



Maximising value of industrial by-products

Through our wholly owned subsidiary Rain Carbon Inc., we produce calcined petroleum coke, coal tar pitch, and other carbon products. These are critical raw materials for the production of aluminium, steel, and many additional products.

2.43 Mn MT
Sales volume

₹155,418 Mn
Revenue

23%
Operating margin

74%
Contribution to consolidated revenue

Business strength

Our global network of plants and flexible logistics infrastructure helps us maintain a reliable supply of raw materials and ensures consistent calcined petroleum coke and coal tar pitch deliveries to our customers. This enabled us to continue producing CPC and CTP despite the declining availability of anode-grade green petroleum coke. This was driven by continued softness in refinery production of automobile and aviation fuels due to the COVID pandemic's impact in some parts of the world as well as reduced steel production.



Our carbon products



Calcined petroleum coke (CPC)



Coal tar pitch (CTP)



Other carbon products

(creosote oil, carbon black oil and others)

Raw materials used

Green petroleum coke (GPC), a by-product of crude oil refining

Coal tar, a by-product of metallurgical coke used in the iron and steel industries

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Manufacturing process

Using rotary-kiln and vertical-shaft technologies in a high-temperature process called calcining, which removes moisture and volatile matter from GPC

Produced through distillation of coal tar. Distillation is a process that separates the components of a product based on different boiling points

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Uses

Raw material for anodes used in the production of primary aluminium as well as for the steel and titanium-dioxide industries

Raw material for anodes used by the aluminium industry as well as for the graphite and refractory industries

Raw materials used by the wood treatment, carbon black, construction and other industries

Our capabilities

Eight production units with a production capacity of 2.4 MTPA in North America and Asia

Five coal tar distillation plants with a capacity of 1.3 MTPA in Europe and North America

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Key highlights of CY22

Optimising ACP production for commercial success

In our quest to commercialise our proprietary anhydrous carbon pellets (ACP), we primarily focused on improving and stabilising the performance of our ACP production facility in CY22. This helped us better understand the new material and novel production process as well as find ways to increase productivity and reduce costs. We are happy with the current quality and density of the ACP and recently provided two major global customers with calcined ACP for testing.

End industries driving CPC sales

In CY22, aluminium continued to be the primary driver of CPC sales, followed by the titanium dioxide industry.

Operating landscape

The availability of high-quality raw materials, specifically low-sulphur anode-grade green petroleum coke (GPC) for calcination, has been a key concern.

Our response

We are maximising utilisation of marginal GPC available in India by leveraging our blending capabilities. We combine shot coke with other raw materials to produce CPC blends that meet customer requirements. In addition, we are working to strengthen our relationships with GPC suppliers in India, while establishing cost-effective goals. We are also working with customers to help them expand their CPC specifications so we can broaden our use of the green petroleum cokes available.

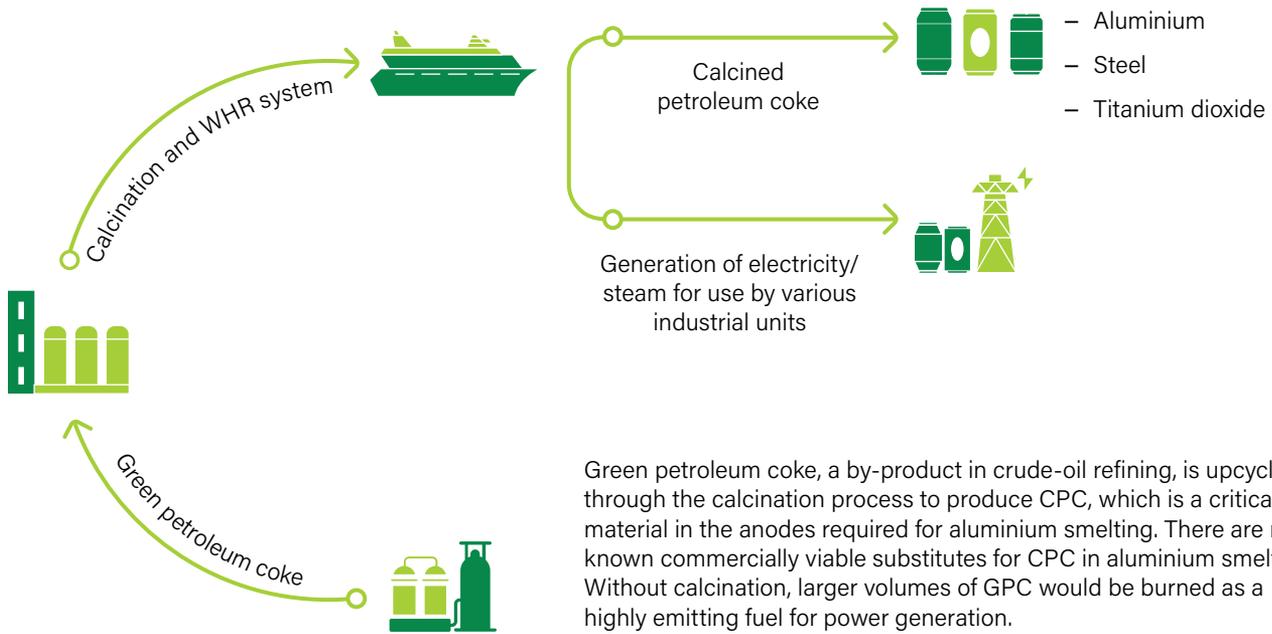


Way forward

As we enter CY23, our focus will be on reducing costs and improving the reliability and efficiency of our operations in the calcination business. For the distillation business, our top priority is to secure affordable feedstocks as the transition to green steel impacts the availability of coal tar. We are also exploring more cost-effective and environmentally friendly alternatives for feedstock such as petro tar.



Calcination upcycling value chain



Distillation upcycling value chain

