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# INSPECTION AND TEST PLAN



## Inspection & Test Plan Description:

Downer

ITP for Shop fabrication - Homai project- Lighting and Conduit Brackets

ITP Doc No: ITP-001-39028- Span 2

Revision: A

Downer- Homai pedestrian bridge

Customer: Downer

Prepared by: Bashir Heidarian

Date: 5/12/2024

Location: Hamilton

Customer Job Reference: 746-24-847-AC

PFS Job Reference 39028

Review by: Regan Hose

Date: 5/12/2024

Construction Category

CC3

Service Category

SC2

Fabrication Category FC1

Weld Category

SP

Tolerance

Class 2

Seq	Task/ QA Activity	Specification Standard	Acceptance Criteria	Certify Doc / Ref	PFS Engineering	Sign	C	Subcontracted scope	Sign	C	Downer	sign	C	Remark
Engineering														
1	Inspection and Test Plan Reviewed and Approved by Customer	Project Structure Specification C07 Rev. 01 IFC structure DWG	Inspection and Test plan shall be submitted to the Engineer for review and approval before fabrication is commenced.	IFC DWGs	PM/PE	Initial: RH Sign: RH	S				Downer	Initial: Sign:	H	
2	Shop Drawing approval	Project Structure Specification C07 Rev. 01 IFC structure DWG	Shop Drawing shall be submitted to Engineer for review along with Shop Drawing Check form	Shop Drawing Check form	PM/PE	Initial: RH Sign: RH	S				Downer	Initial: Sign:	H	
3	Welding Procedures - Structural	AS/NZS 1554.1:2014 Category SP	Details of the welding procedures to be used including details of the equipment and consumables before any welding is carried out. No welder shall carry out work for which he is not certified.	Welding Procedures HERA/CSWIP Stamp	PM/PE	Initial: RH Sign: RH	S	SQA	Initial: 2 Sign: 2	RA				
4	Welder Qualifications - Structural	AS/NZS 1554.1:2014, ISO 9606-1:2017	A list of proposed welders and their welding certificates to be provided prior to any welding being carried out. No welder shall carry out work for which he is not certified.	WQT by Authorised Person (Welding Supervisor)	PM/PE	Initial: RH Sign: RH	S	SQA	Initial: 2 Sign: 2	RA				
Procurement														
5	Procurement of materials in line with IFC drawings and Technical Specification	Project Structure Specification C07 Rev. 01 IFC structure DWG	Materials match that specified in Project IFC drawings and Technical Specification. Structural steel Material shall be sourced from suppliers certified by ACRS. Material test certificates shall report all element required by AS/NZS relevant standard, plus total boron content (Manufacturer certificates shall from ILAC MRA laboratories)	Supplier Material Certificate	PM/PE	Initial: RH Sign: RH	RA/S				Downer	Initial: Sign:	H	
6	Procurement of Welding consumable to match Weld procedure and parent materials.	AS/NZS 1554.1	Welding consumables and gas match what is specified on the appropriate welding procedures.	Supplier Material Certificate PFS Welding Procedures	PM/PE	Initial: RH Sign: RH	RA							
7	Material inspection upon receiving	Project Structure Specification C07 Rev. 01 IFC structure DWG	All material shall be inspected against IFC drawing to make sure material grades, type, thickness, size are in compliance with IFC DWGs.	IFC DWGs	Team Leader	Initial: RH Sign: RH	H							
Steel structure Fabrication														
8	Manufacturing Work Pack Issued to Production Manager	Project Structure Specification C07 Rev. 01 IFC structure DWG	Job barcodes, Inspection & Test Plan's, IFC Fabrication Drawings, Reference Drawings/Info, Welding Procedures, weld map, welding log info, traceability sheet		Production Manager	Initial: RH Sign: RH	RA							

S: Submit Documents H: Hold Point D: Dimensional Inspection RA: Review and Approve Documents W: Witness V: Visual Inspection



Seq	Task/ QA Activity	Specification Standard	Acceptance Criteria	Certify Doc / Ref	PFS Engineering	Sign	C	Subcontracted scc	Sign	C	Downer	sign	C	Remark
9	Identification and traceability for main items	Project Structure Specification C07 Rev. 01 IFC structure DWG AS/NZS 5131	Lot traceability shall be provided for main structural members, connections between main structural members and major plate components. Traceability as per AS/NZS 5131: Amd 1:2020 5.2.3 (ii) for minor components including cleats, connecting brackets and the like.	IFC DWGs	PM/PE	Initial: RH Sign: RH	H							
10	Manufacture of steel structure Tack welded only	IFC DWGs	Manufacture completed as per IFC Fabrication drawings. All tack welding shall be performed in accordance with PFS weld procedure. Welding consumables, process & any applicable pre/post heat requirements shall comply with approved welding procedure's.	IFC DWGs	Team Leader	Initial: DLS Sign: L	D							
11	Pre Weld Dimensional Check (Tack Check)	IFC Drawings	Dimensional survey of fabricated item's against IFC drawings. Measured dimensions shall be within stated tolerances unless noted otherwise. Project specification clause C0702.1.3 Functional Tolerances shall be class 2 as per AS/NZS 5131 Table F2.1 to F2.10 Inspections recorded in line with SHEQ-01-02-0035 Product Inspection Procedure	IFC DWGs	Team Leader	Initial: DLS Sign: L	D							
12	Welding	AS/NZS 1554.1 AS/NZS 9606.1	All welding shall be performed in accordance with PFS weld procedures Welding consumables, process & any applicable pre/post heat requirements shall comply with approved welding procedure's. Welder ID, weld date & consumable batch are recorded on traceability register.	Welding Procedure and Welder Qualification	Team Leader	Initial: DLS Sign: L	V							
13	Post Weld Dimensional Check	IFC DWGs	Dimensional survey of fabricated item's against IFC drawings. Measured dimensions shall be within stated tolerances unless noted otherwise. Project specification clause C0702.1.3 Functional Tolerances shall be class 2 as per AS/NZS 5131 Table F2.1 to F2.10 Inspections recorded in line with SHEQ-01-02-0035 Product Inspection Procedure	IFC DWGs & Workshop Pack.	Team Leader	Initial: DLS Sign: L	D							
14	Weld Visual Scanning (PFS Internal Check)	IFC Drawing	100% of all welds shall be subject to visual scanning	PFS NDT Register	Team Leader	Initial: DLS Sign: L	V							
15	NDT inspection	Project Structure Specification C07 Rev. 01	NDE shall include as a minimum: 100% Visual Scanning, 100% Visual examination  The Welding Compliance Inspector shall complete all inspections including any additional inspection, tests and reports necessary due to any welding or welding related workmanship defects.	Stamped NDT report	PM/PE	Initial: DLS Sign: L	RA	NDT subcontractor	Initial: Z Sign: Z	S				
16	Protective Coatings Preparation	Project Structure Specification C07 Rev. 01	Removal of all weld spatter and dressing of any weld to removed sharp edges / spatter. All sharp edges are ground to a smooth 2 mm radius.	N/A	Team Leader	Initial: DLS Sign: L	V							
17	Fabrication NCR (if any)	Project Structure Specification C07 Rev. 01	All Non-conformities reported in PFS NCR system during manufacturing of steel structure need to be submitted to Client for approval	-	PM/PE	Initial: DLS Sign: L	S				Downer	Initial: Sign:	RA	
Assembly -Lightning and Conduit Bracket														
18	Lighting and conduit bracket- assembly	Project Structure Specification C07 Rev. 01 IFC structure DWG	After coating, the bracketes to be assembled on GRP material	IFC DWGs	Team Leader	Initial: RH Sign: RH	V/D							

S: Submit Documents H: Hold Point D: Dimensional Inspection RA: Review and Approve Documents W: Witness V: Visual Inspection



Seq	Task/ QA Activity	Specification Standard	Acceptance Criteria	Certify Doc / Ref	PFS Engineering	Sign	C	Subcontracted	Sign	C	Downer	sign	C	Remark
19	Holing	Project Structure Specification C07 Rev. 01 IFC structure DWG SHEQ-01-02-0040	Manual holing shall be performed on GRP material.	IFC DWGs	Team Leader	Initial: RH Sign: RH	D							
20	Dimension check	IFC DWG	Compliance with IFC DWGs	-	Team Leader	Initial: RH Sign: RH	D							
21	Visual inspection of Fasteners	IFC Drawing	All fasteners (bolts, nuts, washers) are to be in complied with the Project requirement (Grade, Size and Length)	IFC Drawing	Team Leader	Initial: RH Sign: RH	V							
22	Snug tightening of fastener to fasten the brackets to the GRP material	Standard operation procedure for steel structure bolt tightening SHEQ-01-02-0038	100% of fixings securing brackets to be inspected for snug tight condition and marked with coloured paint pen to confirm fixing condition has been checked and verified.	-	Team Leader	Initial: RH Sign: RH	V	<del>Hand tight for expansion joints.</del> <del>Lock tight applied to bolts.</del>						
23	Assembly of the angles between brackets	Project Structure Specification C07 Rev. 01 IFC structure DWG	The angles to be assembled between bracket with fasteners	IFC DWGs	Team Leader	Initial: RH Sign: RH	V/D							
24	Snug tightening of fastener to fasten angles to the brackets	Standard operation procedure for steel structure bolt tightening SHEQ-01-02-0038	100% of fixings securing brackets and angles to be inspected for snug tight condition and marked with coloured paint pen to confirm fixing condition has been checked and verified.	-	Team Leader	Initial: RH Sign: RH	V	- Lock tight applied to bolts - Hand tight for expansion joints						
25	Final Inspection	IFC Drawings, AS/NZS 1554.1:2014 Category SP	Visual and Dimensional inspections completed by PFS Project Manager to confirm manufactured items have been manufactured to acceptable standard & tolerance and approved to progress to protective coatings. >Confirmation that dimensional inspections have been completed in line with SHEQ-01-02-0035 Product Inspection Procedure >Confirmation that required quantity and type's of NDE has been completed and any identified defects have been remediated.	IFC DWGs	PM/PE	Initial: RH Sign: RH	RA							
Quality Review														
26	Compile, review and submit documentation	Project Structure Specification C07 Rev. 01 IFC structure DWG	Documentation, Certificates and reports to support manufacture of steel structure and subcontracted items compiled into PFS Manufactures Data Report	PFS Manufactures Data Report	PM/PE	Initial: RH Sign: RH	RA				Downer	Initial: Sign:	RA	
PFS Revision Record: 39028-ITP-001-39028- Span 2 RevA														

Approved by [Engineer/Client]	Name:	Date:	Sign:
Issued for Construction	Name: Regan Hose	Date: 9/12/2024	Sign: Regan Hose

Comments/Notes: