

**GOVERNMENT OF ANDHRA PRADESH  
RURAL WATER SUPPLY AND SANITATION DEPARTMENT**

From  
T. Gayatri Devi, B.Tech.,  
Chief Engineer-II,  
C Block, Vasudha Towers  
Gollapudi-521225,  
Vijayawada.

To  
The Engineer In Chief/  
Chief Engineer (V&QC),  
RWS&S, Department  
Gollapudi  
Vijayawada

Lr. No. AEE(D) /DEE(I)/CE-II/JJM/FHTC/QAP/2022      Dated: 18-03 - 2022.

Sir,

Sub:- RWS&S- Jal Jeevan Mission Programme- Functional Household Tap Connections (FHTCs) – Quality Assurance Plan (QAP) of FHTC with integrated saddle piece – Approved – Intimation -Regarding.

- Ref:-
1. Proc No.AEE/DEE/JJM/Integrated Saddle Piece Empanelment/2020-21 dated 10-02-2021 of PD,SWSM,RWS&S, Vijayawada( Bently)
  2. Proc No.AEE/DEE/JJM/Integrated Saddle Piece Empanelment/2020-21 dated 10-02-2021 of PD,SWSM,RWS&S, Vijayawada(Global)
  3. Proc No.AEE/DEE/JJM/Integrated Saddle Piece Empanelment/2020-21 dated 10-02-2021 of PD,SWSM,RWS&S, Vijayawada(Aiva)
  4. Proc No.AEE/DEE/JJM/Integrated Saddle Piece Empanelment/2020-21 dated 10-02-2021 of PD,SWSM,RWS&S, Vijayawada(Kimplas)
  5. Proc No.AEE/DEE/JJM/Integrated Saddle Piece Empanelment/2020-21 dated 10-02-2021 of PD,SWSM,RWS&S, Vijayawada(AI Aziz)
  6. Circular Memo No. AEE/DEE-III/JJM/RWS&S/FHTCs est/2021 dt 02-11-2021 of the CE-II,RWS,Vijayawada addressed to all the SEs in the State.
  7. Memo No.AEE1/DEE/V&QC/General Instructions/2021 dated 01-02-2022 of the Chief Engineer (V&QC) addressed to all the SEs &EEs in the state.
  8. Note orders of Engineer in Chief, RWS&S, Vijayawada 17/ 03/2022.

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In connection with the Functional Household Tap Connection(FHTC) , in continuation of the above references and also as per the need, the QAP of FHTC with integrated saddle piece/Component wise is approved to maintain assured quality materials as per the field conditions duly considering the recommendations of the Chief Engineers committee in its meeting held on 17-12-2021.

A copy of the approved QAP is herewith communicated for taking further action.

Encl: Copy of Approved QAP

Yours faithfully  
Sd/-xxxxxxx  
Chief Engineer-II,  
RWS&S, Vijayawada.

Copy to all the Superintending Engineer's, RWS&S in the State.

//t.c.b.f.o//  
*K. G. Srinivas* 18/3/22  
Deputy Executive Engineer-I  
O/o ENC, RWS &S, Vijayawada

*18/3/22*

| GOVERNMENT OF ANDHRAPRADESH<br>RURALWATER SUPPLY & SANITATION DEPARTMENT                                                                                                                 |                                          |                                                |                     |                         |               |                                                                                                                                                          |         |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|------------------------------------------------|---------------------|-------------------------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--|--|
| QUALITY ASSURANCE PLAN OF FUNCTIONAL HOUSEHOLD TAP CONNECTION (FHTC)                                                                                                                     |                                          |                                                |                     |                         |               |                                                                                                                                                          |         |  |  |
| PRODUCT NAME :                                                                                                                                                                           |                                          | Functional House Hold Tap connections ( FHTC ) |                     |                         |               |                                                                                                                                                          |         |  |  |
| S.No.                                                                                                                                                                                    | Test Description                         | Method of Check                                | Instrument to Check | Samples to Check        | Ref. Standard | Acceptance Norms                                                                                                                                         | Remarks |  |  |
| I) 3 mm to 160 mm dia pipe with 1/2" out let Integrated PP Clamp Saddle/ Component wise in Blue/Black Color with SS 316 FCV and Compression fittings, Male/Female Threaded Adaptor (FTA) |                                          |                                                |                     |                         |               |                                                                                                                                                          |         |  |  |
| 1                                                                                                                                                                                        | Poly propylene Resin test report         | -                                              | -                   | -                       | Mfg. -Std     | Raw material test certificates from the suppliers and WRAS(Water Regulation Advisory Scheme) certificate.                                                |         |  |  |
| 2                                                                                                                                                                                        | SS 316 FCV raw material test report      | -                                              | -                   | -                       | -             | Raw material test certificates from NABL(National Accreditation Board for Testing and Calibration Laboratories) accredited.                              |         |  |  |
| 3                                                                                                                                                                                        | SS 304 Nuts & bolts material test report | -                                              | -                   | -                       | Mfg. -Std     | Raw material test certificates from NABL accreditation.                                                                                                  |         |  |  |
| 4                                                                                                                                                                                        | Colour                                   | Visual Characteristics                         | Visual Check        | -                       | -             | Poly Propylene saddle having blue colour of PN-16 rated and the Elbow Body shall be in black & Cap shall be in Blue Colour.                              |         |  |  |
| 5                                                                                                                                                                                        | Visual Appearance.                       | Visual Characteristics                         | Visual Check        | 10 pieces for 1000 no's | •-            | The surface of fitting shall be smooth, clean and free from blur. No component of the fitting shall show any signs of damage such as bubbles and cracks. |         |  |  |
| 6                                                                                                                                                                                        | Dimensions                               | Geometrical Characteristics                    | Vernier Calliper.   | 10 pieces for 1000 no's | •-            | As per standard manufacturer's Drawing.                                                                                                                  |         |  |  |
| 7                                                                                                                                                                                        | Positive locking                         | Visual Characteristics                         | Visual Check        | 10 pieces for 1000 no's | •-            | Physical verification at lab                                                                                                                             |         |  |  |

|                                                           |                                                   |                             |                                                    |                        |                                  |                                                                                                                                                                    |  |
|-----------------------------------------------------------|---------------------------------------------------|-----------------------------|----------------------------------------------------|------------------------|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 8                                                         | Hydrostatic Pressure Strength test                | Mechanical Characteristics  | Hydraulic Pressure Testing Machine                 | 5 pieces for 1000 no's | Mfg. -Std                        | Must sustain Hydrostatic test Pressure of PN-16 throughout the test period of 1.00 hr at Temp. --20±2°C.                                                           |  |
| 9                                                         | Flow Rate Measurement of FCV                      | Flow Rate Measurement       | Water Pump, Pressure Gauges, Measuring Jar & Timer | 5 pieces for 1000 no's | Mfg. -Std                        | Flow Rate shall be as below,<br>Inlet Pressure -- 0.50 kg/cm <sup>2</sup> -Discharge 5LPM ± 0.75% Inlet Pressure --1.0 kg/cm <sup>2</sup> -Discharge 7 LPM ± 0.75% |  |
| 10                                                        | Sliding Test                                      | Mechanical Characteristics  | Manual                                             | 5 pieces for 1000 no's | Manual by hand                   | Saddle Shall not to be slide on the pipe (Physical verification)                                                                                                   |  |
| 11                                                        | Leak tightness Test                               | Mechanical Characteristics  | Hydraulic Pressure Testing Machine                 | 5 pieces for 1000 no's | Mfg. -Std                        | Must sustain Hydrostatic test Pressure of PN-16 throughout the test period of 1.00 hr at Temp. --20±2°C.                                                           |  |
| 12                                                        | Pull Out Test                                     | Mechanical Characteristics  | Manual                                             | 5 pieces for 1000 no's | Manual by hand                   | Pipe should not come out of the fitting throughout the test (Physical verification)                                                                                |  |
| <b>2) 12.7 mm BRASS BIB COCK</b>                          |                                                   |                             |                                                    |                        |                                  |                                                                                                                                                                    |  |
| 1                                                         | Material of Construction of Body, Bonnet & Handle | MTC/ NABL Lab Report        | As per IS:1264 Grade DCB-2                         |                        | IS:1264 Grade DCB-2              | As per the code                                                                                                                                                    |  |
| 2                                                         | Visual Appearance.                                | Visual Characteristics      | Visual Check                                       |                        |                                  | As per the code                                                                                                                                                    |  |
| 3                                                         | Dimensions                                        | Geometrical Characteristics | Vernier Calliper                                   | As per the code        | As per manufacturer drawing      | As per the code                                                                                                                                                    |  |
| 4                                                         | Hydrostatic Pressure test                         | Mechanical Characteristics  | Hydraulic Pressure Testing Machine                 | As per the code        | As per Approved Standard drawing | As per the code                                                                                                                                                    |  |
| 5                                                         | Weight Test                                       | Mechanical Characteristics  | Weighing Machine                                   | As per the code        | Mfg. -Std                        | As per the code                                                                                                                                                    |  |
| <b>3) 15 mm Medium 'B' Class G.I Pipe as per IS 1239.</b> |                                                   |                             |                                                    |                        |                                  |                                                                                                                                                                    |  |
| 1                                                         | Material Of Construction of Body                  |                             |                                                    |                        | IS: 1239 Part-2 Clause: 7.1      |                                                                                                                                                                    |  |

|                                                             |                                                         |                                 |                                    |                 |                                  |                                                                                                                                                   |                 |  |
|-------------------------------------------------------------|---------------------------------------------------------|---------------------------------|------------------------------------|-----------------|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--|
| 2                                                           | Galvanizing Mass of Zinc Coating, Uniformity & Adhesion |                                 |                                    |                 |                                  | IS: 1239 Part-2 Clause: 7.1                                                                                                                       | As per the code |  |
| 3                                                           | Visual Appearance.                                      | Visual Characteristics          | Visual Check                       | As per the code | IS: 1239 Part-2 Clause: 13.1.1.1 | As per the code                                                                                                                                   |                 |  |
| 4                                                           | Dimensions                                              | Geometrical Characteristics     | Vernier Calliper.                  | As per the code | IS: 1239 Part-2 Clause: 13.1.1.1 | As per the code                                                                                                                                   |                 |  |
| 5                                                           | Weight                                                  | Geometrical Characteristics     | Weighing Machine                   | As per the code | IS: 1239 Part-2 Clause: 13.1.1.1 | As per the code                                                                                                                                   |                 |  |
| 6                                                           | Hydrostatic Pressure test                               | Mechanical Characteristics      | Hydraulic Pressure Testing Machine | As per the code | IS: 1239 Part-2 Clause: 13.1.1.1 | As per the code                                                                                                                                   |                 |  |
| <b>4) 15 mm dia G.I Pipe &amp; fittings as per IS 1239.</b> |                                                         |                                 |                                    |                 |                                  |                                                                                                                                                   |                 |  |
| 1                                                           | Raw Material                                            | Chemical composition            | Visual Check                       | As per the code | IS:228                           | Raw material test certificates from manufacturer                                                                                                  |                 |  |
| 2                                                           | Zinc Coating                                            | Cooling Thickness /Mass of ZINC | Visual Check                       | As per the code | IS:4759                          | Raw material test certificates from manufacturer                                                                                                  |                 |  |
| 3                                                           | Visual Appearance.                                      | Visual Characteristics          | Visual Check                       | As per the code | • -                              | The surface of fitting shall be smooth, clean and free from blur. No component of the fitting shall show any signs of damage, bubbles and cracks. |                 |  |
| 4                                                           | Dimensions                                              | Geometrical Characteristics     | Vernier Caliper.                   | As per the code | • -                              | As per IS:1879                                                                                                                                    |                 |  |
| 5                                                           | Hydrostatic Pressure test                               | Mechanical Characteristics      | Hydraulic Pressure Testing Machine | As per the code | IS:1239                          | Without leakages                                                                                                                                  |                 |  |
| 6                                                           | Weight Test                                             | Mechanical Characteristics      | Weighing Machine                   | As per the code | IS:1239                          | As per the code                                                                                                                                   |                 |  |

| <b>5) 20 mm HDPE Pipe 16 Kg /Cm2 of PE 100 grade - As per IS: 4984-2016</b> |                                       |                             |                                    |                 |               |  |                                                                                                          |
|-----------------------------------------------------------------------------|---------------------------------------|-----------------------------|------------------------------------|-----------------|---------------|--|----------------------------------------------------------------------------------------------------------|
| 1                                                                           | Raw Material                          | -                           | -                                  | -               |               |  | Raw material certificate from the supplier shall be submitted                                            |
| 2                                                                           | Pipe Identification (Marking on pipe) | Visual Characteristics      | Visual Check                       | As per the code | IS: 4984-2016 |  | As per IS4984-2016                                                                                       |
| 3                                                                           | Visual Appearance.                    | Visual Characteristics      | Visual Check                       |                 | •-            |  | The surface of fitting shall be smooth, clean and free from blur. No signs of damage, bubbles and cracks |
|                                                                             | Dimensions of Pipe                    | Geometrical Characteristics |                                    |                 |               |  |                                                                                                          |
|                                                                             | a) Wall Thickness                     | Measurement                 | Ball ended Micro meter             | As per the code | IS: 4984-2016 |  | As per the code                                                                                          |
|                                                                             | b) Outer Diameter                     | Measurement                 | Vernier Calliper.                  | As per the code | IS: 4984-2016 |  | As per the code                                                                                          |
|                                                                             | c) Ovality                            | Measurement                 | Vernier Calliper.                  | As per the code | IS: 4984-2016 |  | As per the code                                                                                          |
|                                                                             | d) Length                             | Measurement                 | Measuring Tape                     | As per the code | IS: 4984-2016 |  | As per the code                                                                                          |
| 4                                                                           | Hydrostatic Pressure Strength test    | Mechanical Characteristics  | Hydraulic Pressure Testing Machine | As per the code | IS: 4984-2016 |  | As per the code                                                                                          |

1. All Fittings of same size and pressure rating in single consignment shall constitute a Lot.
2. All measuring instruments shall be calibrated periodically and calibration records shall be made available for verification.
3. Material is marked with ISI mark with size for GI Fittings
4. All dimensions are in mm unless otherwise specified.
5. All samples inspected by inspection agency will be stamped.
6. All relevant documents are to be produced on inspection.
7. Quality check certificate is to be insisted
8. Centralised laboratory is to be established at Vijayawada
9. Stock Point shall be established at Zonal wise-Subsequently in Districts
10. One year Warrantey with one year free maintenance
11. Technicians shall be made available for rectifications with in 24 hours.
12. Engraving of programme name on GI pipes i.e (for every 1.0Mt length) as **JJM- AP**.
13. Stenceling of programme name on HDPE pipes i.e (for every 1.0Mt length) as **JJM- AP**.
14. Responsible for replacement of material for any manufacturing defect for 2 years free of cost (transportation & labour charges included in replacement)
15. If Component wise procurement is done, Components shall obtain QC Clearance along with required tests including Hydraulic tests in the lab established in A.P in the presence of QC wing.

1408/22