

**Project Name**

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| **INSPECTION TEST PLAN**  **STRUCTURAL STEEL WORK** |

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| 1A |  |  |  |  |  |
| Rev # | Date | Prepared By | Reviewed By | Approved By | Remarks |

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| Revision | Revision History |
| 1A | First Issue |
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Before Starting the Project, Ensure all relevant specifications are copied from tender drawings and attached to this ITP.

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|  | | | Client Name | | Project | | |
| **INSPECTION TEST PLAN**  **STRUCTURAL STEEL WORK** | | | | | | | |
| Prepared By | Lee West | ITP No: | | TEG-007 | | Rev: No: | 1A |

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| LEGEND: XXX – Fabrication Manager  YYY – Technical / Project Manager R – REVIEW / S - SURVEILLANCE  ZZZ – Independent Inspector W- WITNESS / H – HOLD POINT |

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| **No** | **Activity** | **Inspection** | | | **Frequency** | **XXX In Charge** | **Acceptance Criteria** | | **Verifying Documents** |
| **XXX** | **YYY** | **ZZZ** |
| **1** | **SHOP DRAWINGS** | | | | | | | | |
| 1a | Issued for Construction drawings received |  |  |  |  | QS | IFC drawings received and reviewed against Tender Documents | | IFC Drawings |
| 1b | Shop drawings issued for Approval |  |  |  |  | PM | In accordance to contract specs, design requirements, drawings | | Issued for Approval Drawings |
| 1c | Shop drawings issued for Fabrication |  |  |  |  | PM | Should be complying with BOQ and tender conditions | | Issued for Construction  Drawings |
| **2** | **INCOMING MATERIALSa** | | | | | | | | |
| 2a | Steel profiles |  |  |  |  | Fab |  | | Manufactures test certificates  3rd party test reports |
| 2b | Plate |  |  |  |  | Fab | | Ordered as per BOQ, as per tender specifications and supplied mill certificates |
| 2c | Purlins |  |  |  |  | Fab | Ordered as per BOQ, as per tender specifications and supplied mill certificates | |
| 2d | Bolts & Fastenings |  |  |  |  | Tech / PM | Ordered as per bolt list, as per tender specifications and supplied mill certificates | |
| 2e | Consumables |  |  |  |  | Fab / Tech / PM | As per tender specifications and supplied mill certificates | |

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| **3** | **FABRICATION** | | | | | | | |
| 3a | Fabricate to supplied approved drawings |  |  |  |  | Fab | All pre-fabricated materials to be as per spec:, approved drawings and details and free from damages and rust. | Inspection, Checklist  Individual QA Sheet |
| 3b | Inspection complete |  |  |  |  | Fab | Welding inspected in line with required procedures and standards |
| 3c | Galvanising |  |  |  |  | Fab | Galvanising complete as per required specification | Galvanising Certificate Warranty |
| 3d | Painting / Priming |  |  |  |  | Fab | Galvanising complete as per required specification | Painting Certificate / Warranty |
| **4** | **PRE-ERECTION** | | | | | | | |
| 4a | Check for bench marks |  |  |  |  | Tech | Permanant bench mark for reference to be available. | Inspection, Checklist |
| 4b | Check on foundations |  |  |  |  | Tech | Foundations are to be cast as per approved drawings and in correct orientations |
| 4c | Check on levels and distances of foundations |  |  |  |  | Tech | Top level of the foundation wrt bench marks and centre to centre distance and diagonal distance are as per approved details. |

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| **XXX** | **YYY** | **ZZZ** |
| **5** | **ERECTION IN PROGRESS** | | | | | | | |
| 5a | Check on columns erection |  |  |  |  | Tech | Interchanging and turning of columns by 180 degrees to be avoided. | Inspection, Checklist |
| 5b | Check on alignment of columns |  |  |  |  | Tech | Columns are to be properly oriented and centre line of base plate to be coincide with foundation pedestal axis.  Foundation bolts to be properly tightened with lock nut |
| 5c | Check for erection of horizontal beams, girders and vertical bracings |  |  |  |  | Tech | First piece of all columns are to be erected and aligned first.  Pieces which affects the movement of crane or other equipment to be erected only at appropriate time. |
| 5d | Check on bolting |  |  |  |  | Tech | Bolts to be of proper size and to be tightened properly as per bolt tightening procedure. |
| 5e | Check on erection of interconnecting members |  |  |  |  | Tech | All remaining members to be erected as per the drawing and details providing facility to movement of crane and other equipment. |
| 5f | Check on welders |  |  |  |  | Tech | All welders to be have qualified welder Certificate or to be approved by performing test at site. |
| 5g | Check on welding materials |  |  |  |  | Tech | All welding consumables to be available as per the approved details |
| 5h | Check for pre heating |  |  |  |  | Tech | All joints to be pre heated by approved method by maintaining uniform temperature |
| 5i | Check for fit up of joints |  |  |  |  | Tech | Minimum gap to be maintained for fillet welding. |
| 5j | Check for assembly of welding parts |  |  |  |  | Tech | All parts to be welded shall be arranged so as to fit properly on assembly. |
| 5k | Check for post weld heat treatment |  |  |  |  | Tech | To be done as applicable using appropriate heating method by maintaining uniform temperature. |

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| **XXX** | **YYY** | **ZZZ** |
| **6** | **POST ERECTION** | | | | | | | |
| 6a | Check on columns and other members |  |  |  |  | PM | Total erected columns to be vertical within the tolerance as per spec  All other members to be vertical or horizontal as the case may be within tolerance as per spec/standard | Inspection, Checklist |
| 6b | Check on weld surface & Size |  |  |  |  | PM | All welds to be cleaned, overlap / excess weld metal to be removed by grinding.  Weld size not to be less than specified. |
| 6c | Check on welding |  |  |  |  | PM | All welding to be free from surface cracks, blow holes, infused welds, improper welding profile and misalignment of welded parts etc: |
| 6d | Testing of welds |  |  |  |  | PM | Tests to be done for required no.: of welds as per specification |
| 6e | Check for repair of faulty welds |  |  |  |  | PM | Defective weld to be removed up to the sound metal and parent metal is free from damage. |
| 6f | Check for re weld and retest |  |  |  |  | PM | To be done by using the same procedure and methods. |
| 6g | Check on tolerances |  |  |  |  | PM | All tolerance to be within the limit specified |
| 6h | Check on grouting |  |  |  |  | PM | After all erections are approved.  Grouting to be done as per the approved method after cleaning and clearing of all dust, mud, water, oil and other unwanted material by using approved material. |
| 6i | Check on painting |  |  |  |  | PM | Painting to be carried out as per specifications |

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| **XXX** | **YYY** | **ZZZ** |
| **7** | **CLOSEOUT** | | | | | | | |
| 7a | Site diaries |  |  |  |  | PM | All site diaries compiled in QA folder | Inspection, Checklist |
| 7b | Internal Inspection reports |  |  |  |  | PM | All internal reports including fabrication, surface treatment, and erection compiled in QA folder |
| 7c | Independent Inspection reports |  |  |  |  | PM | All Independent Weld Certificates compiled in QA folder |
| 7d | Mill Certs |  |  |  |  | PM | All Mill Certs compiled in QA folder |
| 7e | As Built Drawings |  |  |  |  | PM | Shop Drawings confirmed as acceptable and supplied to relevant parties |
| 7f | Producer Statements |  |  |  |  | PM | Producer Statements completed and in QA folder |
| 7g | Client acceptance |  |  |  |  | PM | Correspondence of acceptance compiled in QA folder |

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|  | | | | | | | | | **Client** | | | **Project** | | | | | | |
| **INSPECTION CHECKLIST**  **STRUCTURAL STEEL WORK-ERECTION** | | | | | | | | | | | | | | | | | | |
| **ITP** | | Structural Steel | | **Inspection No.** | | |  | | | | | | **Location** | |  | | | |
| **Prepared by** | |  | | | | | **Applicable Drawing** | | | | | |  | | | | | |
| **#** | **Description** | | **Result** | | **Date** | **Sign** | | | | **#** | **Description** | | | **Result** | | **Date** | **Sign** | |
| **XXX** | | **YYY** | | **XXX** | **YYY** |
| **3** | **FABRICATION** | | | | | | | | | 6 | **POST ERECTION** | | | | | | | |
| 3a | Inspection complete | |  | |  |  | |  | | 6a | Check on columns and other members | | |  | |  |  |  |
| **4** | **PRE-ERECTION** | | | | | | | | | 6b | Check on weld surface & Size | | |  | |  |  |  |
| 4a | Check for bench marks | |  | |  |  | |  | | 6c | Check on welding | | |  | |  |  |  |
| 4b | Check on foundations | |  | |  |  | |  | | 6d | Testing of welds | | |  | |  |  |  |
| 4c | Check on levels and distances of foundations | |  | |  |  | |  | | 6e | Check for repair of faulty welds | | |  | |  |  |  |
| **5** | **ERECTION IN PROGRESS** | | | | | | | | | 6f | Check for re weld and retest | | |  | |  |  |  |
| 5a | Check on columns erection | |  | |  |  | |  | | 6g | Check on tolerances | | |  | |  |  |  |
| 5b | Check on alignment of columns | |  | |  |  | |  | | 6h | Check on grouting | | |  | |  |  |  |
| 5c | Check for erection of horizontal beams, girders and vertical bracings | |  | |  |  | |  | | 6i | Check on painting | | |  | |  |  |  |
| 5d | Check on bolting | |  | |  |  | |  | | **7** | **CLOSEOUT** | | | | | | | |
| 5e | Check on erection of interconnecting members | |  | |  |  | |  | | 7a | Site Diaries | | |  | |  |  |  |
| 5f | Check on welders | |  | |  |  | |  | | 7b | Internal Inspection reports | | |  | |  |  |  |
| 5g | Check on welding materials | |  | |  |  | |  | | 7c | Independent Inspection reports | | |  | |  |  |  |
| 5h | Check for pre heating | |  | |  |  | |  | | 7d | Mill Certs | | |  | |  |  |  |
| 5i | Check for fit up of joints | |  | |  |  | |  | | 7e | As Built Drawings | | |  | |  |  |  |
| 5j | Check for assembly of welding parts | |  | |  |  | |  | | 7f | Producer Statements | | |  | |  |  |  |
| 5k | Check for post weld heat treatment | |  | |  |  | |  | | 7g | Client Acceptance | | |  | |  |  |  |

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| **CONCLUSION** | **🞏 Accepted 🞏 Accepted with Comments 🞏 Rejected** | | |
| **COMMENTS** |  | | |
|  | **XXX** (Contractor) | **YYY** (Consultant) | Client |
| **Name** |  |  |  |
| **Sign** |  |  |  |
| **Date** |  |  |  |