**Checklist – CAC016M**

**MRTS73 *Manufacture of Prestressed Concrete Members and Stressing Units* incorporating MRTS70 *Concrete* and MRTS71 *Reinforcing Steel***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Contractor** |  | **Date** |  | **Review No.** |  |
| **Contract No.** |  | **Project No.** |  | **Project Name** |  |
| **Unit Numbers** |  | **Unit Types** |  | **Date(s) Manufactured** |  |

| Reference | Documentation / Inspection | Addressed | Comments/Observations |
| --- | --- | --- | --- |
| MRTS73Clause 5.3 | **HP1 Product and supplier details*** Quality plan
* Precast registration certificate
	+ Including stressing bed
	+ Including void restraint system
* Casting programme
* MRTS70 (HP8)
	+ Mix design approval certificate
	+ Project-specific requirements
* MRTS71 (HP1)
	+ Reinforcing supplier’s registration certificate
* MRTS71 (HP6)
	+ Welding procedure specification
* MRTS71 (HP8)
	+ Certified lifting diagram for large reinforcing cage
 |  |  |
| MRTS73Clause 5.4 | **HP2 Manufacturing procedures and Stressing Beds*** *Check registration certificate*
* Stressing and transfer of prestressing
 |  |  |
| MRTS73 Clause 7.4.9 | **HP3 Alternate void or tub lengths*** *Possible RFI for Designer*
 |  |  |
| MRTS71(ATS 5310)Clauses 5-7 | **Steel reinforcement*** Delivery dockets/bundle tags
	+ Registered supplier
	+ Grade and ductility class
* Visual inspection
	+ Surface condition
	+ Storage
	+ Shape/Size
	+ Welding
 |  |  |
| MRTS73Clause 9.1 | **Prestressing strand*** Delivery dockets/coil tags
	+ Registered supplier
	+ Test certificate
* Visual inspection
	+ Surface condition
	+ Storage
	+ Size
 |  |  |
| MRTS73Clause 10 | **Tensioning of prestressing strand*** Correlation between force and elongation
* Lift off test
 |  |  |
| MRTS73 Clause 11.3MRTS70Clause 16.3 | **HP4 Placement of concrete (first cast)****WP2 Placement of concrete*** Pre-pour visual inspection
	+ Reinforcement position
	+ Stressing strands (and debonding)
	+ Void position
	+ Cover-to-reinforcement/Spacers
	+ No foreign material
	+ Thermocouples to monitor temperature
	+ Electrical conductivity of reinforcement (if necessary)
	+ Lifting anchor position
	+ Formwork secure

**MRTS71 HP4 Electrical Conductivity*** If required
 |  |  |
| MRTS70 Clause 11Clause 16.4 | **Concrete Delivery*** Delivery docket (approved mix)
* Field sheet
	+ Slump/spread result
	+ Batch/arrival times
	+ Concrete temperature
	+ Ambient conditions
* Visual inspection
	+ No surprises
 |  |  |
| MRTS70 Clause 16.5 | **Placement and Compaction*** Visual Inspection
	+ Concrete
	+ Placement
	+ Compaction
	+ Evaporation retardation
	+ Steam curing
 |  |  |
| MRTS73Clause 12 | **Transfer of prestress*** Concrete strength
* Curing complete
* Condition of strands
 |  |  |
| MRTS73 Clause 7.1Clause 16 | **WP1 Dimension checks*** Visual inspection
	+ Dimensions (hog, length etc)

**WP3 Product Inspection*** Visual Inspection
	+ Surface finish
	+ Defects (e.g. cracks)
	+ Product marking
* Storage

***\*SAFETY CONSIDERATIONS ARE PARAMOUNT WHEN INSPECTING PRESTRESSED ELEMENTS*** |  |  |
| MRTS73 Clause 16 | **HP5 Material Data Record*** Concrete strength report (NATA-endorsed)
* Lot register
* As-constructed dimensions
* Heat-accelerated curing charts
* Stressing records
 |  |  |

**Additional items for consideration**

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| --- | --- |
|  |  |
|  |  |

*Delete below section if not required*

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| Audited by: |  |  |  |
| Name |  | Signature |  | Date |  |