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(57) Abstract :
 SolGoliath is a goliath crane system that integrates solar power to enhance heavy lifting operations sustainably. The system features solar panels mounted on the crane structure to capture sunlight and convert it into electrical energy using a photovoltaic cell array and power management unit. This energy is stored in rechargeable batteries or a battery bank, which powers the crane's motor system and operational controls. Designed for efficiency and flexibility, SolGoliath reduces reliance on fossil fuels and grid electricity, thereby lowering operational costs and minimizing environmental impact. Its modular design allows for scalable adaptation to various industrial applications, providing a versatile and eco-friendly solution for construction, shipping, manufacturing, and logistics.

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