



: 020-26133148

: 020-26052869

**REGD SDS / BY POST**

Superintending Technical Examiner (SC)

PCDA (SC) Complex, No.1, Finance Road

Pune – 411 001

1216/06/ 02/Q/ADGTE

Jul 2018

Garrison Engineer  
(Project) NDA  
Khadakwasla,  
Pune – 411 023

**SITE VISIT : CEPZ/PNA-18 OF 2016-2017**

1. Refer inspection conducted by STE team on 09 Jul 2018.
2. The copy of factual statement of the work is held on your record. The obsns on account of above mentioned visit are enclosed as Appendix 'A'. The obsns apply to the entire work except where otherwise specially mentioned. No action for price adjustment/deviation has been initiated till date of insp.
3. Please take suitable action to get the defective work rectified as mentioned on factual notes/obsns and ensure compliance. If, however, the defects are not rectifiable and the defective work as executed is technically acceptable to you, please forward the details of overpayments invoiced for such defective work accepted.
4. Please ref to E-in-C's Branch letter No 41000/E4 dated 14 Oct 1981 and take necessary further action to ensure that the defects are not allowed in the current works in your area and remedial actions are taken. This should be taken in other cases also including financial recovery.
5. Please furnish your specific replies to obsns within 06 weeks failing which the matter may have to be reported to Higher Authorities. In this connection please ref to Sec 23 of Manual of Contracts, 2007.

(Satish Chander, IDSE)  
STE SC, Pune

Encls : As above

**Copy to :-**

HQ ADGTE, New Delhi .. For info alongwith copy of obsns.

HQ CE Pune Zone  
Pune – 411 001

CWE Pune – 411 001

Station HQ  
Pune Sub Area  
Pune – 411 001

1. For info & necessary action. Obsn may please be replied incl conditions.

2. Please refer to Sec 23 of Manual of Contracts, 2007 and issue suitable instruction to all other GEs under you with a view to prevent acceptance of similar defective work in those divisions where such defects are suspected to be occurring. Financial recoveries as applicable may be effected in similar works also.

3. Systematic corrective measures be instituted in all units of your AOR (Area of Responsibility).

**SUPERINTENDING TECHNICAL EXAMINER**  
**(SOUTHERN COMMAND) PUNE**  
**NO. 01 FINANCE ROAD, PCDA (SC) COMPLEX, PUNE - 411 001**

**TECHNICAL EXAMINATION OF CONTRACTS / WORKS / FINAL BILLS**

<b>CA No</b>	CEPZ/PNA-18 of 2016-2017	<b>Amount (in lakhs)</b>	976.74 lakhs	<b>Location</b>	Khadakwasla		
<b>Name of Work</b>	Construction of Pre-Fabricated Shed at NDA Khadakwasla						
(a)	<b>Contractor</b>		M/s VM Matere Infrastructure (India) Pvt Ltd.				
(b)	<b>Date of Commencement</b>		29 Aug 2016				
(c)	<b>Completion as per CA</b>		28 Jan 2017				
(d)	<b>Extended date of completion</b>		17 Apr 2018				
(e)	<b>Actual date of Completion</b>		17 Apr 2018				
(f)	<b>DV No &amp; Date of final bill if paid</b>		-				
(g)	<b>Whether ADGTE visited project (if yes, date)</b>		-				
(h)	<b>Name of STE / TE</b>		<b>Name of MES Offrs Accompanying</b>				
	Shri Satish Chander, IDSE, STE SC Pune Shri D Suresh Reddy, IDSE, SE(NF), TE Lt Col Bhaskar Rautela, TE Lt Col Digvijay Singh, TE Shri Manish Raj, IDSE, TE		Shri S Tamma Rao, IDSE, EE, GE(P) Shri K Alam Sha, AGE B/R(P) Sub Maj Ajay Kumar, Offg AGE E/M				
(k)	<b>Inspection Summary :</b>						
	<b>No Inspection</b>	<b>Ist Check</b>		<b>2nd Check</b>		<b>3rd Check</b>	
(i)	<b>Date of Check</b>	09 Jul 2017		-		-	
(ii)	<b>Progress %</b>	<b>Actual</b>	<b>Target</b>	<b>Actual</b>	<b>Target</b>	<b>Actual</b>	<b>Target</b>
		100%	-	-	-	-	-
(iii)	<b>Obsn Nos Raised</b>	<b>Ist</b>	<b>24</b>	<b>2nd</b>	<b>-</b>	<b>3rd</b>	<b>-</b>
(iv)	<b>Total Obsn Raised</b>						
(v)		<b>Minor</b>	<b>Maj</b>	<b>Adv</b>	<b>Minor</b>	<b>Maj</b>	<b>Adv</b>
		-	28	-	-	-	-
(vi)	<b>Obsn Split</b>	<b>B/R</b>	<b>E/M</b>	<b>B/R</b>	<b>E/M</b>	<b>B/R</b>	<b>E/M</b>
(vii)		22	06	-	-	-	-
(viii)	<b>Total Settled</b>	-	-	-	-	-	-
(ix)	<b>Outstanding Obsn</b>	22	06	-	-	-	-
(x)	<b>Outstanding Obsn (Check wise)</b>	22	06	-	-	-	-
(xi)		<b>IRNR</b>	-	<b>IRNR</b>	-	<b>IRNR</b>	
(xii)	<b>Net Outstanding Obsns</b>	28					
(xiii)	<b>Date of Expiry of DLP (where wk 100% completed)</b>						

CA No : CEPZ/PNA-18 of 2016-2017  
Name of Work : Construction of Pre-Fabricated Shed at NDA Khadakwasla  
Amount in lakhs : ₹. 976.74 Lakhs

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**OBSNS ON ADM APPROVAL, PLG & TS**

-NIL -

**OBSERVATION ON CONTRACT & SITE DOCUMENT**

-NIL -

**OBSERVATION ON SITE INSPECTION (MAJOR)**

1. **Obsn No 01 : Structural Steel Sections (Pre-fabricated Structures).**

(a) As per IIT vetting report the minimum grade of steel having yield strength of 355 MPA is to be used. i.e. YST. 355 grade, however, design has been found done based on YST 310 grade as per notes of Drg No CEPZ/2016/KDK/07/STE sheet No 1/1 and the material used is also YST 310 grade. Please fwd reasons for discrepancy in the design & vetting authority and also fwd structural safety certificate from vetting auth for use of YST 310 grade steel. Reply be sent through CE.

(b) MS section of sizes RHS 150 X 150 X 4 mm & 150 x 150 x 6 mm found provided as stanchions in Adm block and Cadets block, as checked randomly, where as 150 x 150 x 5 mm shown on drawings. Make 'TATA' found marked on it. Some stanchions have been joined together using welding. Please fwd reasons for deviation from structural drgs/CA provisions. Replace the unapproved sections and intimate cost. Fwd reply through CE.

(c) No independent testing of structural steel members brought/used by the manufacturer has been carried out. Please fwd acceptance criteria of the structural sections in the absence of testing of members.

(d) Colour not found uniform and need to be repainted. Please identify similar defective places and carryout one more coat of paint. Intimate cost.

2. **Obsn No 02 : Delay in Completion.** It is observed that the period of completion extended from 5 months to 19 months. Pre-fabricated structure is catered for early completion and utilization of the facility, but in this case the purpose of conceptualization of the pre-fab structure is defeated and has not served the desired purpose. Fwd reasons for delay with justification and confirm that the approval of CFA for extension of job PDC has been obtained. Please fwd your reply through CE.

3. **Obsn No 03 : False Ceiling.** Board of size 600 x 600 mm, 6 mm thick, non-Asbestos, make 'Everest Sheet' having ISI mark found used. False ceiling board found lifted up and not properly fitting at certain places. Powder coated GI grid used to support false ceiling, sectional details are given below :-

Main T	-	38 x 23.4 mm
Cross	-	27 x 23.4 mm

Suspender wire 3.25 mm in lieu of 6 mm dia found used. Adjustable clip not found used. Please replace suspender wire as per CA specifications and intimate cost or accept recovery for using lesser size suspender wire, if technically acceptable. Fwd PV & TC of false ceiling.

4. **Obsn No 04 : Seepage Marks.** Seepage marks observed on the false ceiling board at places. Please identify similar defective places & rectify the same duly intimating cost.

5. **Obsn No 05 : Joinery.**

(a) **Door.** 35 mm thick wooden paneled door found provided with following sections :-

Top Rail	-	100 mm
Lock Rail	-	150 mm
Bottom Rail	-	200 mm

**Aluminium fittings.**

D Handle	-	150 mm length, 11.3 mm dia make 'Classic', ISI mark.
Tower bolt	-	200 mm length, 9.4 mm dia make 'Classic', ISI mark.
Sliding bolt	-	250 mm in lieu of 300 mm make 'Classic', ISI mark.

The door stoppers provided are insufficient in size and are not holding / stopping the door. These needs to be replaced. Please replace unapproved aluminium fittings & intimate cost.

(b) **Wire Mesh.** SS wire 0.2 mm dia having 1.7 mm apertures in lieu of 0.56 mm dia with aperture 1.18 mm. Please replace the wire cloth as per CA provisions and intimate cost.

(c) **Window.** 3 track aluminium powder coated window found provided, make could not be ascertained. Aluminum window found provided in place of box type MS window through DO. Intimate reasons for deviation from CA provisions and fwd copy of DO intimating financial effect.

(d) **Chowkhats.** Pressed steel chowkhats found provided. Not filled with concrete and hollow sound observed. Rubber Gasket found provided at the junction which looks shabby / unergonomic. Stoppers not fitted properly and not holding the door

Please identify similar defective places & rectify them as per CA specifications & intimate cost.

(e) **Floor Spring.** Floor spring of make 'ARIES' non ISI found provided. Please replace with ISI marked floor spring. Else accept recovery @ 10% cost if technically acceptable. Intimate cost.

(f) Fwd PV & TC of all Joinery Items.

6. **Obsn No 06 : Tiles.**

(a) 600 x 600 mm Vitrified tiles of thickness 8 to 8.5 mm in lieu of 10 mm, found laid make of which could not be ascertained. Undulation observed at certain places. Joints found wider and not filled properly. No pigment used for joint filling. Rectify defects & intimate cost. Also accept recovery for using less thickness.

(b) Size 400 x 400 mm, non-skid ceramic floor tiles. Make could not be ascertained. Gaps found wider and not properly filled. No pigment used for joint filling. Rectify defects & intimate cost.

7. **Obsn No 07 : Sanitary Fittings.** Following sanitary fittings found provided :-

(a) Bib Tap. Make – Essco.

(b) Angle Cock. Make – Essco.

(c) Pillar Tap. Make – Essco.

(d) Towel Rail. Make - Jaquar.

(e) Toilet Paper Holder. Make – Jaquar.

(f) Looking Mirror. 5 mm 'Modi Guard' back support by cement board found provided.

(g) Oval Shape wash Basin. 550 x 4100 mm, make – Cera.

(h) EWC & Urinal: Make Cera.

Please fwd PV & TC of all sanitary fittings. Confirm that all CP fittings are of 'Jaquar' as per CA specifications.

8. **Obsn No 08 : Kota Stone Flooring.**

(a) Kota stone flooring of thickness 20 to 25 mm & 58 x 58 cm size found provided. Gaps found wider at certain places and not properly filled. 15% shade variation observed.

(b) 20-25 mm thick Kota stone found provided for steps. Wide gaps observed and not properly filled. Edges not rounded properly at places.

Identify similar defects & rectify them duly intimating cost.

9. **Obsn No 09 : Plinth Protection.** 90 cm plinth protection found provided all around the bldg. Cracks observed in plinth protection at places. Grooves not properly filled. Grooves not provided between wall & plinth protection. Provide grooves & rectify all the joints using joint filler & intimate cost.

10. **Obsn No 10 : RWP.** RWP found provided of galvalume sheet. RWP found leaking at certain places at joints. Identify similar defects and rectify them duly intimating cost.

11. **Obsn No 11 : Curtain Roads.** No curtain rods found provided for windows. Clause 17.7 of PS says drapery rod is to be provided as per drawing. Please justify reasons for not providing drapery rod/ curtain rod and fwd supporting documents. Else provide the same and intimate cost.
12. **Obsn No 12 : Puff Panel.**
- (a) Puff panel of thickness 50 mm found provided. Gaps observed at places and not filled by silicone gel. Puff panel on outside roofs have not been covered by edging sheet and puff is exposed.
- (b) The joint of puff panel and plinth not properly sealed and filled. Water going inside from it at places. The joints need to be sealed properly to arrest seepage.
- Provide edge sheet for all exposed edges to avoid damage to the insulation and rectify other defects. Intimate cost. Fwd PV & TC of puff roof & wall panels.
13. **Obsn No 13 : Washing Pedestal.** Lotus shaped central washing pedestal found provided. The size found very small for proper utilisation. Granite found of poor quality. Tap very poorly fitted. Please replace un-approved materials & rectify defects duly intimating cost. Confirm that the size of structure is as per drawing.
14. **Obsn No 14 : Road (40 mm thick Bitumen Carpet).** Water found stagnating at edges. Undulation observed and gradient not proper. Compaction not proper at edges. Edges not properly cut. Please identify similar defective places and rectify defects. Intimate cost.
15. **Obsn No 15 : Rubber Flooring.** 10 mm thick Rubber flooring stuck over unpolished Kota Stone. The rubber flooring is of make 'ECOFLEX' non ISI. The rubber tiles have not been stuck properly and coming out with slight pulling. Please remove and fix rubber tiles using proper adhesive and intimate cost. Fwd PV and TC of tiles.
16. **Obsn No 16 : PCC Tiles.**
- (a) PCC Chequered tiles 24.4 mm thick of size 300 x 300 mm found laid over PCC sub base. Make & ISI mark not found on tiles. Tiles found broken at places and undulation also observed. Please replace tiles with approved make and ISI marked tiles & intimate cost.
- (b) **Paver Blocks.** Paver block of thickness 57 mm, Make Topaz non ISI found provided. Accept a recovery @5% for using non-ISI marked tiles.
17. **Obsn No 17 : Drainage.** Water stagnation observed at certain places. Dressing of surface not done properly as slope found in reverse direction and water is not flowing towards the drain. Please identify depressions in the area and take suitable remedial measures to avoid stagnation of water. Intimate cost.
18. **Obsn No 18 : Sewer Pipes.** CI pipe, Dia 100 mm pipe used, make & ISI mark not found. CI fittings found with ISI mark. Pipes found fixed to puff board using self tapping screws. Lighter PVC pipes could have been used for more durability. Vent Cowl is provided below the roof top and need to be extended above roof. Please provide suitable fixing arrangement as screws in puff board will come out easily. Intimate cost.

19. **Obsn No 19 : Open Garages.** I girder section of thickness 10 mm found provided. GI purlins found provided. Painting of purlins not carried out. Rusting of bolt observed. PCC flooring of garage not proper. The grooves of panels have not been filled properly. Cracks seen at places.

Rectify defects & intimate cost. Accept penal recovery of ` 5,000/- for poor workmanship.

20. **Obsn No 20 : APP Water Proof Treatment.** APP membrane found provided over the RCC roof. Membrane not stucked properly at places and aluminium paint found patchy.

Rectify defects & intimate cost. Accept a penal recovery of ` 5,000/- for poor workmanship.

21. **Obsn No 21 : Performance Evaluation Report & Appx 'F'.** Performance evaluation not found carried out. Appx 'F' not found filled. Please explain reasons for deviation from CA provisions as performance evaluation is an important quality tool in execution. Fwd reply through CE.

22. **Obsn No 22 : Site Documents.**

(a) Steel.

- (i) Reinforcement bars found procured from 'JSW Steel'.
- (ii) Independent test found carried out.

(b) Structural Steel.

- (i) All Pre-fab steel structures found procured form 'M/s Saxena Marine Tech Ltd. (SML), Ghaziabad'.
- (ii) Manufacture test certificate & independent test certificate not produced.

(c) Site Order Book. Site found handed over to the contractor on 29 Sep 2016.

(d) Cement.

- (i) Procured from ACC Ltd. Vr for 20 MT.
- (ii) Cement OPC 53 grade, 43 grade available on site.
- (iii) Independent test found carried out twice.

(e) Following Registers maintained.

- (i) Cube Testing Register.
- (ii) PMG Register. No entries made.
- (iii) Hindrance Register. Not maintained properly. Three hindrances entered in the book but not clear when hindrances got removed.
- (iv) Stage Passing Register.

(f) RCC Works. RMC found used for all RCC works & procured from plant located at 30 Km from working site. Batching reports not produced.

(h) ATT.

(i) No paid vouchers found in file.

(ii) ATT Register, independent test certificate, applicators details not produced.

Please update all site documents and confirm. Accept a penal recovery of ` 5,000/- for the lapse.

23. **Obsn No 23 : Item No 5.2** Cables to the fire alarm panel found passing through PVC conduit in lieu of flame proof conduit.

Rectify the defect & fwd rectification cost.

24. **Obsn No 24 : Item No 6.6** APFC panel, 50 KVAR make 'L&T'. Capacitors found of make 'Shrem, ISI marked. This is not a reputed make and the make is also not included in CA. Replace all capacitors & fwd replacement cost.

25. **Obsn No 25 : LT Panel.**

(a) Make of the panels found 'Infinity Engineering Co'. CPRI approval not shown. Rubber gasket found used in lieu of neoprene gasket.

Replace the panels, rectify other defects & fwd rectification cost.

(b) Item No 8.4.

(i) Outgoing MCCB 175 Amps, 37 KA, two Nos found provided in lieu of One No., 16 Amps, 35 KA.

(ii) 75 Amps, 18KA, One No., MCCB found provided in lieu of 02 Nos., 63 Amps, 10 KA.

Replace all MCCBs & fwd rectification cost.

(c) Item No 7.7.

(i) Incoming MCCB 350 Amps, 37 KA found provided in lieu of 300 Amps, 35 KA.

(ii) Outgoing MCCB 250 Amps, 37 KA & 75 Amps, 18 KA, found provided in lieu of 63 Amps, 10 KA.

Replace all MCCBs & fwd rectification cost.





26. **Obsn No 26 : Item No 7.4** HPSV lamp make 'HPL' found used. It is not understood why such a high energy consuming fitting has been considered in CA, when so many energy saving options are available. Fwd your justification for including HPSV in CA.
27. **Obsn No 27.** Pole painting found patchy for HT poles. Carry out the painting again & fwd rectification cost.
28. **Obsn No 28 : XLPE Cable.** 25 Sqmm cable found laid adjacent to 10 sqmm cable. Sand above and below the cable found 5 cm and 2 cm in lieu of 10 cm & 08 cm. Relay the cable maintaining minimum distance of 25 cm between the cables. Provide proper sand cushioning as per SSR. Fwd rectification cost.

(Satish Chander, IDSE)  
STE SC Pune

**MINOR OBSERVATION**

CA No : CEPZ/PNA-18 of 2016-2017  
Name of Work : Construction of Pre-Fabricated Shed at NDA Khadakwasla  
Amount in lakhs : ₹. 976.74 Lakhs

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**-NIL-**

(Satish Chander, IDSE)  
STE SC Pune

**IMPORTANT OBSERVATION**

CA No : CEPZ/PNA-18 of 2016-2017  
Name of Work : Construction of Pre-Fabricated Shed at NDA Khadakwasla  
Amount in lakhs : ₹. 976.74 Lakhs

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