

ti Current Trends

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A RECENT SUCCESS

We are thrilled to announce that our commitment to excellence has been recognized once again as we have been awarded the Performance Excellence CY 2023 for Best Quality of Order Execution from L&T Electrical & Automation Group. This prestigious accolade underscores our unwavering dedication to delivering exceptional quality in every aspect of our operations. At Tech India Engineers, we prioritize quality above all else, and this award serves as a testament to our dedication.



*Performance Excellence
Best Quality of Order Execution CY
2023*

Empowering India's Energy Landscape with Sandwich Busbar Trunking Systems

In the dynamic arena of India's energy landscape, embracing cutting-edge solutions is imperative to meet the evolving demands of modern infrastructure. Today, we delve into the transformative role of Sandwich Busbar Trunking Systems, supported by compelling facts that underscore their significance.

1. High-Rise Marvels

Mumbai, a bustling metropolis, boasts its architectural wonders like the Residence Antilia, India Bulls, L&T crescent Bay, Chalet Hotel, Lodha World Towers, etc. Present buildings are soaring around 1,000 feet above the city skyline. These structures house luxury residences, commercial spaces, and recreational facilities, catering to the needs of thousands of residents and visitors.



Behind the scenes, Sandwich Busbar Trunking systems play a pivotal role in ensuring seamless energy distribution throughout, with their superior current-carrying capacities and minimal voltage drop, these systems provide a reliable power backbone that fuels the city's pulse.

Did you know? The Lodha World Towers rely on Sandwich Busbar Trunking Systems to distribute over 20,000 amps of electricity across their sprawling infrastructure, demonstrating the scalability and efficiency of these advanced solutions.

2. Industrial & Automotive

Industrial and automotive giants like JSW Steel, Haier Appliances, Volkswagen, Tata Motors, Ford, Hyundai, Renault Nissan etc. renowned for their manufacturing prowess, exhibit a palpable demand for robust energy distribution solutions. Sandwich Busbar Trunking systems reign supreme, orchestrating the seamless distribution of power to

assembly lines, robotic arms, and auxiliary machinery, showcasing their adaptability and reliability in high-demand industrial environments. These leading players in the automotive and manufacturing sectors rely on efficient energy distribution systems to maintain uninterrupted operations and uphold their reputation for precision and efficiency. As such, the adoption of Sandwich Busbar Trunking systems underscores not only their commitment to innovation but also their recognition of the critical role played by reliable Power Distribution.



3. Data Center



As India accelerates its digital transformation journey, efficient energy management in data centers becomes paramount. Leading data centers such as NTT, PDG, Yotta, and Web Werks etc. have already implemented Sandwich Busbar Trunking systems, offering a revolutionary solution. These systems ensure reliable power distribution to critical IT infrastructure, ranging from 10 to 20 MW, with minimal energy losses and enhanced safety features. From cloud computing hubs to colocation facilities, they play a vital role in optimizing the performance and sustainability of India's digital ecosystem.

Compelling Facts:

1. Energy Efficiency at Scale:

Studies have shown that the implementation of Sandwich Busbar Trunking Systems can significantly reduce energy losses compared to traditional XLPE cables. With their superior conductivity and minimal voltage drop, these systems offer unparalleled energy efficiency, translating into tangible cost savings and environmental benefits.

2. Safety First:

The emphasis on safety in high-rise buildings, industrial facilities, and data centers cannot be overstated. Sandwich Busbar Trunking Systems, with their enclosed construction and enhanced fire resistance, provide a safer alternative to traditional PVC/XLPE cables, mitigating the risk of fire hazards and toxic fume emissions.

In conclusion, Sandwich Busbar Trunking systems stand as beacons of innovation in India's energy landscape, empowering high-rise buildings, industrial facilities, and data centers with efficient and reliable power distribution solutions.

Addressing Challenges in the Installation of Sandwich Busbar Trunking Systems

Sandwich Busbar Trunking systems represent a revolutionary advancement in power distribution technology, offering unparalleled efficiency, reliability, and safety. However, the installation of these systems comes with its own set of challenges that must be carefully navigated to ensure successful implementation. Let us delve into the key challenges related to the installation of Sandwich Busbar Trunking systems, supported by facts, examples, and practical insights.

1. Space Constraints

One of the primary challenges encountered during the installation of Sandwich Busbar Trunking systems is accommodating their space requirements. Unlike traditional cable systems, which can be more easily maneuvered, the physical dimensions of Busbar Trunking systems may pose logistical challenges, especially in retrofit projects or densely populated urban environments. For example, in a commercial Highrise building retrofit, the limited space within ceiling voids or service corridors may require innovative solutions such as custom designed Trunking configurations or strategic placement of access points.

2. Specialized Skills and Equipment

Installing Sandwich Busbar Trunking systems requires specialized skills and equipment that may not be readily available to all contractors. From precision cutting and fitting to electrical connections and testing, the installation process demands a high level of technical expertise and attention to detail. General Contractors must be trained and certified in the installation of Busbar Trunking Systems to ensure compliance with safety standards and manufacturer specifications.

In projects, the installation team encountered challenges due to the complexity of the system and the need for precise alignment with existing infrastructure. Through comprehensive training and onsite supervision by certified technicians, the team successfully installed the Busbar Trunking system without disruptions to ongoing operations. Studies have shown that improper installation of Busbar Trunking systems can lead to operational inefficiencies, increased maintenance costs, and safety hazards, underscoring the importance of skilled labor and proper training.

3. Accessibility and Maintenance

Diverging from traditional cables, the Busbar Trunking System introduces a new dimension of maintenance and servicing, constituting another pivotal aspect in the installation process. It necessitates careful attention to detail in designing accessible access points, ensuring seamless inspection procedures, and instituting robust preventive maintenance protocols. These measures are indispensable for optimizing system reliability and ensuring its prolonged longevity, thereby safeguarding operational efficiency and minimizing potential disruptions. Studies have shown that proactive maintenance and regular inspections can extend the lifespan of Busbar Trunking Systems thus reducing downtime and repair costs over the system's lifecycle.

4. Coordination with Project Timeline

Unlike cables, which have a more straightforward installation process, the decision-making, design, and manufacturing stages of Sandwich Busbar Trunking systems require meticulous coordination to align with the overall project timeline. Effective planning and communication are crucial to ensure timely completion. Any delays in procurement, site preparation, or coordination with other trades can significantly impact the installation schedule, leading to potential cost overruns and project delays. Therefore, proactive management and collaboration among all stakeholders are imperative to streamline the process and meet project deadlines efficiently.

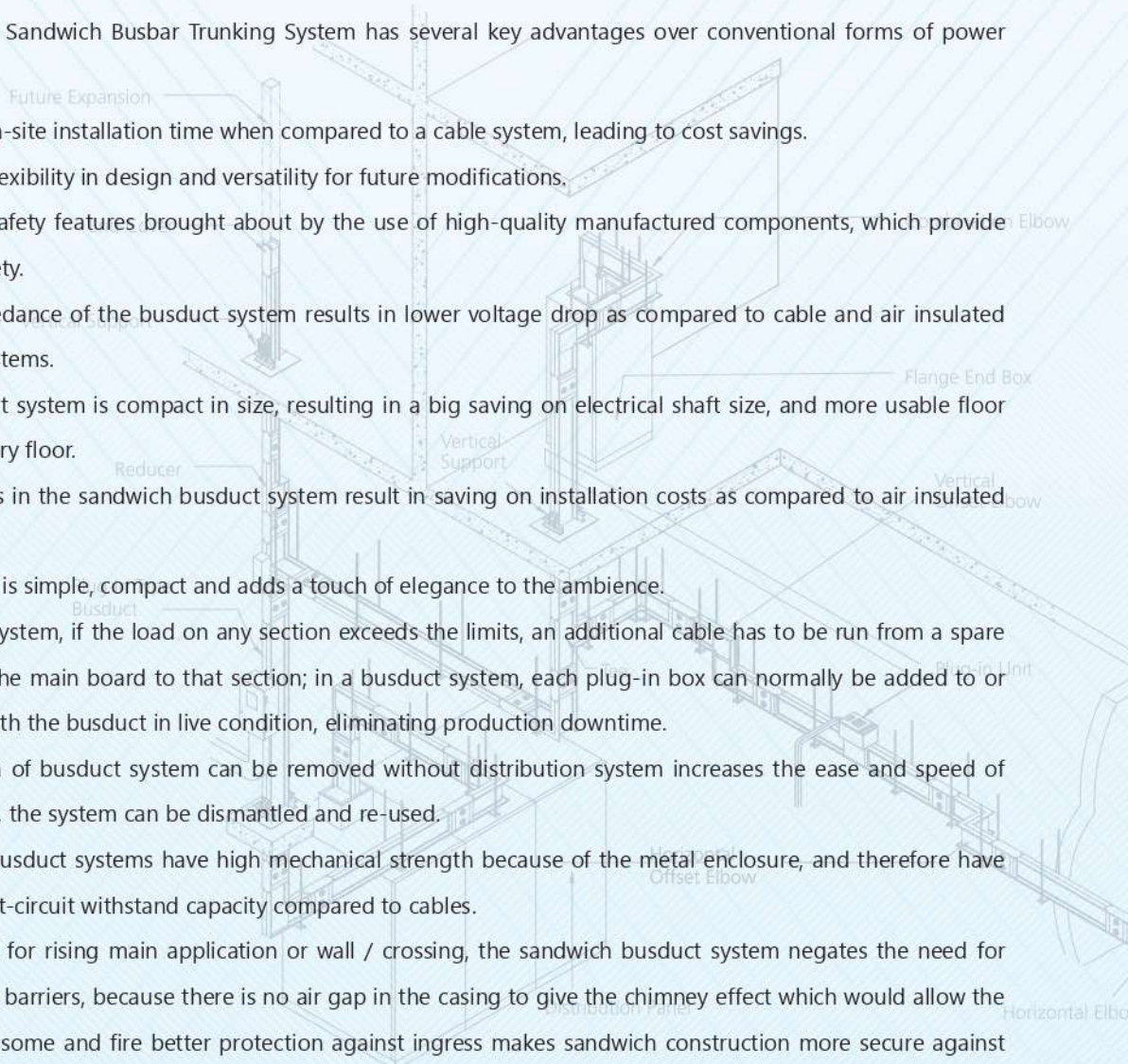
According to industry surveys, project delays emerge as a prevalent challenge encountered by installation teams, with approximately 60% of projects encountering schedule overruns attributable to coordination issues with various services within a project.

The installation of Sandwich Busbar Trunking systems presents unique challenges that require careful planning, coordination, and expertise. By addressing these challenges proactively and leveraging the knowledge and experience

of industry experts, stakeholders can ensure the successful implementation of Busbar Trunking systems and unlock their full potential in enhancing energy infrastructure across India.

With over two decades of expertise in design, supply, installation, testing, and commissioning, Tech India stands as a trusted partner for your project needs. Should you have any inquiries or require assistance with your installation project, please don't hesitate to contact our team of experienced experts. We are dedicated to providing comprehensive support and ensuring the success of your endeavors.

To summaries, the Sandwich Busbar Trunking System has several key advantages over conventional forms of power distribution:

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1. Reduced on-site installation time when compared to a cable system, leading to cost savings.
 2. Increased flexibility in design and versatility for future modifications.
 3. Increased safety features brought about by the use of high-quality manufactured components, which provide greater safety.
 4. Lower impedance of the busduct system results in lower voltage drop as compared to cable and air insulated busduct systems.
 5. The busduct system is compact in size, resulting in a big saving on electrical shaft size, and more usable floor area on every floor.
 6. Fewer joints in the sandwich busduct system result in saving on installation costs as compared to air insulated busducts.
 7. The system is simple, compact and adds a touch of elegance to the ambience.
 8. In a cable system, if the load on any section exceeds the limits, an additional cable has to be run from a spare feeder on the main board to that section; in a busduct system, each plug-in box can normally be added to or removed with the busduct in live condition, eliminating production downtime.
 9. Any section of busduct system can be removed without distribution system increases the ease and speed of installation., the system can be dismantled and re-used.
 10. Sandwich busduct systems have high mechanical strength because of the metal enclosure, and therefore have higher short-circuit withstand capacity compared to cables.
 11. When used for rising main application or wall / crossing, the sandwich busduct system negates the need for internal fire barriers, because there is no air gap in the casing to give the chimney effect which would allow the passage of some and fire better protection against ingress makes sandwich construction more secure against flashover because of ingress.

...To be continued - Part 2.

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