**1. Introduction**

This methodology outlines the systematic process for the safe and efficient erection of steel structures. The erection will follow a structured sequence ensuring precision, safety, and compliance with industry standards.

**2. Pre-Erection Preparations**

- Verify the placement and alignment of holding-down bolts on the foundation and base plates.

- Position base plates under columns, ensuring proper alignment, straightness, and grout space.

- Use temporary bracings to maintain vertical alignment and prevent column tipping.

- Erect long stanchions or columns in sections and connect on-site.

**3. Erection Sequence**

**Stage 1:**

- Position middle sections of rafters and trusses as per design specifications.

- Fasten trusses to column ends using secure bolt connections.

**Stage 2:**

- Install vertical column bracing and roof bracing to stabilize the structure.

- Conduct final alignments and adjustments to ensure frame positioning.

**Stage 3:**

- Secure roof purlins and sheeting rails using bolted connections.

- Construct gantry crane girders if necessary.

**Stage 4:**

- Mount overhead cranes on crane girders where required.

- Install top and side panels for enclosure.

**Stage 5:**

- Fill base plate undersides with non-shrinking grout upon completion of erection.

**4. Lifting Procedures**

- Utilize cranes (mobile and non-mobile) for lifting heavy steel members.

- Minimize crane lifts by using pre-assembled units whenever possible.

- Estimate erection time based on the 'piece count' and minimize the number of lifts required.

**5. Alignment and Connections**

- Collaborate between site engineers and erection crews for precise alignment using survey tools.

- Use wedges, jacks, and specialized tools for adjustments before securing with bolts.

- Prefer bolted connections over site welding for speed and ease.

**6. Erection Handover**

- Ensure the erected frame meets positional accuracy standards for subsequent trades.

- Maintain plum and line accuracies of approximately 1 part in 1000.

**7. Quality Control**

- Perform tests according to an inspection and test plan.

- Document testing procedures, frequency, acceptance criteria, and actions if criteria are not met.

**Conclusion**

This methodology establishes a structured approach to safely and accurately erect steel structures, emphasizing precision, safety measures, and adherence to quality standards throughout the process.