

China Hongqiao Group – a Leading Global Aluminum Producer Moving from Heavy to Zero Carbon

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Abstract



Introducing China Hongqiao Group, from our aluminum beginning in 2001 to a leading global producer today. A journey started by our founder Zhang Shipping to utilise available electricity generated in the power station built to supply steam for the Weiqiao textiles production facilities. By 2015, aluminum smelting capacity had reached five million tonnes (Mt) and today we have 6.46 Mt licensed capacity under China's nationally approved aluminum production capacity of 45 Mt.

Over the course of the two decades of aluminum industry development, China Hongqiao has spread along the full aluminum value chain covering upstream, midstream, and downstream activities. This includes around 17 Mt of alumina capacity and an expanding footprint in the downstream sector. In addition, we are growing our involvement in the recycled aluminum space. We are operating a modern energy-efficient fleet of aluminum smelters with an average age of less than 10 years and amperage of 400 kA to 600 kA, with additional technically advanced 600 kA potlines being added with the capacity relocation to Yunnan.

Current work involves the most dramatic shift in the Hongqiao aluminum story, relocating aluminum capacity from Shandong to Yunnan Province . . . an energy and environmental game-changer, from coal to hydro energy. Our Yunnan Hongtai & Honghe projects are in line with government objectives to optimize aluminum industry through supply side management, and to promote green development.

The China Hongqiao business model includes the complementary elements of industrial clusters and the delivery of hot metal direct to customers. The industrial clusters business model is built on the foundations of strategic partners and close commercial links to customers.

China Hongqiao is continuing scientific research and technological investment in the field of lightweight aluminum applications – and the creation of higher value products. Weiqiao is now partnering with CITIC Foundation and the University of the Chinese Academy of Sciences in building an advanced industrial research Institute for Future Technology & Engineering. The goal is to build a platform for the integration of science, education, innovation, and production - and to promote industry-education integration and industrial innovation and to accelerate high-quality development.

China Hongqiao is working to advance a sustainable, environmentally responsible, and advanced technology aluminum industry, together with partners, customers, and other stakeholders, including national research institutions.

China Hongqiao Chairman Zhang Bo attaches great importance to environmental protection, energy conservation and sustainable development, with clean green production and higher value products as core business goals.

China has set goals of a carbon peak by 2030 and carbon neutralization by 2060 – and China Hongqiao is committed to meeting these national goals. A roadmap for achieving the twin carbon goals is in development and the presentation to ICSOBA will focus on the key issues facing the company and the key initiatives being taken to achieve carbon neutrality.

Keywords: China Hongqiao group, Efficient aluminum smelters, Sustainable aluminum industry, Technology innovation, Carbon neutrality goal.

1. Introducing China Hongqiao Group

China Hongqiao Group is incorporated in the Cayman Islands and was listed on the Hong Kong stock exchange (HKEX Code 1378) on 24 March 2011.

The main shareholder is Shiping Prosperity Private Trust Company (through its 100 % equity interest in China Hongqiao Holdings Limited) with 66.62 % of the total issued share capital (as at 31 December 2021). The next largest shareholding is controlled by CITIC Group Corporation and related companies. The China Hongqiao Group Chairman & CEO is Mr Zhang Bo. Further information is available from the annual and interim reports filed with the HKEX.

From our aluminum beginning in 2001 to a leading global producer today, this aluminum journey was started by our founder Zhang Shiping to utilise available electricity generated in the power station built to supply steam for the Weiqiao textiles production facilities. The aluminum activities expanded rapidly and were spun-off from the Weiqiao Pioneering textiles business to form China Hongqiao Group.

Over the course of the two decades of our aluminum industry development, China Hongqiao has spread along the full aluminum value chain covering upstream, midstream, and downstream activities. This includes around 17 Mt of alumina capacity and an expanding footprint in the downstream sector. In addition, we are growing our involvement in the recycled aluminum space. By 2015, aluminum smelting capacity had reached five million tonnes (Mt) and today we have 6.46 Mt licensed capacity under China's nationally approved aluminum production capacity of 45 Mt.

China Hongqiao is operating a modern energy-efficient fleet of aluminum smelters with an average age of less than 10 years and amperage of 400 kA to 600 kA, with additional technically advanced 600 kA potlines to be introduced with the second phase of the capacity relocation to Yunnan.

The China Hongqiao business model includes the complementary elements of industrial clusters and the delivery of hot metal direct to customers. The industrial clusters business model is built on the foundations of strategic partners and close commercial links to customers. In 2021, China Hongqiao produced 5.633 Mt of electrolytic (primary) aluminum. While the majority of the output is supplied to customers in adjacent industrial parks and industry clusters, we also produced 0.672 Mt of aluminum fabricated products.

Current work involves the most dramatic shift in the Hongqiao aluminum story, relocating aluminum capacity from Shandong to Yunnan Province, an energy and environmental game-changer, from coal to hydro energy.

The Yunnan Hongtai 2.03 Mt & Yunnan Honghe 1.93 Mt projects are in line with government objectives to optimize aluminum industry through supply side management, and to promote green development. When these projects are completed, over 60 % of China Hongqiao's aluminum

aluminum (hot metal) to vehicle assembly. We strive to build the largest lightweight production base in China that integrates R&D, testing, and manufacturing.

We aim to take an ambitious step forward, planning a broader presence in the realm of lightweight materials. Our diversified expansion will have automotive application and aluminum products as the foundation, and include high-end extension of current aluminum processing parts, the expansion of non-aluminum materials such as carbon fiber that are highly synergistic with aluminum assembly parts, and the extension to integrated solutions of design and services based on aluminum components and vehicle assembly.



Figure 7. The Weiqiao Lightweight Base.

9. Conclusions

This paper and accompanying presentation aims to introduce China Hongqiao Group as one of the leading global aluminum producers and the current goals and objectives being pursued by the Group's management led by Chairman/CEO Zhang Bo, with a corporate priority on carbon neutrality and a sustainable future:

“Using China’s climate goals as a framework, we have been proactive in accelerating our green transition and exploring the path towards a sustainable future. We have found our way, which is to achieve high-quality and sustainable development through decarbonization and innovation, and to contribute to the harmonious coexistence between economy and ecology.

We understand that green and low-carbon development matters a lot. It matters to the future of the community with a shared future for mankind and relates to the ecological protection of countries and regions. It increasingly shapes how competitiveness is defined in the manufacturing industry and among companies. And it drives innovation within companies and in the industry. We are determined to achieve our carbon neutrality goals and elevate climate-compatible productivity. We also pledge to make good use of our influence along the industrial chain, inviting all partners and friends to join our decarbonization efforts and pursue green and low-carbon development. Let us join hands to ensure a greener, better and more sustainable future!”