### The Quality Pathway - Defect Avoidance

# Structural Steelwork

To facilitate this ambition of getting the quality right, these checks should take place:

- > Ensure origin and quality of steel is acceptable, especially imported
- > Are rolling tolerances compatible with finished requirements?
- Who is responsible for design and specification of connections? Are HSFG (High Strength Friction Grip) bolts required?
- Is temporary bracing required and who should design it? Does the sequence allow it to be installed so that it is effective? Who is responsible for temporary stability? Note steel frames have collapsed during erection
- > Have measures been adopted to restrict temporary deflection and rotation?
- Should the primary and secondary steelwork be precambered to allow for deflection when concreting? Steelwork designed to be composite may need propping?
- > Has a project specific and comprehensive RAMS (Risk Assessment and Method Statement) been issued and approved for all the works?
- The subcontractor shall coordinate with all other stakeholders involved in the project in a timeous manner
- > The subcontractor will participate fully with all site safety requirements and initiatives
- > Who supplies the holding down bolts? Are they adequately detailed to allow installation?
- $\succ$  Has the size and grade of the holding down bolt been checked?
- Ensure holding down bolts are moved after striking template to free them when concrete has hardened sufficiently
- $\succ$  Good practice is to grease the threads when replacing the nuts
- Is the specification for the paint to the steel clear?
- $\succ$  Is the steel to receive any special coatings in the factory i.e. intumescent paint?
- Provide written confirmation that a full survey of positions and height of holding down bolts and level of concrete has been completed by the subcontractor no later than two working days before works commence and any discrepancies are advised to Morgan Sindall
- Provide details of crane requirements in terms of size, access around the site, temporary road loadings, crane mat size and loadings to Morgan Sindall as part of the RAMS
- Confirmation to be provided to Morgan Sindall that the subcontractor has checked the access / egress to / from the site and can safely transport their materials, plant and equipment on and off the site. The subcontractor is responsible for dealing with statutory authorities i.e. the police, local roads dept etc
- Has an Inspection & Test Plan (ITP) been issued by the subcontractor and agreed and signed off by Morgan Sindall?
- > Survey positions and height of holding down bolts and level of concrete within 48 hours
- Visit supplier's works check welder's certification / welding procedures and preparation, plus painting including preparation. Is the steel form an approved source?
- > Are full builder's works details available before manufacture?



# Cet it right

#### Our Quality vision:

We will get it right first time on all our projects by delivering exceptional customer service



## The Quality Pathway – Defect Avoidance

# Structural Steelwork

To facilitate this ambition of getting the quality right, these checks should take place:

- Check that design includes all secondary steel for cladding, trimming for openings in walls, roofs and steel for eaves details plus masonry support systems
- > Are all tolerances compatible lift shafts, secondary steelwork, cladding, false ceilings etc?
- > Agree checking regime for bolts in frame (including size and grade) and ensure compliance
- > Is the top of foundation suitable before erection level reasonably smooth?
- Ensure erection method statement details measures to prevent damage to any coatings, especially during handling
- > Ensure contractor has checked frame for level and plumb before we carry out our final check
- Has a method statement been prepared for grouting base plates? Has the material been specified? Ensure bold holes have been cleaned out, including any hole formers and the base concrete has been sufficiently pre-wetted
- > No site welding unless applied by consultant. Use a coded welder. Ensure welding rods suit the grade and finish of steelwork. Is preheating required if so how will the temperature be monitored?
- > No burning of holes unless approved by the structural engineer
- > Ensure ground conditions suitable for cranes being used. Has a method statement be obtained?
- Care needed to avoid paint damage a method of making good should be considered where access is difficult
- Confirm that Morgan Sindall will provide initial setting out in terms of line and level only. It is the subcontractor's responsibility to carry out all setting out from this information



MORGA

CONSTRUCTION

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