INSPECTION AND TEST PLAN

Project: Iron Bridge SMPEI Process Plant Construction – Dry Plant	**FMG Document No:** 662NSC2002-2000-IT-QA-0003	**Document No:** C292-QU-ITP-0003	**Revision: 2**
Project No: C292	**Contract No:** 662NSC2002-0000-CO-CP-0002	**Prepared By:** F.Fernandez	**Approved By:** W. Bradshaw
Scope: Bin / Chute Installation			**Workpack / Area:**
Control Point	**H** = Hold Point (Work must not proceed to the next step until this activity is completed and a signature obtained); **W** = Witness Point (Notify to permit witness, work can proceed if witness does not attend at agreed time); **S** = Surveillance (Monitor operations / surveillance of activity); **R** = Review Documentation (Sign to record review);		
Resp. Person	**QC** - Quality Inspector; **PE** - Project Engineer; **CQR** - Client Quality Representative; **CI** - Coating Inspector; **PM** - Project Manager; **SS** - Site Supervisor; **DC** - Dimension Checker; **WE** - Welding Engineer; **PP** - Pre-processing Personnel		

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1	**Submission / Approval of Documentation**							
1.1	Submit Bin / Chute Inspection & Test Plan for FMG Approval	662NSC2002-2000-SW-CN-0002_4 100-ST-QA-0002	662NSC2002-2000-SW-CN-0002_4 Cl. 10.3 100-SP-ST-0001_0 Cl. 10	Approved ITP	QC / PE	H / R	H	
1.2	Submit Weld Procedure Specifications (WPS) and Weld Procedure Qualification Records (WPQR) to FMG for Approval	100-SP-ST-0001_0 AS 1554.1	100-SP-ST-0001_0 Cl. 10.1 AS 1554.1	Approved WPS & WPQR	QC / PE	H / R	R	
1.3	Submit Welder Qualification Records (WQR) to FMG for Approval	100-SP-ST-0001_0 AS 1554.1 Sec 4	100-SP-ST-0001_0 Cl. 10.3 Welders Qualified to AS2980, AS1554 or AS1796	Welders Qualification Record (WQR) Approved & WQR Register	QC / PE	H / R	R	
1.4	Submit Non-Destructive Examination (NDE) Procedures to FMG for Approval	100-SP-ST-0001_0 AS 1554.1 Sec 7.4	100-SP-ST-0001_0 Cl. 10.4 AS 1554.1	Approved NDE Tester's NATA Accreditation Approved NDE Procedures	QC / PE	H / R	R	
1.5	Submit Non-Destructive Examination (NDE) Personnel Qualifications to FMG for Approval	100-SP-ST-0001_0 AS 1554.1 AS 3998 AS 4635	100-SP-ST-0001_0 Cl. 10.4 AS 1554.1 AS 3998 AS 4635	Approved NDE Personnel Qualifications	QC / PE	H / R	R	
1.6	Submit Bolt Tensioning Part Turn Testing Procedure to FMG for Approval	100-SP-ST-0002_0 AS 4100	100-SP-ST-0002_0 Cl. 9.2.8 AS 4100	Approved Bolt Tensioning Part Turn Testing Procedure	QC / PE	H / R	R	
1.7	Where installation is Critical lift, Submit Lift Study where Required to FMG for approval	100-PR-SA-1036_5	100-PR-SA-1036_5 Cl. 3.4	Approved Lift Study	SS / PE	H / R	H	
2	**Materials Receipt, Inspection & Storage**							
2.1	Inspect Supplied and Fabricated Materials Including Chutes, Bin Components , Liners and Other Related Materials for the Following: • Identification/Markings; • Conformance to Specification and Drawings; • Damaged or Missing Components; and • Review Material Certification and Material Traceability Records. **NOTE:** Non-Conforming Materials Shall be Segregated, Quarantined and an OS&D Report Completed.	100-SP-ST-0002_0 C292-QU-PLN-0001 AS 4100	100-SP-ST-0002_0 Cl 8.1 & 8.2 Relevant Aust Standards	Delivery Dockets, Letters of Conformity, Statements of Compliance, Material Certificates, Data Sheets, Delivery Documentation, Packing List	SS / QC / PE	S / R	S	
2.2	Supplied Welding Consumables to be Inspected for the Following and Stored in Accordance with Relevant Specifications and Recommendations: • Damage to Consumables or Packaging; • Contamination with Dissimilar Metals; and • Review Material Certification.	100-SP-ST-0001_0 10-QU-QC-WIN Welding Consumable Control AS 1554.1 AS 1858 AS 2207 AS 2717 AS Applicable to Welding Process Manufacturer Recommendations	100-SP-ST-0001_0 Cl 10.2 Store in dry weather proof location in an area free from possibility of contamination. Welding consumables to be stored per manufacturer instructions (eg Rod Oven)	Material Trace / Batch Certificates, Welding Consumable Register	SS / QC / PE	S / R	S	

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3	**Acceptance of Foundations Supporting Bin / Chute**							
3.1	Inspect Concrete Foundations and Steel Structures for Conformance to the Following: • Structure is as at Correct Level, Alignment and Position; • Structural Connections Have Been Torqued and Verified; • Concrete / Grout Curing Period Satisfied; and • Required Concrete / Grout Strengths Have Been Achieved.	Applicable Sections within C292-QU-ITP-0002 Structural Steel Erection	C292-QU-ITP-0002	Signed ITP	SS / PE	R	R	
4	**Bin / Chute Installation**							
4.1	Prepare Foundations for Installation of Chute or Bin: • Scabble Concrete Foundation below Baseplate with Allowance for 45° Chamfer in Grout (if applicable) • Steel Members Shall be Clean, Flat and Free From Burrs; • Baseplate Free From Surface Treatment UNO	100-SP-ST-0002_0 IFC Drawings Manufacturer's Recommendation	100-SP-ST-0002_0 Cl. 9.2.4 & 9.2.6 IFC Drawings Manufacturer's Recommendation	Field Inspection Records - Signed ITP	SS / PE	S / R	S / R	
4.2	•Surveying and install Packers / Shims to Achieve Level and Alignment.	100-SP-ST-0002_0 IFC Drawings Manufacturer's Recommendation	100-SP-ST-0002_0 Cl. 9.2.4 & 9.2.6 IFC Drawings Manufacturer's Recommendation	Signed ITP Survey Report	SS/PE	H	H/R	
4.3	Installation of Chutes and Bin Components in Accordance with Drawings and Specifications Progressively Surveying Alignment, Position and Level.	100-SP-ST-0002_0 AS 4100 IFC Drawings	100-SP-ST-0002_0 Cl. 9.2 & 9.5 AS 4100 IFC Drawings	FMG C1-ST-ITR-035 Bins & Chutes	SS / PE	S / R	S / R	
4.4	Inspect Chutes and Impact Plates for the Following: • Horizontal Position of Chutes Centreline at Discharge Pulley Level: ±10mm • Horizontal Misalignment Between Chute Corners at Discharge Pulley Level: 10mm • Horizontal Position of Chutes Centreline at Skirt Level: ±5mm • Horizontal Misalignment between Chute Corners at Skirt Level (Symmetrical to the Chute Centreline);5mm • Vertical Position of Any Point on Chute: ±5mm • Vertical Position of Any Point on Chute at the Skirt Support Level: ±5 mm • Back Wall Angle of Loading Boot: ±1°	100-SP-ME-0004_2 IFC Drawings	100-SP-ME-0004_2 Cl. 5.1 IFC Drawings	FMG C1-ST-ITR-035 Bins & Chutes Survey Report	SS / PE	S / R	R	
4.5	Confirm Sufficient clearance to all moving parts - Pulleys, Belt, Drives	100-SP-ME-0002_0	100-SP-ME-0002_0 IFC Drawings	FMG C1-ST-ITR-035 Bins & Chutes	SS / PE	S / R	R	
4.6	Check Bolted Connections for Part Turn Method Markings and conduct >10% visual inspection of structural bolted connections	100-SP-ST-0002_0 AS 4100 Civmec Project Bolting Procedure C292-QU-PRO-0001	100-SP-ST-0002_0 Cl. 9.2.8 AS 4100 Part-Turn Marks visible for inspection	FMG C1-ST-ITR-003 Bolt Tensioning	PE / QC	H	W	

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5	**Site Welding**							
5.1	Fit-up weld in accordance with WPS	100-SP-ST-0001_0 AS1554.1 Approved WPS	100-SP-ST-0001_0 Cl. 10 AS1554.1 WPS	Weld Traceability Records	QC / SS	W / R	S / R	
5.2	Undertake Welding in Accordance with Approved Weld Procedure Specification	100-SP-ST-0001_0 AS1554.1 Approved WPS	100-SP-ST-0001_0 Cl. 10 AS1554.1	Weld Traceability Records	QC / SS	S / R	S / R	
5.3	Complete Visual Inspection on 100% of Completed Weld	100-SP-ST-0001_0 AS1554.1	100-SP-ST-0001_0 Cl. 10 AS1554.1	Weld Traceability Records	QC	H	S / R	
5.4	Complete Required NDE of Welds as Follows: Splice Welds / Critical Welds • All Full Penetration Butt Weld Splices Shall be Tested Using RT or UT and MPI; and • All Welds on Immediate Fittings to Monorail Supports Shall be Tested Using RT or UT and MPI. Complete Penetration Butt Welds • 10% of the Length of All Butt Welds Longer than 1000mm Shall be Tested Using RT or UT and MPI. Fillet Welds • 5% of all Fillet Welds Shall be Tested Using MPI; and • 10% of the Length of All Fillet Welds Longer than 1000mm Shall be Tested Using MPI. Other Welds • The Root Pass of All Welds Greater than 38mm Shall be Tested Using MPI; and • Lamination of All Plates or Sections Thicker than 23mm Restrained at a Tee Junction by a Butt Weld Shall be Tested Using UT.	100-SP-ST-0001_0 AS 4100 AS 1554.1	100-SP-ST-0001_0 Cl. 13.6 AS 4100	Weld Traceability Records NATA Endorsed NDE Reports	QC	R	R	
6	**Liners, Inspection Doors and Impact Plate Installation**							
6.1	Complete Installation of Loose Liners Left Out for Site Connections	100-SP-ME-0002_0 IFC Drawings	100-SP-ME-0002_0 Cl. 3.8 IFC Drawings	FMG C1-ST-ITR-035 Bins & Chutes	SS	S	S	
6.2	Complete Installation of Inspection Doors and Check Doors are Secure when Closed and Free to Open	100-SP-ME-0002_0 IFC Drawings	100-SP-ME-0002_0 Cl. 5.10 IFC Drawings		SS	S	S	
6.3	Check Impact Plate Adjusters are Operational and Impact Plate is Positioned in Accordance with Drawings	100-SP-ME-0002_0 IFC Drawings	100-SP-ME-0002_0 Cl. 5.10 IFC Drawings		SS	S	S	
6.5	Warning/Danger/Hazard Signage installed as required	100-SP-ME-0002_0 AS1319 AS4024	100-SP-ME-0002_0 IFC Drawings	Signed ITP	SS	R	S	

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7	**Grouting (If Applicable)**							
7.1	Refer to Grouting ITP	C292-QU-ITP-0007	C292-QU-ITP-0007	FMG C1-ST-ITR-004 Grout C292-QU-ITP-0007	SS / PE	R	R	
8	**Final Inspection**							
8.1	Complete Final Inspection of Installed Chutes and Bins	100-SP-ME-0002_2 IFC Drawings	100-SP-ME-0002_2 IFC Drawings	FMG ITR's Complete ITP Signed Punchlist	SS / PE	R	R	
9	**Finalise Documentation**							
9.1	Redline Drawings Verified for Bins and Chutes Installed	662NSC2002-2000-SW-CN-0002_4 100-ST-QA-0002	662NSC2002-2000-SW-CN-0002_4 100-ST-QA-0002	Redline Drawings	QC / PE	R	R	
9.2	Complete Construction Verification & Punchlisting	662NSC2002-2000-SW-CN-0002_4 100-ST-QA-0002	662NSC2002-2000-SW-CN-0002_4 Cl. 9.1 100-ST-QA-0002 Cl. 2.8	Approved Construction Verification Documentation Signed-off Punchlist	QC / PE	R	R	

SIGNATURE IDENTIFICATION REGISTER

NO	NAME	SIGNATURE	POSITION TITLE	ORGANISATION
1				
2				
3				
4				
5				
6				