Dalmia Cement is actively contributing to India's net zero goals.

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Dalmia Bharat aims to drive a comprehensive and sustainable green transition within the cement industry.

How is blended cement taking centre stage in the green transition of the cement industry? How is Dalmia Bharat contributing to this green transition?

Blended cement is playing a crucial role in the green transition of the cement industry due to its reduced environmental impact. Blending process reduces the amount of clinker required, thereby lowering carbon dioxide emissions during production. Dalmia Bharat, a leading cement manufacturer, is actively contributing to the green transition. The company has adopted a sustainable approach by promoting the use of blended cement across its operations. Dalmia Bharat has invested in state-of-the-art technologies and processes to maximize the utilization of supplementary cementitious materials in their products. Dalmia Cement has been broadcasted by BBC World in their 'Climate Defenders' series in the recognition of No. 1 rank out of 13 cement majors globally. Under the Green Strategic Partnership, we are the 'First Cement Company' to signs MOU with FLSmidth to collaborate in the research and development of disruptive solutions and to achieve the long-term commitment of Zero Emission for next generation cement manufacturing.

Dalmia Cement has become India's first cement company to receive a green accreditation from the Green Product Rating for Integrated Habitat Assessment (GRIHA) Council and certification by IGBC Green Pro Eco Labelled.

Through these efforts, Dalmia Bharat aims to drive a significant reduction in greenhouse gas emissions and promote sustainable practices within the cement industry.

How are you planning to take this initiative forward? What are the future action plans on this?

Dalmia Bharat Cement has outlined several future action plans to further advance their green initiative:

- **Increasing the usage of supplementary cementitious materials:** Dalmia Bharat aims to maximize the utilization of supplementary cementitious materials such as fly ash, slag, and limestone in their cement production.
- **Research and development:** The company is investing in research and development to explore innovative technologies and processes that can enhance the sustainability of their cement production.
- **Collaboration and partnerships:** We are actively engaging with various stakeholders, including government bodies, research institutions, and industry experts, to foster partnerships and exchange knowledge in sustainable cement manufacturing.
- **Education and awareness:** Dalmia Bharat is committed to educating consumers, construction professionals, and other stakeholder s about the benefits of blended cement and sustainable construction practices.
- **Carbon capture initiatives:** The company is exploring and introducing carbon capture, utilization, and storage (CCUS) technologies to capture and this approach can significantly reduce the carbon footprint associated with cement production.

By implementing these action plans, Dalmia Bharat aims to drive a comprehensive and sustainable green transition within the cement industry, contributing to the global efforts in combating climate change and promoting environmental stewardship.

What are the green solutions offered by the company for airport infrastructure developments?

Dalmia Cement offers several green solutions

for airport infrastructure developments.

Green concrete: Dalmia Cement provides eco-friendly concrete solutions that are designed to reduce carbon emissions and enhance sustainability. These concrete mixes incorporate supplementary cementitious materials such as fly ash or slag, which lower the amount of clinker required, resulting in reduced carbon dioxide emissions during production.

High Performance Cement Concrete: Dalmia Cement is proud part of the Construction of Rapid Exit Taxiway Chennai where Dalmia Infragreen Cement (early strength and high performance blended cement) is used in Pavement Quality Concrete (PQC) M40 grade of concrete which helped in achieving 28 days compressive strength required strength 112% in seven days only, 89% faster commissioning of facility in 72 hours instead of 672 hours, water use was almost 71% lower for curing in comparison to conventional ordinary portland cement and help in reduction CO_2 emission almost 30% 230 kg of CO_2 with each metric ton of blended cement used.

Dalmia Cement contributes to the development of airport infrastructure that is environmentally responsible, energy efficient, and resilient, aligning with the industry's increasing focus on sustainability and reducing carbon emissions.

How are these initiatives going to help achieve India's net zero goals in the future?

The initiatives undertaken by Dalmia Cement align with India's net zero goals and can contribute significantly to achieving them in the future. Here's how:

- **Reduced carbon emissions:** Dalmia Cement's focus on blended cement and supplementary cementitious materials helps to lower the carbon intensity of cement production by reducing the reliance on clinker which is a carbon intensive component. This aligns with India's goal of decarbonizing the cement industry, a major contributor to greenhouse gas emissions.
- **Promotion of sustainable practices:** Dalmia Cement's emphasis on sustainable construction practices promotes energy efficiency, waste management, and water conservation which supports India's broader sustainable development goals and the transition to a low carbon economy.
- **Technological advancements:** Dalmia Cement's investment in research and development enables the exploration of innovative technologies and processes. This includes carbon capture, utilization, and storage (CCUS) technologies, which can play a crucial role in achieving India's net zero goals.
- **Collaboration and knowledge sharing:** Dalmia Cement's collaborations with government bodies, research institutions, and industry experts foster knowledge sharing and exchange of best practices. This collaboration can help accelerate the adoption of sustainable technologies and practices not only within Dalmia Cement but also across the wider cement industry in India.

By implementing these initiatives, Dalmia Cement is actively contributing to India's net zero goals and our actions contribute to India's overall efforts to combat climate change and achieve a sustainable future.

What are the advantages of blended cement over ordinary OPC cement?

Blended cement offers several advantages over ordinary Portland cement (OPC). These include:

- **Reduced carbon emissions:** Blended cement has a lower carbon footprint compared to OPC. By incorporating supplementary cementitious materials like fly ash, slag, or limestone, the clinker content in blended cement is reduced. Clinker production is energy-intensive and emits a significant amount of carbon dioxide.
- **Improved durability:** Blended cement often

Blended cement has a lower carbon footprint compared to OPC.

exhibits enhanced durability properties compared to OPC. The addition of supplementary cementitious materials can enhance the resistance of concrete to chemical attacks, sulphate attacks, and chloride penetration, resulting in longer service life for structures.

- **Reduced heat of hydration:** Blended cement typically exhibits lower heat of hydration compared to OPC. This is beneficial in large scale concrete applications where excessive heat generation can lead to thermal cracking.
- **Enhanced workability and pumpability:** Blended cement can improve the workability and pumpability of concrete. The addition of supplementary cementitious materials enhances the cohesiveness and lubricity of the concrete mix, making it easier to handle, place, and finish.
- **Increased strength:** Blended cement displays increased strength in long term due to the pozzolanic properties and denser particle packing which help in the construction of strong and durable structures.

Overall blended cement offers environmental benefits, improved durability, better workability, and the utilization of industrial by-products, making it a favourable choice over ordinary OPC cement for sustainable construction practices.

Blended cement displays increased strength in long term due to the pozzolanic properties.

What are the opportunities you look forward to for your blended cement products and solutions?

Dalmia Cement looks forward to several opportunities for their blended cement products and solutions:

- **Increasing demand for sustainable construction:** As the construction industry places a greater emphasis on sustainability and environmental stewardship, there is a growing demand for green construction materials. Dalmia Cement's blended cement, with its reduced carbon footprint and enhanced durability, aligns perfectly with this trend.
- **Infrastructure development projects:** Governments around the world are investing in large scale infrastructure development projects. These projects present significant opportunities for Dalmia Cement to promote and supply their blended and high-performance cement products.
- **Collaborations and partnerships:** Dalmia Cement can forge collaborations and partnerships with other stakeholders in the construction industry, including contractors, architects, and developers. We encourage the adoption of blended cement to address sustainability challenges in the industry.
- **Technological advancements:** Dalmia Cement explores and implements innovative processes and technologies to further improve the performance and sustainability of their blended cement products.
- **Awareness and education:** Dalmia Cement can play an active role in educating and creating awareness among construction professionals, policymakers, and consumers about the benefits of blended cement and sustainable construction practices.

By capitalizing on these opportunities, Dalmia Cement can expand their market presence, establish themselves as leaders in sustainable construction materials, and contribute to the broader green transition in the cement industry. ■