



BUILDING THE DREAM of a Sustainable Bangladesh



Md. Jenan-Ul-Islam, Chief Business Officer, Walton Lift

The Daily Star (TDS): What key measures do you recommend to ensure the sustainability of construction materials during the building process, and which areas require the most urgent attention?

Md. Jenan-Ul-Islam (MJUI): When we talk about sustainability in the construction sector, it's important to understand that it's not something that can be "added on" at the end—it has to begin from the very first stage of planning a building. If we embed sustainability early, the impact stays with us throughout the entire lifecycle of the project.

Take lifts, for example. A sustainable lift is not only about saving electricity when it runs, but also about how it is designed, the materials used, and how it integrates with the entire building. For true efficiency, we must choose energy-efficient lift models, ensure that recyclable and durable materials are used, and carefully match the capacity and speed of the lift with the actual needs of the building. If the wrong lift is installed—too large or too small—it leads to either overconsumption or underutilisation of resources, both of which are wasteful.

Another critical point is system integration. Modern lifts should not work in isolation. They should be connected seamlessly to the building's smart systems, such as

power management and Building Management Systems (BMS). This integration ensures that energy use is optimised in real time, and it also makes the building safer and more responsive.

If you ask me what areas require the most urgent attention, I would say three things: energy efficiency, recyclability of materials, and smart integration with buildings. These are the pillars that will make the biggest difference in the sustainability journey of construction materials.



TDS: What types of products does your company offer, and how do you ensure they are both fit for purpose and aligned with sustainability priorities?

MJUI: At Walton Lift, our philosophy goes beyond just selling a lift. We like to say that we offer a long-term, safe, reliable, and sustainable vertical mobility solution. To us, a lift is not just a machine that carries people up and down—it's a part of everyday life that has to be safe, efficient, and environmentally responsible.

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Our product portfolio is diverse. We provide Passenger Lifts, Cargo Lifts, Hospital Lifts, and Home Lifts. Each category is designed keeping in mind international safety standards and energy efficiency benchmarks. For example, hospital lifts are made with special attention to smoothness and reliability, because in a medical environment, every second counts. Cargo lifts, on the other hand, are built with strength and durability, so they can carry heavy loads without consuming unnecessary power.

But where we truly stand out is in our commitment to lifecycle sustainability. This means that our responsibility does not end after installation. From maintenance to modernisation, we ensure that our lifts remain energy-efficient, safe, and up-to-date with technology. For older buildings, we also offer modernisation services—replacing outdated components with advanced, eco-friendly systems that extend the lift's life and drastically cut down on energy consumption. This not only saves money for our clients but also reduces the carbon footprint of the building.

In short, whether it's a high-rise apartment, a busy hospital, or a private residence, our lifts are designed to be fit for purpose, environmentally responsible, and future-ready.

Reliable Experience

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FORGING A GREENER FUTURE

Sustainable Practices and High-Strength Innovations in the Steel Industry

Green Practices in the Steel Industry

As Bangladesh advances toward its Nationally Determined Contributions (NDC) 2030 goals, industries must adopt practices that balance growth with environmental responsibility. The steel sector, long considered energy- and resource-intensive, is now embracing sustainability through innovative technologies and eco-friendly approaches. These initiatives not only align with global climate commitments but also set benchmarks for others to follow.

AIR POLLUTION CONTROL

Industrial emissions, particularly from steelmaking, have historically contributed to air quality deterioration. Modern steel plants now use advanced off-gas treatment systems and high-efficiency baghouse

RENEWABLE ENERGY INTEGRATION
The steel industry is steadily reducing its reliance on fossil fuels by adopting solar photovoltaic systems and exploring wind energy and green hydrogen options. These transitions not only cut carbon footprints but also contribute directly to affordable and clean energy goals under the UN Sustainable Development Goals (SDGs).

BIODIVERSITY CONSERVATION

Beyond production, industries are engaging in large-scale tree plantation drives and developing artificial lakes and green belts around their facilities. These initiatives serve as carbon sinks, reduce noise pollution, and create thriving habitats for local wildlife—proving that

The Future of High-Strength Rebar - 600

As urbanization accelerates, the need for safer, stronger, and more sustainable construction materials is greater than ever. Modern steelmakers are adopting advanced technologies to deliver not only superior quality but also environmentally responsible products. Among these innovations, the production of high-strength rebar, such as 600-grade steel, represents a major leap toward building structures that last longer, use fewer resources, and offer enhanced safety.

WHY HIGH-STRENGTH REBAR MATTERS

High-strength rebar offers exceptional tensile strength compared to conventional grades. Using 600-grade rebar allows for fewer reinforcement bars in a structure without compromising safety or durability. This reduction leads to cost savings in both material and labor while ensuring

like paint, dust, and coatings before melting begins. The result is purer steel produced with lower environmental impact.

SIPHONIC TAPPING FOR PURITY

Another critical advancement is the siphonic tapping system, which ensures that only pure molten steel is collected from the furnace. Traditionally, impurities like slag can mix with molten steel during tapping, compromising quality. By using a special refractory barrier and minimal furnace tilting, siphonic tapping prevents slag contamination. The process enables the production of cleaner, liquid steel—essential for manufacturing high-strength rebar with uniform properties.

HIGH-SPEED CONTINUOUS CASTING

After refining, molten steel undergoes high-speed continuous casting to

reduce sulfur ratios, reducing the negative impact of sulfur on steel's mechanical strength. The entire process is closed and controlled to prevent re-oxidation, preserving the purity achieved during earlier stages.

WINLINK TECHNOLOGY: ENERGY EFFICIENCY MEETS QUALITY

One of the most remarkable innovations in modern steelmaking is Winlink technology. This system directly connects the casting and rolling processes, allowing billets to move from the caster to the rolling mill without intermediate cooling. By maintaining optimal billet temperatures and avoiding full-scale reheating, Winlink technology significantly cuts energy consumption and emissions. At the same time, in every stage of rolling, it ensures proper control of temperature, rolling speed & water parameter simultaneously.



filters to capture harmful particles before they reach the atmosphere. By integrating cutting-edge furnace technologies and stringent monitoring, emissions can be dramatically reduced—protecting public health and the environment.

WATER STEWARDSHIP

With water scarcity emerging as a critical global concern, rainwater harvesting and Zero Liquid Discharge (ZLD) technologies are becoming standard practices. Industrial units are creating artificial reservoirs to store rainwater while ensuring that no untreated wastewater leaves the premises. Every drop is recycled and reused, preserving natural resources and safeguarding ecosystems.

industrial zones can coexist with nature.

COMMUNITY AND CRISIS SUPPORT

On-site oxygen plants, primarily used in steel production, have also served communities during emergencies, such as supplying medical oxygen during the COVID-19 pandemic. This demonstrates how industrial infrastructure can support both economic and humanitarian needs.

A HOLISTIC ROADMAP

By integrating air pollution control, water stewardship, renewable energy, biodiversity initiatives, and zero discharge systems, the steel industry sets a clear path toward sustainable growth—showing that industrial progress and environmental care can advance together.

earthquake resilience and longer service life for buildings, bridges, and other critical infrastructures. Moreover, high-strength rebar contributes to sustainability by minimizing the use of raw materials and optimizing structural efficiency.

SCRAP PREHEATING TECHNOLOGY

The journey toward sustainable, high-strength steel begins with raw materials. Scrap preheating technology plays a vital role here. Instead of feeding cold scrap directly into the furnace, modern systems use the heat from furnace off-gases to preheat the scrap before melting. This approach reduces electricity consumption, cuts down greenhouse gas emissions, and ensures the removal of surface impurities

produce billets—the raw material for rebar. High-speed casting ensures the use of automatic mold level sensor (AMLS), closed casting practice, enhanced Mn/S ratio, the actual use of EMS, close & optimal superheat temperature control in the process. Advanced features like electromagnetic stirring break, harmful dendritic structures, while automatic mold level sensors maintain consistent casting speed. This leads to billets with exceptional internal refined grained structure properties, forming the foundation for world-class 600-grade rebar.

Moreover, high-speed continuous casting systems maintain high manganese content with the help of SCADA-based PLC automation system which ensures better surface quality and mechanical properties for the final rebar product.

A CALL TO THE INDUSTRY

The adoption of these advanced technologies demonstrates that producing high-quality, sustainable, and high-strength steel is not only possible but essential. Steel manufacturers across the industry should embrace similar practices to reduce environmental impact, improve resource efficiency, and deliver materials that meet modern construction demands. By doing so, the entire sector can move toward a future where sustainability and strength go hand in hand.