			INSPECTION AND TEST PLAN FOR STRUCTURAL STEELWORKS					
ITP / Document No. xxxxxx			**Scope of Plan: SAMPLE HIGH-RISE BUILDINGS & STEEL FRAME PROJECTS**			**DATE : xxxxx REV. : B**		
No.	**Item / Activity to be Inspected / Tested**	**Inspection Description**	**Requirements / Reference**	**Inspection Test Method & Acceptance Criteria**	**Inspection Record**	**RESPONSIBILITIES**		
						SUBCONTRACTOR	CONTRACTOR QA/QC	EMPLOYER
STRUCTURAL STEEL FRAMING								
1	**Design of Structural Steelwork Project**	Project Design	BS EN 1993-1	Approval of the static project responsible will be checked on the shop drawings	Shop Drawings	C	R	
2	**Acceptance for Structural Steel Raw Material**	Compliance of Materials	Project Steel Spec., EN 10204 Type 3.1 test certificates	Steel sections and plates for internal & external steelworks to be grade S355J0 acc. to BS EN 10025-2 See Steel Specification **xxxxxxxxxx** Clause **136** & **138**	Material Test Certificates	C	R	
3	**Fabrication**	Identification of Materials	Project Steel Spec.	Markings of the materials and components, visible for checking after erection. Hard stamping is not permitted except as indicated on drawings	Identification Report	E	S/W	
		HSFG Joints	Project Steel Spec.	Check faying surfaces of steel material with 25mm thickness or over for deformities to prevent the reduction of slip factor below the design limit	Report	E	S/W	
		Hollow Sections	Project Steel Spec.	Debris and moisture to be removed before sealing end and openings	Report	E	R	
		Base Plates	Project Steel Spec.	25mm diameter holes to be drilled for base plates larger than $1m^2$ for pressure grouting	Shop Drawings, Report	E	R	
		Galvanization	Project Steel Spec.	Cutting, drilling and shop welding to be completed before steelwotk galvanizing	Coating App. Report	E	R	
4	**Non-Preloaded Bolt Assemblies**	Compliance of Materials	Project Steel Spec., BS 4190, NSSS	Black bolts to be grade 8.8 of BS 4190, nuts and washers to suit clause 2.7 of NSSS	Material Test Certificates	C	R	
	Preloaded Bolt Assemblies	Compliance of Materials	Project Steel Spec., BS EN 14399-1	Bolt assemblies to be grade 8.8 of BS EN 14399-1	Material Test Certificates	C	R	
	Anchorages to Concrete	Compliance of Materials	Project Steel Spec., ETAG 001 Annex C	Galvanized carbon steel bolts to be fixed into predrilled hole using chemical bond agent. See Steel Specification **xxxxxxxx** Clause **318**	Material Test Certificates	C	R	
	Holding Down Bolts	Compliance of Materials	Project Steel Spec., BS 7419	Hexagonal headed, grade 8.8, non-coated bolts to be used in acc. with Steel Specification **xxxxxxxxxx** Clause **316**	Material Test Certificates	C	R	
	Galvanized Coating to Bolt Assemblies	Galvanization	Project Steel Spec., BS 7371-6	Galvanization of bolt assemblies in acc. with BS 7371-6. See Steel Specification **xxxxxxxxxx**Clause **375**	Coating App. Report	C	R	
5	**Erection**	Method of Erection	Project Steel Spec., NSSS	Outline method of erection with reference to drawings	Method Statement	E	S/W	
		Pre-Erection Checks	Project Steel Spec., BS 5606	Foundations and holding down bolts' position, protruding length, slackness and condition to be checked in acc. with the tolerances stated on BS 5606, Tables 1 and 2. See Steel Specification **xxxxxxxxx4** Clause **414**	Dimensional Check Report	E	R	
		Setting Out	Project Steel Spec., NSSS	Permissible deviations for Setting Out is defined on Steel Specification xxxxxxxxx Clause **421**	Dimensional Check Report	E	R	
		Column Bases	Project Steel Spec., NSSS	Mortar Filling of Column Bases in acc. with Steel Specification **xxxxxxxxx** Clause **440**, **446**	Dimensional Check Report	E	S/W	
		Movement Joints	Project Steel Spec., NSSS	Sliding surfaces, appearance and fit in acc. with Steel Specificationxxxxxxxxx Clause **448**	Dimensional Check Report	E	R	
		Bonded Anchors	Project Steel Spec., NSSS	Bonded anchors' holes and permeable sleeves in acc. with Steel Specification xxxxxxx Clause **449**	Dimensional Check Report	E	R	
6	**Testing**	Weld Joints	NSSS	10% of all fillet welds to be tested by Dye Penetrant or MPI (or Ultrasonic Examination). Level of acceptability for test results is determined on NSSS Annex C.	NDT Report	E	R	
7	**Protective Coatings**	Compatibility of Shop Primer	Project Steel Spec.	Shop primer is to be compatible with coating under general and fire conditions. Intumescent coating : M61/10. Manufacturer'a recommendations and test evidence including test data in acc. with BS 476-20, or BS EN 1363-1 and BS EN 1365-2, -3 and/or -4. See Steel Specification xxxxxxxx Clause 525	Coating App. Report	E	R	
		LMAC	Project Steel Spec., BS EN 1290	Visual inspection of all galvanized structural steelwork surfaces for crack or indication of **Liquid Metal Assisted Cracking (LMAC)**. Inspector to be trained and competent in visual inspection for LMAC. Areas where LMAC is suspected following visual inspection is to by inspected by Magnetic Particle acc. to BS EN 1290	NDT Report	E	R	
		Surface Preparation before Galvanization	Project Steel Spec., BS EN ISO 8505-1, BS EN ISO 1461	Preparation and Galvanizing of external steelwork surfaces in acc. with. Steel Specification xxxxxx Clause **623**	Coating App. Report	E	R	
		Shop Primer Application	Project Steel Spec., BS EN ISO 8505-1	Shop priming as M61 to blast cleaned surfaces of grade Sa 2½, BS EN ISO 8505-1 for intumescent coating system M61/110. See Steel Specification **xxxxxxxxx** Clause **639**	Coating App. Report	E	R	
		Shop Painting	Project Steel Spec.	Shop Painting of internal hidden surfaces (environmental category C2) with Epoxy Zinc Phosphate with dry film thickness of 80 microns. See Steel Specification **xxxxxxxx** Clause **644**	Coating App. Report	E	R	
8	**Preparation for Painting**	Manual Cleaning before Painting	Project Steel Spec. BS EN ISO 8505-1	Manual Cleaning of New Steelwork is to be in acc. with Steel Specification **xxxxxxxxxxxxxxxxxx** Clause **711** Surface finish to be grade 2 of BS EN ISO 8505-1	Surface Preparation Report	E	R	
		Site Welds	Project Steel Spec.	Preparation for Site Welding of Shop Painted Steelwork in acc. with Steel Specification xxxxxxxxx Clause **737**	Surface Preparation Report	E	R	
		Bolted Joints	Project Steel Spec.	See Steel Specification **xxxxxxxx** Clause **742**	Surface Preparation Report	E	R	
		Site Preparation of Shop Painted Surfaces	Project Steel Spec.	See Steel Specification xxxxx Clause **766**	Surface Preparation Report	E	R	
9	**Painting**	Environmental Conditions, Film Thickness	Project Steel Spec.	Environmetal condition to be required before paint applications acc. to Steel Specification **xxxxxxxxx** Clause **811** Wet / Dry film thickness odf painted surfaces is to be acc. to Steel Specification **xxxxxxxxxx** Clause 822	Paint Application Report	E	C	
ISOLATED STRUCTURAL METAL MEMBERS								
1	**Approval of Steel Material**	Compliance of Materials	Project Steel Spec., EN 10204 Type 3.1 test certificates	Steel materials for hollow sections is to be acc. to BS EN 10210-1 and for all others to BS EN 10025-2. Internal steel materials to be of grade S275JR and external steel materials of S275J0. Properties and dimension tolerances of Section is to be acc. To BS4-1, BS EN 10055, BS EN 10056 and BS EN 10210-2. See Steel Specification **xxxxxxxx** Clause **324**	Material Test Certificates	C	R	

2	**Approval of Bolt Assemblies**	Compliance of Materials	Project Steel Spec., EN 10204 Type 3.1 test certificates	Galvanized black bolts in acc. to BS 4190, size and grade as shown on drawings. See Steel Specification **xxxxxxxxxxxxxxxx** Clause **345**	Material Test Certificates	C	R	
3	**Steel Members (Cutting, Drilling, Welding)**	Fabrication	Project Steel Spec., NSSS	See Steel Specification **xxxxxxxxxxxxxxxx** Clause **514** Weld joints, to be fully penetrated, and done by Metal Arc Methods of BS EN 1011-2.	WPS	C	R	
4	**Execution**	Installation	Project Steel Spec. BS 5606	See Steel Specification **xxxxxxxxxxxxxxx** Clause **610**. Installation tolerances of Members are to be as given in BS 5606 Tables 1 and 2	Dimensional Check Report	E	R	
		Bonded Anchors	Project Steel Spec., NSSS	See Steel Specification **xxxxxxxxxxxxxxxx** Clause **624**	Dimensional Check Report	E	R	
		Preparation and Priming	Project Steel Spec., NSSS	See Steel Specification xxxxxxxxxxxxxxxx Clause **647**	Surface Preparation Report	E	R	
		Shop Primer Application	Project Steel Spec., BS EN ISO 12944-4, BS EN ISO 8501-1, BS EN ISO 12944-7	Surface preparation before shop priming is to be acc. to BS EN ISO 12944-4, surface finish grade to be Sa 2½ of BS EN ISO 8501-1 and shop primer application to be in acc. with BS EN ISO 12944-7. See Steel Specification **xxxxxxxxxxxxxx** Clause **658**	Surface Preparation Report	E	R	
5	**Completion**	Steel to Timber Joints	Project Steel Spec.	See Steel Specification **xxxxxxxxxxxxxxxxx** Clause **999**	Shop Drawings	C	S/W	

Prepared by : [CTI CERT Technical Team ***Checked by :[QA/QC Consultant]*** ***Approved by :[Responsible Welding Coordinator (RWC)]***	***Legend***	
	W= Witness Point (Subcontractor will notify Contractor by inspection request but also Contractor can continue the production cycle) **S/W**= Spot Witness Point (Contractor may follow production cycle without any inspection request from subcontractor)	**C=** Check point with documentation (Check has been performed and relevant document issued.) **E=**Execution of Test / Inspection **R=** Review (Checking of relevant document)