tank EPC, currently in construction.
- 6 国家管网集团粤东 LNG 接收站外输能力扩建工程设计采购施工（EPC），建设中。
Expansion Project of Outbound Transmission Capacity of Guangdong East LNG Receiving Station of National Pipeline Group (EPC), currently in construction.

液化天然气工厂 LNG Liquefaction Plant

中集安瑞科工程科技有限公司，致力于天然气液化、LNG 加气站整站工程设计。
Since becoming a member of CIMC ENRIC, YPDI has been devoting to engineering design of LNG station integrating liquefying and filling.

与安瑞科成员企业协作，已进行了多个项目的设计和工程建设，并进一步技术更新和优化。

CIMC EnTech has coordinated with the other members of CIMC ENRIC to conduct a number of design and engineering construction projects, so that the technology of CIMC EnTech has been updated and optimized further.



- 宁夏 30 万方液化天然气工厂项目（EPC），2016 年建成中交。
Ningxia 300,000m³/d LNG Liquefaction plant (EPC, completed in 2016).
- 宁夏 50 万方液化天然气工厂项目（EPC），建设中。
Ningxia 500,000m³/d LNG Liquefaction plant (EPC), currently in construction.
- 山西襄垣5万方/天LNG装置设计
Shanxi Xiangyuan 50,000 m³/d LNG plant (Design).
- 吉林岫坤20万方/天LNG装置
Jilin Hongkun 200,000 m³/d LNG plant (Design).

| 石油化工 Petrochemicals |

>> 石油化工装置 Petrochemical Plants



- 1 扬子石化30万吨/年乙烯工程总体设计, 获全国优秀工程设计金质奖
Overall design of 300,000 t/y ethylene project of YPC, won the golden prize of national excellent.

2 北京燕山石化14万吨/年聚乙烯装置 (获国家科技进步三等奖和中国建筑工程鲁班奖)
140,000 t/y polyethylene plant of Beijing Yanshan Petrochemical Co., won the national science & technology advancement third prize and Luban prize.

3 汉邦(江阴)石化60万吨/年PTA装置工程项目管理(PMC), 于2011年1月成功投产。
600,000 t/year PTA Plant of Hanbang (Jiangyin) Petrochemical Co., Ltd., starting producing in Jan., 2011. (PMC)
- 扬子石化2万立方米/小时火炬气回收装置
20,000 m³/h flare gas recovery plant of YPC.
 - 扬子石化50万吨/年延迟焦化装置
500,000 t/y delayed coking plant of YPC refinery.
 - 扬子石化60万吨/年催化裂化装置
600,000 t/y catalytic cracking plant of YPC.
 - 广东茂名芳烃抽提装置
Aromatics extraction plant of Guangdong Maoming Petrochemical Co., Ltd.
 - 扬子石化20万吨/年聚乙烯装置
200,000 t/y PE plant of YPC.
 - 扬子石化年包装能力40万吨的联合包装装置
400,000 t/y combined packaging plant of YPC
 - 扬子石化-巴斯夫有限责任公司裂解罐区
Cracking material tank farm of BASF-YPC Co., Ltd.
 - 兰州化学工业公司7万吨/年聚乙烯装置
70,000 t/y PE plant in Lanzhou

>> 石油化工罐区 Petrochemical Tank Farm

- 1 浙江舟山液体化工品中转基地工程, 包括: 储罐 58 台, 罐容 88 万立方米; 5 万吨级泊位、3 万吨级泊位、1 万吨级泊位及工作船码头各 1 座。一期工程已于 2009 年建成投运。
Transit Base of Liquid Chemicals of Zhejiang Zhoushan: 58 storage tanks with capacity of 880,000m³, berths and workboat wharfs of 50,000t, 30,000t and 10,000t. The Phase I project has been put into operation in 2009.

2 泰州东联化工滨江项目重油罐区、化工产品罐区
Tank farm for heavy oil and chemical products in Taizhou
- 欧德油储(南京)3号罐区扩建项目
Expansion project for No.3 tank farm of Oiltanking Nanjing Co., Ltd.
 - 扬子石化新建石脑油储罐项目 (4×50,000m³石脑油储罐)
4×50,000m³ naphtha oil storage tanks of YPC.
 - 扬子石化油品质量升级及原油劣质化改造项目码头原油罐区
Crude oil tank farm on the wharf of YPC in renovation project for upgrading oil quality.
 - 扬子石化环氧乙烷化工园储运站
Storage and transportation station in industry park for ethylene oxide (YPC)
 - 南通东海石油化工宁汇库区40,000m³石化仓储改扩建项目
Reconstruction and expansion project of 40,000m³ chemical storage (Nantong Donghai Petrochemical Industry Co., Ltd.)
 - 中国石化武汉80万吨/年乙烯工程原料罐区
Raw material tank farm of Sinopec Wuhan 800 thousand t/y ethylene project
 - 南京沙达旺储运有限公司液体化学品仓储基地
Liquid chemical storage base in Nanjing Chemical Industry Park
 - 张家港东华石化200,000m³罐区项目
200,000m³ tank farm in Zhangjiagang
 - 江苏海企化工(泰州)100,000m³化工原料罐区
100,000m³ chemical material tank farm in Taizhou
 - 扬子石化-巴斯夫有限公司裂解罐区(中德合资)
Cracking tank farm (YPC-BASF)



精细化工装置 Fine Chemical Plants

>> 压力容器 Pressure Container



- 镇海炼化乙烯工程全压力罐区
包括：2 台 1000m³ 球罐、8 台 2000m³ 球罐、9 台 4000m³ 球罐设计，2010 年 1 月建成投产
2×1000m³ Propylene spherical tanks, 8×2000m³ Propylene spherical tanks and 9×4000m³ Propylene spherical tanks for Zhenhai Refining & Chemical Co., Ltd., which have been put into operation in Jan., 2010.
- 绍兴三圆石化有限公司4台2000m³丙烯球罐设计，2009年8月建成投产
4×2000m³ Propylene spherical tanks for Shaoxing Sanyuan Petrochemical Co., Ltd., which have been put into operation in Aug., 2009.
- 己烷切割塔
Hexane cutting column
- 大型卧式罐
Large sized horizontal tank
- 液化气罐
LPG tank

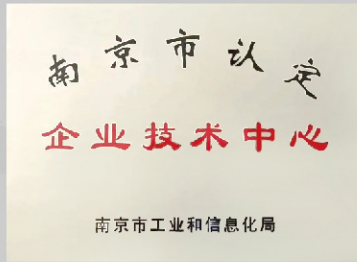
- 1 河南省义煤集团开祥天源化工有限公司年产10万吨级聚对苯二甲酸丁二醇酯 (PBT) 装置
100,000 t/y polybutylene terephthalate (PBT) plant of Henan Kaixiang.
- 2 雅保聚合物添加剂生产装置
Polymer additive plant of Albemarle Chemical (Nanjing) Co., Ltd.
- 3 可利亚聚醚多元醇生产装置
Polyether polyol plant of Korea Polyol (Nanjing) Co., Ltd.
- 扬子奥克环氧乙烷衍生精细化学品项目
Ethylene oxide derivative fine chemicals project of Nanjing Yangzi Oxiran Chemical Company Ltd.



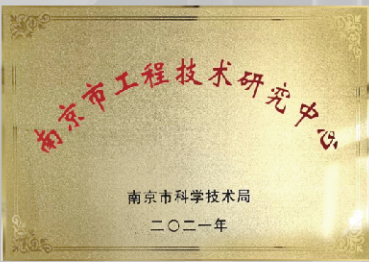
技术开发与应用 Technology Development and Application

| 研发 Research and Development |

中集工程大力推进科技进步、注重技术开发，精于技术更新，不断加强对外技术合作交流，实现科技创新。By focusing on technology development and update, as well as continuously strengthening external technical cooperation and exchange, YPDI has greatly improved science and technology.



2020年, 中集工程荣获南京市企业技术中心
In 2020, CIMC EnTech won the title of Nanjing Enterprise Technology Center



2021年, 中集工程荣获南京市石化低温储存工程技术研究中心
In 2021, CIMC EnTech won the title of Nanjing Petrochemical Cryogenic Storage Engineering Technology Research Center



PDSOFT是工厂设计系列软件(Plant Design Software)的简称, 其中配管设计软件(PDSOFT Piping)和钢结构设计软件(PDSOFT SteelWorks)由中集工程与中科辅龙公司联合开发完成。PDSOFT Piping于1997年通过建设部和中国科学院联合组织的鉴定, 并荣获中国科学院科技进步二等奖。PDSOFT SteelWorks于2000年6月通过中国石油化工集团公司和中国科学院联合组织的鉴定。两者均达到国际先进水平, 现已广泛应用于石化、石油天然气、化工、核工业、轻工、医药等设计行业。

PDSOFT is the abbreviation of Plant Design Software series. CIMC EnTech and Zhongke Fulong Co., Ltd. has jointly developed the piping design software (PDSOFT Piping) and the steel structure design software (PDSOFT SteelWorks). PDSOFT Piping passed the authentication organized jointly by the Ministry of Construction and Chinese Academy of Science in 1997. PDSOFT Steel Works passed the authentication organized jointly by Sinopec Group and Chinese Academy of Science in June 2000. Both have reached international advanced level and been widely used in the engineering design of many industries such as petrochemical, petroleum and natural gas, chemical, nuclear, light, pharmaceutical, etc.

| 专利 Patents |

公司拥有 1 项发明专利, 36 项实用新型专利和 3 项软件著作权。
CIMC EnTech has 1 invention patent, 36 utility model patents and 3 software copyrights.

双金属全容低温储罐、大型立式储罐、覆土式储罐总成、低温乙烯储存系统等知识产权优化低温储运系统设计。

Intellectual property optimization of cryogenic storage and transportation system design, such as **bimetallic full-capacity cryogenic storage tank**, large vertical storage tank, earth-covered storage tank assembly, cryogenic ethylene storage system, etc.



立式储罐罐内管道的安装方法、环梁结构、穹顶气顶升监测装置等知识产权提高了工程质量、降低了造价。

The intellectual property rights of the installation method of the pipeline in the vertical storage tank, the ring beam structure and the dome gas jacking monitoring device improve the quality of the project and reduce the cost.



二氧化碳捕集系统、罐区挥发性有机物处理系统等知识产权配合公司战略, 拓展环保领域新市场, 提高公司的竞争能力。

Intellectual property rights such as **carbon dioxide capture system** and volatile organic compounds treatment system in tank farm cooperate with CIMC EnTech's strategy to expand new markets in the field of environmental protection and improve CIMC EnTech's competitiveness.



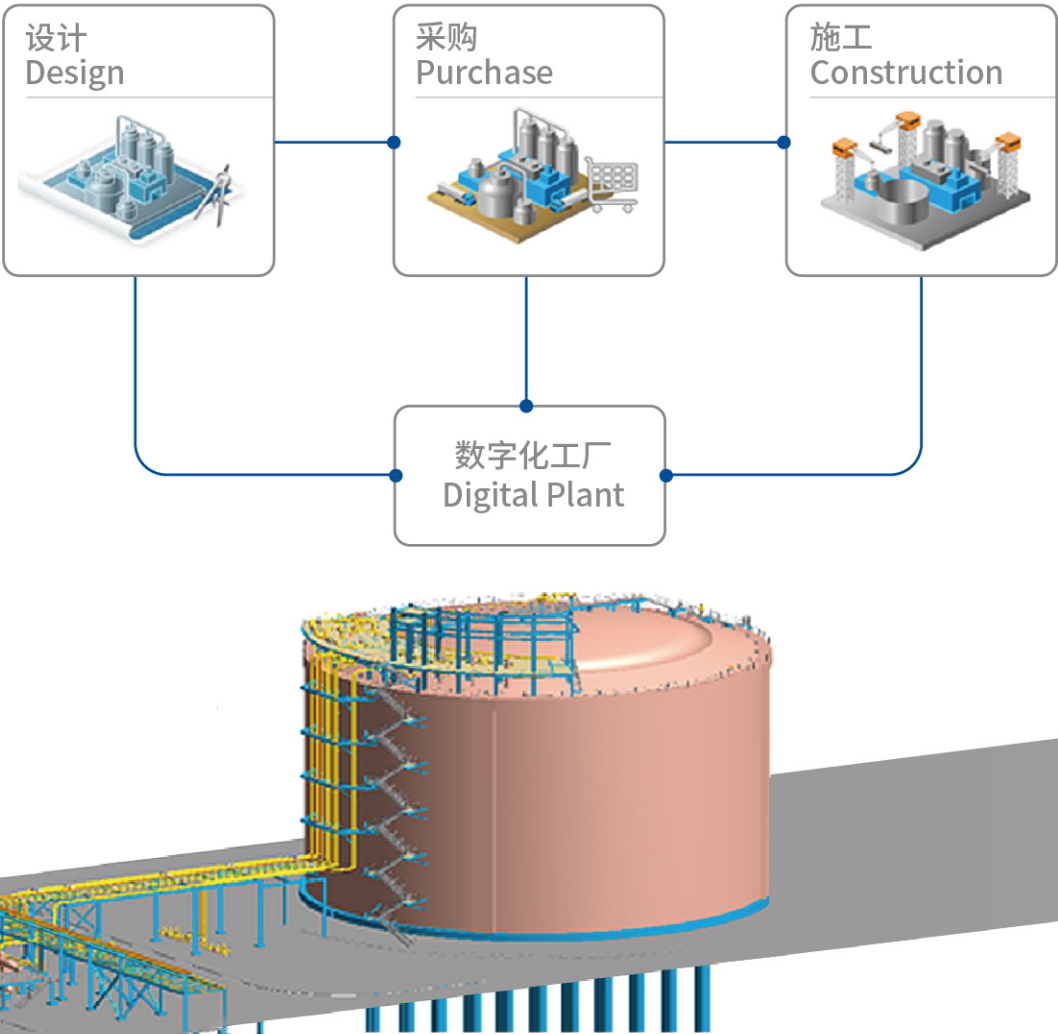
| 数字化交付 Digital Delivery |

公司积极探索,主动变革,通过数字化技术的实施,建立和移交在设计、采购、施工建设中产生的数据资产,帮助业主方实现从源头上掌握工厂运行管理数据,并以此为基础实现工厂数字化,开展智能化的工厂运维及设备资产管理,从而实现工厂全生命周期的数字化管理。

目前数字化交付能力可以实现 **PDS、PDMS、Smart Plant 3D、E3D**等三维软件全覆盖。

CIMC EnTech actively explores and takes the initiative to change. Through the implementation of digital technology, it establishes and transfers the data assets generated in the design, procurement and construction, helps the owner to grasp the plant operation and management data from the source, and on this basis, realizes the digitalization of the plant, carries out intelligent plant operation and maintenance and equipment asset management, so as to realize the digital management of the whole life cycle of the plant.

At present, the digital delivery capability can achieve full coverage of **PDS, PDMS, Smart Plant 3D, E3D** and other three-dimensional software.



| 校企合作 School-enterprise cooperation |

公司为促进科技创新,依托自建的研发中心,以自主研发为主的原则,充分利用高等院校的技术、人力等资源以及先进成熟的技术成果,与高校、国际大型先进企业展开多种形式的合作,推动企业科技创新。

与**南京工业大学**通过联合技术攻关、科研成果转化、共建研发平台、人才培养等方面进行产学研合作,目前在“16万方LNG预应力混凝土储罐结构有限元分析”、“大型低温储罐气升顶检测控制系统”等项目进行技术合作,开展“复合胺吸收剂设计、脱碳行为及示范”技术开发。

与**天津大学**签订“大型储罐地震有限元时程分析”技术开发合作项目。



与**常州大学**联合申报石油和化工行业“先进等离子体催化技术创新中心”项目。

In order to promote scientific and technological innovation, the company relies on the self-built R & D center, gives priority to independent R & D, makes full use of the technology, human resources and other resources of institutions of higher learning as well as advanced and mature technological achievements, and carries out various forms of cooperation with universities and large international advanced enterprises to promote scientific and technological innovation of enterprises.

Through joint technical research, transformation of scientific research achievements, co-construction of research and development platforms, personnel training and other aspects of industry-university-research cooperation with **Nanjing University of Technology**, technical cooperation is currently carried out in such projects as "Finite Element Analysis of 160000 LNG Prestressed Concrete Storage Tank Structure" and "Gas Lifting Detection and Control System of Large Low Temperature Storage Tank". Carry out the technical development of "design, decarburization behavior and demonstration of compound amine absorbent"; apply for the project of "advanced plasma catalysis technology innovation center" in the petroleum and chemical industry jointly with **Changzhou University**; sign the technical development cooperation project of "seismic finite element time-history analysis of large storage tanks" with **Tianjin University**.

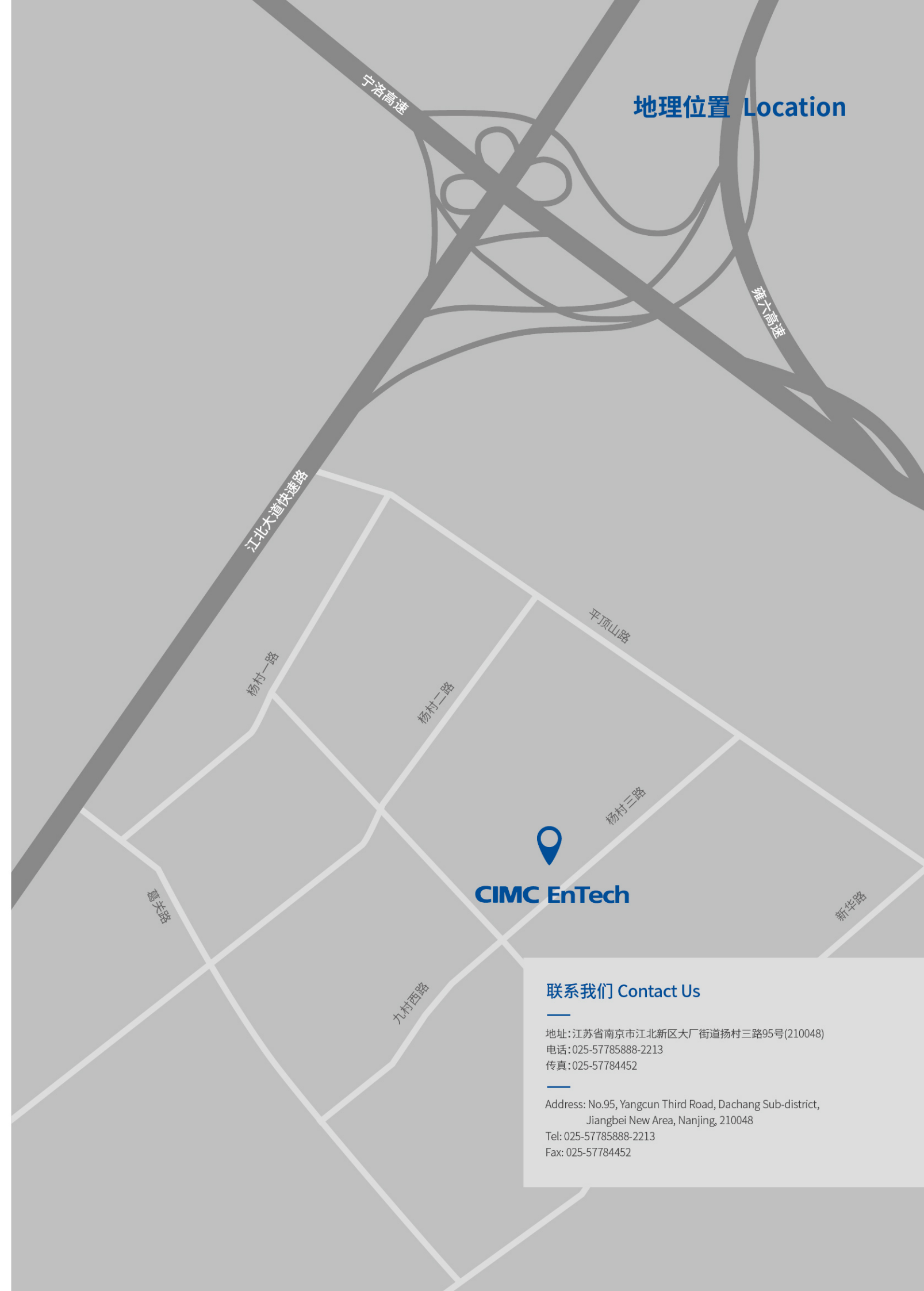


主要合作伙伴和客户

Main Partners and Customers



地理位置 Location



联系我们 Contact Us

地址: 江苏省南京市江北新区大厂街道杨村三路95号(210048)
电话: 025-57785888-2213
传真: 025-57784452

Address: No.95, Yangcun Third Road, Dachang Sub-district,
Jiangbei New Area, Nanjing, 210048
Tel: 025-57785888-2213
Fax: 025-57784452