

Ref. No. SAI-TYPSA/PMC/TATA/103/Y17-M07/ 762

12.07.2017

25

To,
TATA-ALDESA (JV)
1-7-80 TO 87, "Mithona Towers-1"
Prenderghast Road
Secunderabad – 500003
Andhra Pradesh

Sub: - Design and Construction of Civil, Structures, and Track Works for Double Line Railway involving formation in Embankments/Cuttings, Ballast on Formation, Track Works, Structures, Buildings, including Testing and Commissioning on Design – Build Lump Sum basis for Bhaupur - Khurja Section of Eastern Dedicated Freight Corridor. **Contract Package: LOT 103: Submission of QAP of Expansions Joints in Major Bridges Make M/s Ameen Ji Rubber Private Limited, Hyderabad - Reg.**

Ref: - 1. Contract Agreement No. HQ/EN/DB/Bhaupur-Khurja/LOT-103 dated 08.03.2013
2. JV Letter No TATA-ALDESA/EDFCIL/ALJN/ENG/LOT103/2017-2018/2465 dated 04.07.2017
3. JV Letter No TATA-ALDESA/EDFCIL/ALJN/ENG/LOT103/2017-2018/2462 dated 01.07.2017
4. PMC Letter No SAI-TYPSA/PMC/TATA/103/Y17-M07/748 Dated 6.07.2017
5. JV Letter No TATA-ALDESA/EDFCIL/ALJN/ENG/LOT103/2017-2018/2476 dated 11.07.2017

Dear Sir,

Vide reference 2& 3, Contractor submitted the profile & authentic documents of M/s Ameen Ji Rubber Private Limited, Hyderabad for the fabrication of Expansion joints in the major Bridges.

PMC evaluated the credentials of M/s Ammen Ji Rubber Private Limited, Hyderabad and issued the source approval through PMC letter under reference (4) for fabrication of Expansion joints in Major Bridges in LOT-103.

Joint factory inspection conducted by contractor and PMC representatives to finalize the Quality Assurance plan as per PMC Comments and the manufacturing unit, credentials, experience in similar nature of Railway Projects, RDSO approval and SHE requirements of the Project, were found in order, hence acceptable.

Vide reference (5), Contractor submitted the final version of QAP with incorporation of all PMC Comments.

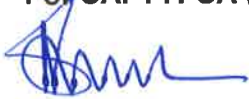
PMC reviewed the same and grants approval for Quality Assurance Plan for the fabrication of

Expansion Joints in the Major Bridges, subject to incorporation of the correction/s modifications marked in the attached QAP.

You are thus instructed to proceed with the fabrication as per requirements of approved Quality Assurance Plan, WPQR & WPSS approval etc.

Note : Please submit the manufacturing schedule and inspection requirements for necessary action our end.

Sincerely,
For SAI-TYPSA (JV)



Balwinder Singh Brar
Dy. Team Leader/Resident Project Manager
bbrar@systra.com, sazmi@systra.com
Mobile No. : +91 7060311908

Enclosure: QAP

Copy to:

1. Mr. Nihal Singh | Dy. CPM | DFCCIL | Aligarh
2. Team Leader | SAI-TYPSA (JV) | Tundla

TATA –ALDESA (JV)

**"Mithona Towers-1" 1-7-80 to 87 Prenderghast Road
Secunderabad – 500 003 Andhra Pradesh India**

No. TATA-ALDESA/EDFCCIL/ALJN/ENG/LOT103/2017-2018/2476

11th, July 2017

To,
Dy. Team Leader
SAI-TYPSA JV
Saraswati Palace, Tundla
Mobile: +91 7060311908

Sub: Design and Construction of Civil, Structures and Track Works for Double Line Railway involving formation in Embankments/Cuttings, Ballast on Formation, Track works, Bridges, Structures, Buildings, including Testing and Commissioning on Design – Build Lump Sum basis for Bhaupur – Khurja Section of Eastern Dedicated Freight Corridor-Contract Package LOT 103-Submission of Quality Assurance Plan of M/s Ameenji Rubber Private Limited for Fabrication of Expansion Joint in Major Bridges-

1. Notification of Award (LOA) vide letter no. HQ/EN/DB/Bhaupur-Khurja dated: 24.01.2013.
2. Contract Agreement no. HQ/EN/DB/Bhaupur-Khurja/LOT-103 dated: 08.03.2013.
3. PMC Letter No, SAI-TYPSA/PMC/TATA/103/T17-M07/748 dated 06.07.2017

Dear Sir,

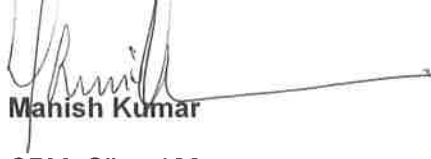
In continuation of our letter no. (3) Cited above, the Source approval for Expansion joint in major bridges has been granted.

Further we are submitting the Quality Assurance Plan for make M/s Ameenji Rubber Private Limited for fabrication of Expansion joint in Major Bridges in Lot 103.

This is for your kind submission and necessary approval please.

Yours faithfully,

For and behalf of TATA – ALDESA (JV)


Mahish Kumar

CPM, Slice-103

Encl: As above

Copy to

- 1) Mr. Nihal Singh, Dy. CPM, DFCCIL, Aligarh.
- 2) Mr. Atul B. Khare, (CPM, DFCCIL, Agra)
- 3) Mr. Raj Singh Tak (AVP & Head Operations) – TATA-Aldesa (JV)

Received on
11/07/2017
/2017

QUALITY ASSURANCE PLAN FOR EXPANSION JOINTS

Name of the Contractor: TATA Projects Ltd

S. NO.	Component Description	Characteristic Checked	Frequency & Type of Check	Reference Documents	Fabricator's Quality Control	Inspection Details		Type of Records	Acceptance Criteria	Remarks
						Inspection Agency	Extent of Inspection			
1	2	3	4	5	6	7	8	9	10	11
1	Mild Steel for Angle, M.S. Plate, Anchor Loops & Anchor Plates	Physical Test UTS, Yield Stress Elongation %, Bend Test, Charpy V notch test at 12.5 (minus Twelve point Five) degree Celsius	As per MTC & test required by Authorized Inspecting official of PMC/DFCC from Govt. Lab./NABL approved Laboratory. (Marking of Heat No. & Quantity)	MTC and Chellan / IS Codes	1. Verification of reference document 2. Complete Visual inspection	Authorizes inspecting official of PMC/DFCC, TPL	One test piece per thickness per heat. Review of MTC & Chellan.	Fabricator's record co-related with MTC & 3rd Party Lab Ultrasonic test report	IS : 2062-11, E250, Quality BR / BO or as per drawing	Manufacturer's test certificate shall be furnished. UST shall be conducted for 20mm & above Thick plates as per provision of relevant specification before processing the material for manufacturing at fabricator's shop floor.
		chemical Test								
		Physical Condition	Visual inspection for corrosion, Pitting, Rusting, Straightness, Rolling defects etc.	MTC and Chellan / IS Codes	100% Verification of MTC and complete visual	Authorizes inspecting official of PMC/DFCC, TPL	100%	MTC and Fabricator's record	IS : 2062-11, E250, Quality BR / BO or as per drawing	
		Ultrasonic Testing of plates (for 20 mm & above Thick Plates)	review of MTC	MTC	Review of Mill test certificate	Authorized inspecting official of PMC/DFCC, TPL	Review of MTC / random witness 100%	Fabricator's inspection report/record	ASTM A435	

Approved By
Contractor (Sign & Stamp)





Name of the Contractor: TATA Projects Ltd

S. NO.	Component Description	Characteristic Checked	Frequency & Type of Check	References Documents	Fabricator's Quality Control	Inspection Details		Type of Records	Acceptance Criteria	Remarks
						Inspection Agency	Extent of Inspection			
1	2	3	4	5	6	7	8	9	10	11
2	Stainless Steel (S.S)	Physical Test UTS, Yield Stress Elongation %, Hardness	As per MTC & test required by Authorized Inspecting official of Zonal Railway from Govt. Lab./NABL approved Laboratory	MTC and Challan	1. Verification of reference document 2. Complete Visual Inspection	Authorizes inspecting official of Zonal Railway, TPL	One test piece per heat. Review of MTC & Challan.	Fabricator's records.	Stainless Steel Conform to AISI 316L Or (Grade/class As per relevant approved Drawing.)	Manufacturer's test certificate shall be furnished.
3	Bolts & Nuts	Physical properties Chemical Test C, Mn, Ni, Cr, P, S, Si, Mo & CE Dimensional Check as per specification	i) Tensile Strength (Mpa) ii) Hardness (BHN) iii) Head Soundness test iv) Decarburization depth - Nil Visual & Measurement	Review of Manufacturer test certificate & Challan / IS Codes and test witness as applicable	Verification of reference document	Authorizes inspecting official of PMC/DFCC, TPL	As per relevant specification. Review of Mill TC & Challan.	Fabricator's records.	IS: 1367, IS:1363 (Property class 8.8), IS:3157 IS:5649 (For Washer) IS:5623 (For Nuts)	Test Certificate shall be furnished by manufacturer

29



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						Inspection Agency	Extent of Inspection			
1	Anti Corrosive Paint on Exposed surface	Verification of manufacturer test certificate, Challan & Approved vendor list of RDSO.	Visual & test sample for each batch/heat tested at NABL approved laboratory	Verification of manufacturer test certificate & Challan, Approved Drawing.	Verification of reference document and IS codes/IRS B-2001	Authorizes inspecting official of PMC/DFCC, TPL	Random	Manufacturer's test certificates or third party test reports.	IRC : SP 69 - 2011	Paint should be as per IRS B1 in clause no.39.2.1
	Metallizing				Verification of reference document	Authorizes inspecting official of PMC/DFCC, TPL		Fabricator's record	IRC : SP 69 - 2011	
4 a.	Welding Consumable	As per RDSO specifications. Physical condition.	Visual check of wire/tuz/electrode as per RDSO relevant clause - RDSO Vendor list	Manufacturer Test Certificate / Challan & RDSO Vendor list	Verification of reference document	Authorizes inspecting official of PMC/DFCC, TPL	Random/ review of documents	MTC's	RDSO Specification M-39-2001 Class I, M-46, Class I & M-28 - 2002 Class A-3	
4 b.	Polysulphide Sealant	Rheological properties, plastic deformation, Adhesion and Tensile modulus, Application life, Adhesion in peel, Loss of mass after heat	One test per source	Manufacturer Test Certificate	Verification of reference document	Authorizes inspecting official of PMC/DFCC, TPL	As per relevant specification. Review of Mill TC, Challan and sample test report	MTC, Invoice, approved vendor list and correlation	IS : 12118 part-1 and 2	
4 c.	Compressible Bifurmenous Joint	Dimensional Tolerances Physical Requirements	As per IS : 1838-1	Manufacturer Test Certificate	Verification of reference document	Authorizes inspecting official of PMC/DFCC, TPL	As per relevant specification. Review of Mill TC, Challan and sample test report	MTC, Invoice, approved vendor list and correlation	IS : 1838 (1)	



AMEENJI RUBBER PVT. LTD

QUALITY ASSURANCE PLAN FOR EXPANSION JOINTS

Name of the Contractor: TATA Projects Ltd

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1	2	3	4	5	6	7	8	9	10	11
1	Process Inspection	a) Welding	Visual Sample and size by using welding gauge	Approved Drawing	Verification of reference document	Authorities Inspecting official of PMC/DICC, TPL	DP Check - 10% of weld length and weld size 100%	Fabricator's record	ISC-B1-2001 & welding code	
		b) Preheating, Spacing of Electrodes, Flare Selection of current, Electrodes & Flare, Current condition	Visual	ISC-B1-2001 ISC-B1-2001 As per approved ROTO List ISC-B1-2001	Random 100%					
		c) Corrosion Protection	Visual	Verification of Manufacturer test certificate & Challen, Approved Drawing	Verification of reference document	Authorities Inspecting official of PMC/DICC, TPL	From each batch at Random	Fabricator's record	ISC-SP-69-2011	
		d) Clamping	Visual	Verification of Manufacturer test certificate & Challen, Approved Drawing		Authorities Inspecting official of PMC/DICC, TPL	From each batch at Random		ISC-SP-69-2011	
		In process inspection, Anchor profile Anchorage, Profile weld Check Stud, Dimensional Check, Strikethrough check		Concerned specification and drawings	Visual & Dimensional Verification	Authorities Inspecting official of PMC/DICC, TPL	100% by firm Random by Inspecting Agency	Fabrication Record maintained by firm		Metallizing should be as per IS 81



(4)

QUALITY ASSURANCE PLAN FOR EXPANSION JOINTS

Name of the Contractor: TATA Projects Ltd

S. NO.	Component Description	Characteristic Checked	Frequency & Type of Check	Reference Documents	Fabricator's Quality Control	Inspection Details		Type of Records	Acceptance Criteria	Remarks
						Inspection Agency	Extent of Inspection			
1	2	3	4	5	6	7	8	9	10	Remarks
6a	Submission of SPSS	Review of WPSS	Visual	As per IRS B1-2002 Welded Bridge code	Verification of reference document	Authorized inspecting official of PMC/DFCC, TPL	100%	Approved copy of WPSS	As per IRS-B-1-2001 and IS:9595	Clearance by RDSO/DFCC/PMC
6b	WPQR (Welding Procedure & Qualification Record)	Witness of test specimen for establishment of WPSS	Visual, NDT/Destructive test as applicable	As per IS:7307 Part - I requirements	Verification of reference document and test reports	Authorized inspecting official of PMC/DFCC, TPL	100%	Inspection reports of inspecting official and fabricator's record	IS:7310 Part-I	
6c	WQR (Welder Qualification record)	Test Witness	Visual, NDT/DT at approved laboratory	As per IS:7307 Part - I requirements	Verification of reference document	Authorized inspecting official of PMC/DFCC, TPL	100%		IS:7310 Part-1	
7	Finished	a) Dimensional checks	Length, Width & Thickness as per drawing	Approved drawing	Visual & Dimensional inspection w.r.t concern specs & drawings	Authorizes inspecting official of PMC/DFCC, TPL	100% by Firm & PMC/DFCC/TPL	Inspection Report	Drawing	Quality check list as per annexure A to be maintained by firm & same to be checked & verified by concern PMC/DFCC.
		b) Straightness check	By line Dori size by Gauge			PMC/DFCC, TPL	100% by Firm & PMC/DFCC/TPL	Inspection Report		
		c) Welding check - by Gauge/ DPT	Material, Size, Length, Dia. Etc.			PMC/DFCC, TPL	100% by Firm & PMC/DFCC/TPL	Inspection Report		



QUALITY ASSURANCE PLAN FOR EXPANSION JOINTS

Name of the Contractor: TATA Projects Ltd		Inspection Details				Type of Records	Acceptance Criteria	Remarks
S. NO.	Component Description	Characteristic Checked	Frequency & Type of Check	Reference Documents	Fabricator's Quality Control	Inspection Agency	Extent of Inspection	
1	2	3	4	5	6	7	8	11
7		(d) Studs	Visual, Ring Test & Bend Test			PMC/DFCC, TPL	100% by Firm & Inspector's Report	Stud: a) Appearance test: The weld to a stud shear connector should form a complete collar around the shank & free from cracks, excess splashes of weld material, injurious laps, fins seams twist bends or other injurious defects. b) Weld material should have a steel blue appearance. Fixing test: Ring test: Involves striking the side of the head of the stud by 2 kg hammer. A ringing tone achieved after striking indicates good fusion whereas dull tone indicates a lack of fusion (BS 5400-6) Bend Test: Test requires a head of a stud to be displaced laterally by approximate 25% of its height using a 6 kg of hammer. The weld should then be checked for sign of cracking or lack of fusion. Stud should not be bent back as it is likely to damage the weld. The testing rate should be 2 In 50 (BS 5400-6)
8	Painting Process Packing & Dispatch	As per IS: 81: 2001 a) Marking of Expansion Joints b) Clamping of Expansion Joints c) Packing of Expansion Joints	100% Verification	As per reference approved drawing/specification	Verification of reference document	Authorizes inspecting official of PMC/DFCC, TPL	From Each batch at Random	Fabricator's record Approved drawing



6