United Civil Construction

INSPECTION & TEST PLAN — KIOREROA ROAD SEWER RISING MAIN — ITP NUMBER 2

WORK AREA:	DESCRIPTION OF ACTIVITY:	Key:					
Kioreroa Road Sewer Rising Main	DN710, DN630 and DN450 PE Pipe and Welding	P= PERFORM (Activity) R = REVIEW (Documents & Work) W = WITNESS (Activity) H = HOLD (Point for Acceptance)	1	GvdLinde	19/06/24		
			0	GvdLinde	10/05/2024		
			Rev	Originator	Date	Approved	Date

Item No.	ITEM	ACTIVITY TASK	ACCEPTANCE CRITERIA	CERTIFING DOCUMENTATION AND FREQUENCY	Supervisor, Foreman or Subcontractor		Project Manager or Delegated Person		Engineer's Representative	
					Key	Sign / Date	Key	Sign / Date	Key	Sign / Date
1	PE Pipe Jointing	Welding – Butt and EF Joints	As per T-WES 04110 – Fusion jointing of PE Pipes Specifications	Submit WMS as per T-WES 04110 Section 2.4 and 2.5	P		R		**H**	
2	DN710 pipe material	Supply of Resin QA data	Certification from manufacturer that materials comply with the manufacturer's specification as per project specs as per T-WES 00013 – Pressure Pipelines Supply, Installation and Testing Specification Section 2.4	QA Documents As per Section 2.4.2.3 – submit prior to procurement.			P		**H**	
3	DN710 Pipe Welding	Construction	All weld parameters are to be recorded for each separate weld as well as the welder, weld number, location, date and time of weld and air temperature All butt welds to be undertaken in accordance with the manufacturer's recommendations. Welder to have qualification certificates. As per T-WES 04110 – Fusion Jointing of PE Pipes	EF Weld Inspection joints Approved WMS Welding machine certified and calibrated with data logging capacity – submit calibration certs prior to start. Welder to supply Data Logger Information etc for butt-welding. Supply info as per Section 2.2 and 2.3- Welder qualifications and info. Maintain site records as per Section 3	**P**		**R**		R	

Date Printed: 10 July 2024

Item No.	ITEM	ACTIVITY TASK	ACCEPTANCE CRITERIA	CERTIFING DOCUMENTATION AND FREQUENCY	Supervisor, Foreman or Subcontractor		Project Manager or Delegated Person		Engineer's Representative	
					Key	Sign / Date	Key	Sign / Date	Key	Sign / Date
4	DN710 -Testing of butt Welds	Butt Welding Test	Tests to be carried out to see Ductile or Tensile Failure as per WDCEES specifications. T-WES 04110 Section 3.	Test Results Butt Welding information to be provided with test weld, copy of information to be kept on site in QA folder, Results / Feedback to be supplied to WDC. Frequency as per T-WES 04110 - Section 3.1.4 Perform pre-construction test as per Section 3.1.1 Test 2 welds from first 50 welds as per Section 3.1.4 Maintain site records as per Section 3	**P**		**P**		**R**	
5	DN710 - Testing of EF Welds	Joining of Strings	Tests to be carried out to see Ductile or Tensile Failure as per WDCEES specifications. T-WES 04110 Section 3.2	Test Results EF Welding information to be provided with test weld, copy of information to be kept on site in QA folder, Results / Feedback to be supplied to WDC. Frequency as per T-WES 04110 - Section 3.1.4	**P**		**P**		**R**	
6	DN630 - Pipe material	Supply of Resin QA data	Certification from manufacturer that materials comply with the manufacturer's specification as per project specs. As per T-WES 00013 – Pressure Pipelines Supply, Installation and Testing Specification Section 2.4	QA Documents As per section 2.4.2.3 – submit prior to procurement.			P		**R**	

Item No.	ITEM	ACTIVITY TASK	ACCEPTANCE CRITERIA	CERTIFING DOCUMENTATION AND FREQUENCY	Supervisor, Foreman or Subcontractor		Project Manager or Delegated Person		Engineer's Representative	
					Key	Sign / Date	Key	Sign / Date	Key	Sign / Date
7	DN630 Pipe Welding	Construction	All weld parameters are to be recorded for each separate weld as well as the welder, weld number, location, date and time of weld and air temperature All butt welds to be undertaken in accordance with the manufacturer's recommendations. Welder to have qualification certificates As per T-WES 04110 – Fusion Jointing of PE Pipes	EF Weld Inspection joints Approved WMS Welding machine certified and calibrated with data logging capacity – submit calibration certs prior to start. Welder to supply Data Logger Information etc for butt-welding. Supply info as per Section 2.2 and 2.3- Welder qualifications and info. Maintain site records as per Section 3	**P**		**P**		**R**	
8	DN630 - Testing of butt Welds	Butt Welding Test	Tests to be carried out to see Ductile or Tensile Failure as per WDCEES specifications. T-WES 04110 Section 3	Test Results Butt Welding information to be provided with test weld, copy of information to be kept on site in QA folder, Results / Feedback to be supplied to WDC. Frequency as per T-WES 04110 - Section 3.1.4 Perform pre-construction test as per Section 3.1.1 Test 2 welds from first 50 welds as per Section 3.1.4	**P**		**P**		**R**	
9	DN630 - Testing of EF Welds	Joining of Strings	Tests to be carried out to see Ductile or Tensile Failure as per WDCEES specifications. T-WES 04110 Section 3.2	Test Results EF Welding information to be provided with test weld, copy of information to be kept on site in QA folder, Results / Feedback to be supplied to WDC. Frequency as per T-WES 04110 - Section 3.1.4	**P**		**P**		**R**	

Item No.	ITEM	ACTIVITY TASK	ACCEPTANCE CRITERIA	CERTIFING DOCUMENTATION AND FREQUENCY	Supervisor, Foreman or Subcontractor		Project Manager or Delegated Person		Engineer's Representative	
					Key	Sign / Date	Key	Sign / Date	Key	Sign / Date
10	DN450 - Pipe material	Supply of Resin QA data	Certification from manufacturer that materials comply with the manufacturer's specification as per project specs. As per T-WES 00013 – Pressure Pipelines Supply, Installation and Testing Specification Section 2.4	QA Documents As per section 2.4.2.3 – submit prior to procurement.			P		**R**	
11	DN450 Pipe Welding	Construction	All weld parameters are to be recorded for each separate weld as well as the welder, weld number, location, date and time of weld and air temperature All butt welds to be undertaken in accordance with the manufacturer's recommendations. Welder to have qualification certificates As per T-WES 04110 – Fusion Jointing of PE Pipes	EF Weld Inspection joints Approved WMS Welding machine certified and calibrated with data logging capacity – submit calibration certs prior to start. Welder to supply Data Logger Information etc for butt-welding. Supply info as per Section 2.2 and 2.3- Welder qualifications and info. Maintain site records as per Section 3	**P**		**P**		**R**	
12	DN450 - Testing of butt Welds	Butt Welding Test	Tests to be carried out to see Ductile or Tensile Failure as per WDCEES specifications. T-WES 04110 Section 3	Test Results Butt Welding information to be provided with test weld, copy of information to be kept on site in QA folder, Results / Feedback to be supplied to WDC. Frequency as per T-WES 04110 - Section 3.1.4 Perform pre-construction test as per Section 3.1.1 Test 2 welds from first 50 welds as per Section 3.1.4	**P**		**P**		**R**	

Item No.	ITEM	ACTIVITY TASK	ACCEPTANCE CRITERIA	CERTIFING DOCUMENTATION AND FREQUENCY	Supervisor, Foreman or Subcontractor		Project Manager or Delegated Person		Engineer's Representative	
					Key	Sign / Date	Key	Sign / Date	Key	Sign / Date
13	DN450 - Testing of EF Welds	Joining of Strings	Tests to be carried out to see Ductile or Tensile Failure as per WDCEES specifications. T-WES 04110 Section 3.2	Test Results EF Welding information to be provided with test weld, copy of information to be kept on site in QA folder, Results / Feedback to be supplied to WDC. Frequency as per T-WES 04110 - Section 3.1.4	**P**		**P**		**R**	

1

INSPECTION & TEST PLAN (ITP)

The ITP defines the required inspections during various stages of fabrication, construction & installation work. It is also a method of communicating these requirements to those doing the work & a verifying record that they have been carried out.

The ITP defines four different levels of inspection according to the following criteria:

- **Perform (P)** The person(s) performing the work inspects his/her own work and the Foreman/Supervisor or Subcontractors Representative is to verify/check the work as correct. The Foreman/Supervisor or Subcontractors Representative is required to sign the Inspection & Test Checklist.
- **Review (R) – Documents** When applied to documents this can indicate review & approval before fabrication commences e.g. weld procedures or after completion e.g. QC Package.
- **Review (R) –Work Performed** Fabrication may proceed past the points indicated on the ITP. This type of inspection performed on a random basis. If corrective action is necessary, the frequency of inspections may be increased.
- **Witness (W)** This type of inspection is performed when critical activities are undertaken & verification of work done is required by a third party, or internally by a supervisor or QA Personnel. It is the responsibility of the Foreman/Supervisor or Subcontractors Representative to notify whoever is identified as the Witness initiator that the (W) stage of inspection has been reached.
- **Hold (H)** This type of inspection requires the Foreman/ Supervisor or Subcontractors Representative to notify the United Civil Project Manager that the (H) stage of inspection has been reached. Fabrication shall not proceed past this point unless the inspection has been carried out or approval to proceed is given in writing & signed by the Engineer's Representative.

NOTE REGARDING INSPECTION AUTHORITIES NOT SIGNING OFF WITNESS OR HOLD POINTS

On occasion there are situations where the required Inspection Authority (normally the Engineer or Contractor's Representative) at the witness or hold points has not for whatever reason signed the required documentation such ITP or Check Sheet where the given verifications points are clearly and evidently completed to the required standard.

The Inspection Authority normally signifies verification by other means such as email sign off or other formal correspondence.

Where this occurs, in lieu of a signature, a note to this effect shall be made on the relevant document by the Project Manager and reference to the said correspondence.

The correspondence shall be kept on the company file for the project concerned.