



पावर फाइनेंस कॉर्पोरेशन लिमिटेड  
POWER FINANCE CORPORATION LTD

(भारत सरकार का उपक्रम)

(A Govt. of India Undertaking)

(आई.एस.ओ. 9001:2015 प्रमाणित)

(ISO 9001:2015 Certified)

No. 02:10: IPDS: III: 2017: Utilities /54499

22 Feb, 2018

To,

All MDs/ CMDs' of Discoms/ Heads of Power Departments  
(As per list enclosed)

Sub: Changes/ clarifications issued in Standard Bidding Document under IPDS

Sir,

This is to inform you that the Standard Bidding Document (SBD) is a common document to be used for DDUGJY and IPDS schemes of Gol and the same was circulated by REC to all the Utilities for use in DDUGJY/ IPDS schemes. Further, a few changes/ clarifications in technical specifications, condition of contract, drawings, price schedule etc. were conveyed to the States from time to time by REC. Similar clarification for IPDS projects was also issued vide PFC letter No.:02:10:IPDS:2017:SBD: 50750 dated 01.09.2017 (available on IPDS web portal at [http://www.ipds.gov.in/advisory/Letter\\_dt\\_010917.pdf](http://www.ipds.gov.in/advisory/Letter_dt_010917.pdf)), clarifying that the changes/ amendments/ clarifications in Standard Bidding Documents issued by REC for DDUGJY are also applicable for IPDS works.

Since then, REC has issued few more clarifications in technical specifications, drawings etc. It is once again clarified to all the Utilities that the clarifications in Standard Bidding Documents issued by REC for DDUGJY as per Annexure-I are also applicable for IPDS works, as the common SBD has been prepared for use in both the schemes i.e. DDUGJY and IPDS works.

However, States/ Utilities, being tender inviting, awarding and executing authority, have to take decision on the commercial aspects wrt post award changes, if any, on the awarded works as in case of DDUGJY.

This is for your kind information and necessary action please.

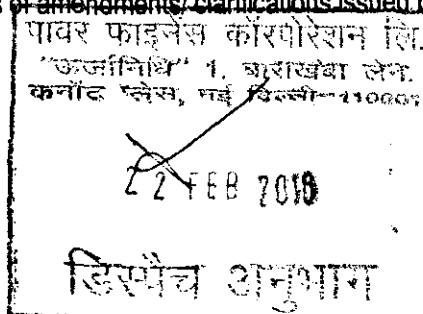
Thanking You,

Yours faithfully,

*(Signature)*

(Subir Saha)  
ED (IPDS)

Encl.: Annexure-1 along with copies of amendments/ clarifications issued by REC



**Annexure-1: Amendment/ Clarification issued for Standard Bidding Document for DDUGJY/IPDS Scheme**

S. No.	Clause No. in SBD for DDUGJY/IPDS	Subject	Date of issue of clarification by REC	Amendment/ Clarification
1	S.No. 4, page no-2, of scope of works (Volume-I: Section-VII)	Clarifications in Tender drawings provided in Standard Bidding Documents	25.04.2017	All the drawings provided in Volume-II of SBD are indicative drawings for tender purpose. These drawings are to facilitate the bidders for quoting the tenders; however every manufacturer has to submit his or her own design / drawing conforming to Technical Specifications and are to be approved by Engineer-in-charge.
2	Technical Specifications for high value materials	Advisory for adherence to Technical Specifications for high value materials procured	27.06.2017	Please adhere to the technical specification of Power Transformers, Distribution Transformers, Conductors & Cables as finalized by Committee-A. Manufacturing Quality Plan, Guaranteed Technical Particulars, Drawings, Data Sheet pertaining to aforesaid materials shall be approved by PIAs/PMAs accordingly. Also, provision of stage inspection for materials, wherever applicable shall be ensured by PIAs/PMAs including core cutting/core inspection for PTR/DTR.
3	Technical Specification stipulated in Volume-III under Section-I of SBD	Pre-dispatch inspection of materials	29.06.2017	CRGO core steel used in manufacturing of Transformers shall be procured from PGCIL approved vendors only. During stage inspection, PIA shall verify documents such as Purchase Order (unpriced) to prime CRGO supplier/ authorized agency, Manufacturer test certificate, Invoice of the Supplier, Packing list, Bill of lading, Bill of Entry Certificate by Customs Dept. etc. A copy of checklist for inspection of prime quality CRGO for transformers is provided in technical specification section of SBD and is enclosed herewith for ready reference. Manufacturer test certificate for CRGO steel are required to be checked and verified by PIA inspector during stage inspection.
4	Technical Specification stipulated in Volume-III under Section-I of SBD	Stage inspection for manufacturing of Power Transformers and Distribution Transformers	11.07.2017	PIA shall have to inspect the prime quality of CRGO used for manufacture of Power & Distribution Transformers during the stage inspection. The detailed check list for the inspection of prime quality CRGO used for manufacturing transformers has been mentioned at <b>Annexure-A</b> of Technical Specification stipulated in Volume-III under Section-I of SBD  Core used for manufacturing of Power Transformers & Distribution Transformers should be ' <b>Prime quality CRGO</b> ' and shall have to be procured only from the PGCIL approved vendors, the list of which is available at <a href="http://apps.powergridindia.com/ims/componentList/Power-former%20upto%20420%20kV-CM%20List.pdf">http://apps.powergridindia.com/ims/componentList/Power-former%20upto%20420%20kV-CM%20List.pdf</a>
5	Technical Specification stipulated in Volume-III	Stage inspection during manufacturing of	20.09.2017	In respect of queries received from Indian Electrical & Electronics Manufacturer's Association (IEEMA) vide their letter dated 19.09.2017 and also by few transformer

S. No.	Clause No. in SBD for DDUGJY/IPDS	Subject	Date of issue of clarification by REC	Amendment/ Clarification
	under Section-I of SBD	Power transformers and Distribution Transformers		<p>manufacturers, following is clarified:</p> <p>a) As per the technical specification mentioned under Clause 6.1.1, Section-I, Volume-III of SBD, <i>the core used for manufacturing of <b>Distribution transformer</b> shall be <u>either prime quality CRGO or Amorphous core.</u></i></p> <p>b) However, for manufacturing of <b>Power Transformer</b>, the core used shall <u>only from high grade non-ageing Cold Rolled Grain Oriented (CRGO) Silicon steel</u> as per technical specification mentioned under Clause No. 7.5.2 &amp; 7.5.3 Volume-III under Section-I of SBD.</p>
6	Clause 6.1.2.2 Volume-III: Section-I of Technical specification (page no. 69) of Standard Bidding Document (SBD):	Procurement of Prime CRGO core by manufacturer for manufacturing of Distribution Transformers	09.10.2017	CRGO supplied by Core cutter/ lamination manufacturers shall also be accepted for manufacturing of Distribution Transformers provided the Core cutter/ core laminator provides the complete traceability report for having procured the prime quality CRGO steel core material from authorized vendors as per the requirement of SBD for DDUGJY/IPDS.

XXXXXXXXXXXXXXXXXXXX

REC/DDUGJY/2017-18/1010

Date: 25.04.2017

To  
All Projects Implementing Agencies  
(DISCOMs/SEBs/CPSUs/Power Departments)

Sub: Clarifications in Tender drawings provided in Standard Bidding Documents of DDUGJY.

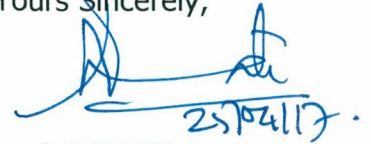
Sir / Madam,

A representation has been received regarding tender drawings of AB Cable accessories provided in Standard Bidding Documents of DDUGJY Scheme. It is to clarify that as mentioned at S.No. 4, page no-2, of scope of works (Volume-I: Section-VII), all the drawings provided in volume-II of SBD are indicative drawings for tender purpose. These drawings are to facilitate the bidders for quoting the tenders however every manufacturer has to submit his or her own design / drawing conforming to Technical Specifications and are to be approved by Engineer-in-charge.

This is for your kind information and necessary action please.

Thanking You,

Yours Sincerely,



G S BHATI

Executive Director (DDUGJY)

Copy to:

1. All ZM/CPM - Please circulate to PIAs in the states under your purview.
2. AGM (IT) – For uploading the letter on DDUGJY Web-portal.



No. REC/DDUGJY/SBD/2017-18/2059

Dated: 27-06-2017

To  
All Project Implementing Agencies  
(DISCOMs/SEBs/CPSU/Power Departments)  
DDUGJY New Projects

Subject: Advisory for adherence to Technical Specifications for high value materials procured under DDUGJY new scheme.


Sir/Madam,

This has reference to REC letters nos. REC/DDUGJY/NIMM/745 dated 26-07-2016 (copy enclosed) and REC/DDUGJY/SBD/360 dated 26-12-2016 (copy enclosed) to adhere technical specifications for high value items such as Power Transformers, Distribution Transformers, Conductors & Cables finalised by Committee-A under DDUGJY new scheme.

We once again request you to adhere to the technical specification of Power Transformers, Distribution Transformers, Conductors & Cables as finalised by Committee-A. Manufacturing Quality Plan, Guaranteed Technical Particulars, Drawings, Data Sheet pertaining to aforesaid materials shall be approved by PIAs/PMAs accordingly. A copy of technical specification of aforesaid materials is enclosed herewith for ready reference. Also, provision of stage inspection for materials wherever applicable shall be ensured by PIAs/PMAs including core cutting/core inspection for PTR/DTR.

This is for kind information and strict compliance please.

Yours sincerely,

  
27/06/17

(G. S. BHATI)

Executive Director (DDUGJY/QA)

Copy for kind information to:

- 1) CMD/MD/CE, CPSU/DISCOM/Power Department of all states
- 2) Sr. CPM/CPM, REC RO/SO-with a request to ensure that PIA of their states adhere the TS of high value items finalised by committee-A.



रूरल इलेक्ट्रीफिकेशन कारपोरेशन लिमिटेड  
**Rural Electrification Corporation Limited**

(भारत सरकार का उद्यम) / (A Government of India Enterprise)

Regd. Office: Core-4, SCOPE Complex, 7 Lodhi Road, New Delhi 110 003

Tel: +91-11-4102 0101 Fax: +91.11.2436 0644 E-mail: reccorp@recl.nic.in

CIN : L40101DL1969GOI005095 Website: www.recindia.nic.in

No. REC/DDUGJY/NIMM/ 745

Dated: 26/07/2016

To,  
All CMDs/MDs/Chairman/Chief Engineer  
DISCOMs/SEBs/Power Deptt.

**Subject: Procurement of major high value equipments / items under Govt. of India's initiative to facilitate states in mobilization of quality equipment's/materials under DDUGJY/IPDS Schemes.**

Dear Sir/Madam,

This is continuation to our letter no. REC/DDUGJY/NIMM/736 dated 21-07-2016 vide which outcome of central procurement under DDUGJY/IPDS was conveyed. In this regard, it is further clarified as under:

1. PIAs/Discoms /Power Department may go for full turnkey execution of the project as per approved Standard Bidding Document circulated earlier subject to condition that they will adhere to the technical specifications finalized by committee-A.
2. PIAs/Discoms/Power Department may procure the materials through their own purchase department and execute the works on partial turnkey subject to condition that they will adhere to the technical specifications finalized by committee-A.

In both the above cases, PIAs/Discoms /Power Department shall adhere to strict testing and inspection to ensure control on the quality of the materials. They shall increase the sample size to ensure quality monitoring at the factories as well as to prevent slippages.

This is for kind information and further needful action please.

Yours faithfully

  
(Sunil Kumar)

Executive Director (DDUGJY)

Copy for kind information to:

1. ZMs/CPMs REC ZOs/POs –to circulate to all PIAs in the states of their purview.

**Zonal Offices** : Hyderabad, Kolkata, Mumbai, Panchkula & Lucknow  
**Project Offices** : Bangalore, Bhopal, Bhubaneswar, Chennai, Guwahati, Jaipur, Jammu Patna, Ranchi, Shillong, Shimla, Thiruvananthapuram & Vadodara  
**Sub Offices** : Dehradun, Raipur  
**Training Centre** : Central Institute for Rural Electrification (CIRE), Hyderabad







रूरल इलेक्ट्रीफिकेशन कारपोरेशन लिमिटेड  
Rural Electrification Corporation Limited

(भारत सरकार का उद्यम) / (A Government of India Enterprise)  
Regd. Office: Core-4, SCOPE Complex, 7 Lodhi Road, New Delhi 110 003  
Tel: +91-11-4102 0101 Fax: +91.11.2436 0644 E-mail: reccorp@recl.nic.in  
CIN : L40101DL1969GOI005095 Website: www.recindia.nic.in



Ref. No. REC/DDUGJY/SBD/ 360

Dated: 26-12-2016

To  
All Project Implementing Agencies  
(DISCOMs/SEBs/CPSUs/Power Departments)

**Sub: Adherence to Standard Bidding Document/TS finalised under DDUGJY - reg**

Sir/Madam,

This has reference to our letter no. REC/DDUGJY/SBD/239 dated 22.08.2016, vide which Standard Bidding Documents was circulated to all PIAs for awarding DDUGJY projects on full turnkey basis, wherein it was informed that Standard Bidding Documents may be customized by PIAs/Discoms as per their specific needs based on States' practices with the prior approval of State Level Standing Committee headed by Chief Secretary of the state, except for Technical Specifications for high value items viz. PTR, DTR, Conductor & Cables finalized by Committee-A.

In this connection, all Project Implementing Agencies/ PMAs are requested to communicate the changes made in SBD of DDUGJY projects to REC along with a copy of in-house approval obtained from State Level Standing Committee of the state.

Further, all PIAs/PMAs are requested to strictly adhere to Technical Specifications for high value items viz. PTR, DTR, Conductor & Cables finalized by Committee-A and to approve GTPs accordingly.

This is for kind information and strict compliance please.

Yours sincerely,

(G S Bhati)

Executive Director (DDUGJY)

Copy to:

1. ZM/CPM- Please circulate to PIAs in the states of your purview.

**Zonal Offices** : Hyderabad, Kolkata, Mumbai, Panchkula & Lucknow  
**Project Offices** : Bangalore, Bhopal, Bhubaneswar, Chennai, Guwahati, Jaipur, Jammu, Patna, Ranchi, Shillong, Shimla, Thiruvananthapuram & Vadodara  
**Sub Offices** : Dehradun, Raipur  
**Training Centre** : Central Institute for Rural Electrification (CIRE), Hyderabad

No. REC /DDUGJY/QA/17-18/2065

Date: 29.06.2017

To  
All Project Implementing Agencies  
DISCOM(s)/SEB(s)/CPSU(s)/Power Department(s)  
DDUGJY New Scheme

Subject: Advisory for carrying out pre-dispatch inspection of materials under DDUGJY new scheme.

Sir/Madam,

This has reference to the final materials inspection calls raised by project implementing agencies under DDUGJY scheme. In this connection, we request you to submit following documents along with inspection requisitions:

1. Approved Manufacturing Quality Plan (MQP) prepared in consultation with PMA
2. Approved Technical Specification, Drawings, Data Sheet and Guaranteed Technical Particulars.
3. Copy of stage inspection report, wherever applicable for materials like Power/Distribution Transformer in the requisite format given in Standard Biding Document.

While on the subject, we would intimate that CRGO core steel used in manufacturing of Transformers shall be procured from PGCIL approved vendors only. During stage inspection, PIA shall verify documents such as Purchase Order (unpriced) to prime CRGO supplier/authorised agency, Manufacturer test certificate, Invoice of the Supplier, Packing list, Bill of lading, Bill of Entry Certificate by Customs Deptt. etc.. A copy of checklist for inspection of prime quality CRGO for transformers is provided in technical specification section of SBD and is enclosed herewith for ready reference. Manufacturer test certificate for CRGO steel are required to be checked and verified by PIA inspector during stage inspection and are to be attached along with stage inspection report. Dispatch clearance for the jointly inspected materials shall only be issued by PIA after seeking consent of REC.

This is for kind information and needful action by project implementing agencies please.

Enclosure: As stated.

Yours faithfully,

  
(G. S. BHATI)

Executive Director (DDUGJY/QA)

**Copy for kind information to:**

1. CMD/MD/Chief Engineer, Project Implementing Agency (ies), DDUGJY New Scheme.
2. The Sr. CPM/CPM, REC Regional Office (s).

**Regional** : Hyderabad, Kolkata, Mumbai, Panchkula & Lucknow  
**and** : Bangalore, Bhopal, Bhubaneswar, Chennai, Guwahati, Jaipur, Jammu, Patna, Ranchi, Shillong, Shimla,  
**State** : Thiruvananthapuram & Vadodara  
**Offices** : Dehradun, Raipur  
**Training Centre** : Central Institute for Rural Electrification (CIRE), Hyderabad

**Annexure - A**

**Check-list for Inspection of Prime quality CRGO for Transformers**

During inspection of PRIME CRGO, the following points needs to be checked by the Transformer manufacturer. Utility's inspector shall verify all these points during inspection:-

**A) In case PRIME CRGO cutting is at works of Transformer Manufacturer:**

1. Review of documents:

- Purchase Order (unpriced) to PRIME CRGO supplier/Authorised Agency
- Manufacturer's test certificate
  
- Invoice of the Supplier
- Packing List
- Bill of Lading
- Bill of Entry Certificate by Customs Deptt.
  
- Reconciliation Statement as per format below
- Certificate of Origin
- BIS Certification

**Format for Reconciliation/Traceability records**

Packing List No./date /Quantity of PRIME CRGO received

Name of Manufacturer

Manufacturer test certificate No./date

Serial No.	Deatails of Package/Job	Drawing Reference	Quantity Invoved	Commulative Quantity Consumed	Balance Stock

2.1 Inspection of PRIME CRGO Coils:

- a. PRIME CRGO-Manufacturer's Identification Slip on PRIME CRGO Coils
  - b. Visual Inspection of PRIME CRGO Coils offered as per packing list ( for verification of coil details as per Test certificate & healthiness of packaging).
  - c. Unique numbering inside of each sample of PRIME CRGO coil and verification of records to be maintained in the register for consumption of CRGO coil.
  - d. ISI logo sticker on packed mother coil and ISI logo in Material TC.
- 2.2. During inspection of PRIME CRGO, surveillance testing of sample shall be carried out for Stacking Factor, Permeability, Specific watt loss at 1.5 Tesla and/or 1.7 Tesla depending on the grade of PRIME CRGO and aging test etc. applicable as per relevant IS/ IEC standard, Tech. Spec., MQP and Transformer manufacturer plant standard.

**Inspection Clearance Report would be issued after this inspection**

- 3. Inspection of PRIME CRGO laminations: Transformer manufacturer will maintain records for traceability of laminations to prime CRGO coils and burr/bow on laminations shall be measured. Utility can review these records on surveillance basis.
- 4. Inspection at the time of core building:  
Visual Inspection of PRIME CRGO laminations. In case of suspected mix-up/ rusting/decoloration, samples may be taken for testing on surveillance basis for tests mentioned in A. 2.2 above.

Above tests shall be witnessed by Utility. In case testing facilities are not available at Manufacturer's work, the sample(s) sealed by Utility to be sent to approved labs for testing.

**Inspection Clearance Report would be issued after this inspection**

**(B) In case PRIME CRGO cutting is at Sub-vendor of Transformer Manufacturer:**

1. Review of documents:

- Purchase Order (unpriced) to PRIME CRGO supplier/ Authorised Agency
- Purchase Order (unpriced) to Core Cutter
- Manufacturer test certificate
- Invoice of the Supplier
- Packing List
- Bill of Lading
- Bill of Entry Certificate by Customs Deptt.
- Reconciliation Statement as per format below
- Certificate of origin
- BIS Certification

**Format for Traceability records as below:-**

Packing List No./date /Quantity of PRIME CRGO received

Name of Manufacturer

Manufacturer test certificate No./date

Serial No.	Name of Customer	Deetails of Package/Job	Drawing Reference	Quantity Invoved	Commulative Quantity Consumed	Balance Stock	Dispatch details

### 2.1 Inspection of PRIME CRGO Coils:

- a. PRIME CRGO-Manufacturer's Identification Slip on PRIME CRGO Coils .
- b. Visual Inspection of PRIME CRGO Coils offered as per packing list ( for verification of coil details as per Test certificate & healthiness of packaging).
- c. Unique numbering inside of each sample of PRIME CRGO coil and verification of records to be maintained in the register for consumption of CRGO coil.
- d. ISI logo sticker on packed mother coil and ISI logo in Material TC.

2.2. During inspection of PRIME CRGO, surveillance testing of sample shall be carried out for Stacking Factor, Permeability, Specific watt loss at 1.5 Tesla and/or 1.7 Tesla, thickness depending on the grade of PRIME CRGO and aging test etc. applicable as per relevant IS/ IEC standard, Tech. Spec., MQP and Transformer manufacturer plant standard.

### **Inspection Clearance Report would be issued after this inspection**

### 3. Inspection of PRIME CRGO laminations:

Transformer manufacturer representative will inspect laminations and issue their internal Inspection Clearance Report. Inspection will comprise of review of traceability to prime CRGO coils, visual Inspection of PRIME CRGO laminations and record of burr/bow. After clearance given by transformer manufacturer, Utility will issue an Inspection Clearance Report after record review. If so desired by Utility, their representative may also join transformer manufacturer representative during this inspection.

### **Inspection Clearance Report would be issued after this inspection**

### 4. Inspection at the time of core building:

Visual Inspection of PRIME CRGO laminations. In case of suspected mix-up/rusting/decoloration, samples may be taken for testing on surveillance basis for tests mentioned in B.2.2.

### **Inspection Clearance Report would be issued after this inspection**

### **NOTE :-**

- a) Transformer Manufacturer to ensure that PRIME CRGO is procured from POWERGRID approved vendors and CRGO manufacturer should have valid BIS Certificate for respective offered Grade.
- b) Transformer Manufacturer should also involve themselves for ensuring the quality of CRGO laminations at their Core Cutter's works. They should visit the works of their Core cutter and carry out necessary checks.

### **c) General**

If a surveillance sample is drawn and sent to TPL (if testing facility not available with the manufacturer), the Transformer manufacturer can continue manufacturing at their own risk and cost pending TPL test report on PRIME CRGO sample drawn. Decision for acceptance of PRIME CRGO shall be based upon report of the sample drawn.



**These checks shall be read in-conjunction with approved Quality Plan, specification as a whole and conditions of contract.**

**Sampling Plan (PRIME CRGO)**

33 / 11 kV

-1<sup>st</sup> transformer and subsequently at random 10% of

Transformers (min. 1) offered for inspection.

DTs and other ratings

-1<sup>st</sup> transformer and subsequently at random 2% of

Transformers (min. 1) offered for inspection.

**NOTE:-** One sample for each lot of CRGO shall be drawn on surveillance basis.

CRGO has to be procured only from POWERGRID approved vendors. List of such vendors is available at the following website. Since the list is dynamic in nature, the site may be checked from time to time to see the list of approved vendors.

<http://apps.powergridindia.com/ims/ComponentList/2017/3/Power-Xformer%20upto%20420%20kV-CM%20List%20updated%20on%2012.05.2017.pdf>

Lr No. REC /DDUGJY/QA/2017-18/D.No. 2087

Date: 11-07-2017

The CMD/MDs of DISCOMs  
Chief Engineer of Power Departments  
Project Implementing Agency (ies),

**Subject: Stage inspection by PIA for manufacturing of Power Transformers and Distribution Transformers used for DDUGJY new scheme.**

Ref: REC Letter No.REC /DDUGJY/QA/17-18/2065 dated 29-06-2017

Sir/Madam,

Greetings from REC. Your kind attention is invited to the Standard Bidding Document (SBD) pertains to DDUGJY new scheme and our letter cited under reference above on the captioned subject. In this connection, it is to mention that 100% quality is to be ensured by the Project Implementing Agency (PIA) as per the quality prescribed under Quality Assurance Mechanism of DDUGJY scheme. In terms of Clause No. 7.5 of Technical Specification stipulated in Volume-III under Section-I of SBD, the core used for manufacturing of Power Transformers & Distribution Transformers should be '**Prime quality CRGO**' and shall have to be procured only from the PGCIL approved vendors, the list of which is available at <http://apps.powergridindia.com/ims/componentList/Power-former%20upto%20420%20kV-CM%20List.pdf>.

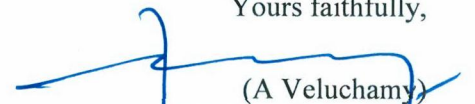
Further, PIA shall have to inspect the prime quality of CRGO used for manufacture of Power & Distribution Transformers during the stage inspection. The detailed check list for the inspection of prime quality CRGO used for manufacturing transformers has been mentioned at **Annexure-A** of Technical Specification stipulated in Volume-III under Section-I of SBD (enclosed for your ready reference). PIA shall issue **Inspection Clearance Report** after the inspection as per SBD mentioned above. REC Quality Monitor (RQM) in its inspection report pertains to power and distribution transformers have to invariably mention the compliance of the above by the PIA on the above.

In view of the above, all the PIAs are requested to strictly comply with the quality prescriptions for inspection of prime CRGO core used for manufacturing of Power Transformers & Distribution Transformers and issue the Inspection Clearance Certificate to ensure quality compliance. Non-compliance of inspection of prime CRGO core used for manufacturing of power and distribution transformers by the PIA as per SBD may invite rejection of lot of Power Transformers & Distribution Transformers offered for inspection.

PIA is also requested to ensure carrying out stage inspection and compliance of technical specification as per SBD for all the power and distribution transformers supplied and installed to enable us to book the same under the scheme.

This is for kind information and needful action by PIA.  
Thanking you

Yours faithfully,



(A Veluchamy)  
Addl. General Manager  
DDUGJY-QA

Enclosure: As above

Copy to: (1) All REC Quality Monitors (RQM) for kind information and strict compliance  
(2) Senior CPM/CPM, REC Regional/State Offices

**Regional** : Hyderabad, Kolkata, Mumbai, Panchkula & Lucknow  
**and** : Bangalore, Bhopal, Bhubaneswar, Chennai, Guwahati, Jaipur, Jammu, Patna, Ranchi, Shillong, Shimla,  
**State** : Thiruvananthapuram & Vadodara  
**Offices** : Dehradun, Raipur  
**Training Centre** : Central Institute for Rural Electrification (CIRE), Hyderabad

(Placed in the control room)

- Voltmeter
- "AUTO-MANUAL" control switch
- "RAISE-LOWER" control switch
- Tap position indicator
- Tap changer operation program indicator.

Transformer Tap Changer driving mechanism control cubicle

- "REMOTE-LOCAL-TEST" selector switch
- "AUTOMATIC-MANUAL" control switch
- "RAISE-LOWER" control switch
- Tap position indicator
- Tap changer operation program indicator
- Voltmeter
- Tap change operation counter
- Means for manual operation when power supply is lost

**Annexure - A**

**Check-list for Inspection of Prime quality CRGO for Transformers**

During inspection of PRIME CRGO, the following points needs to be checked by the Transformer manufacturer. Utility's inspector shall verify all these points during inspection:-

**i) In case PRIME CRGO cutting is at works of Transformer Manufacturer:**

Review of documents:

Purchase Order (unpriced) to PRIME CRGO supplier/Authorised Agency  
Manufacturer's test certificate

Invoice of the Supplier

Packing List

Bill of Lading

Bill of Entry Certificate by Customs Deptt.

Reconciliation Statement as per format below  
Certificate of Origin  
BIS Certification

**Format for Reconciliation/Traceability records**

Packing List No./date /Quantity of PRIME CRGO received

Name of Manufacturer

Manufacturer test certificate No./date



Serial No.	Deatails of Package/Job	Drawing Reference	Quantity Invoved	Commulative Quantity Consumed	Balance Stock

(i).1 Inspection of PRIME CRGO Coils:

PRIME CRGO-Manufacturer's Identification Slip on PRIME CRGO Coils  
 Visual Inspection of PRIME CRGO Coils offered as per packing list ( for verification of coil details as per Test certificate & healthiness of packaging).  
 Unique numbering inside of each sample of PRIME CRGO coil and verification of records to be maintained in the register for consumption of CRGO coil.  
 ISI logo sticker on packed mother coil and ISI logo in Material TC.

2.2. During inspection of PRIME CRGO, surveillance testing of sample shall be carried out for Stacking Factor, Permeability, Specific watt loss at 1.5 Tesla and/or 1.7 Tesla depending on the grade of PRIME CRGO and aging test etc. applicable as per relevant IS/ IEC standard, Tech. Spec., MQP and Transformer manufacturer plant standard.

**Inspection Clearance Report would be issued after this inspection**

3 Inspection of PRIME CRGO laminations: Transformer manufacturer will maintain records for traceability of laminations to prime CRGO coils and burr/bow on laminations shall be measured. Utility can review these records on surveillance basis.

4. Inspection at the time of core building:  
 Visual Inspection of PRIME CRGO laminations. In case of suspected mix-up/ rusting/decoloration, samples may be taken for testing on surveillance basis for tests mentioned in A.2.2 above.

Above tests shall be witnessed by Utility. In case testing facilities are not available at Manufacturer's work, the sample(s) sealed by Utility to be sent to approved labs for testing.

**Inspection Clearance Report would be issued after this inspection**

**(i) In case PRIME CRGO cutting is at Sub-vendor of Transformer Manufacturer:**

Review of documents:

Purchase Order (unpriced) to PRIME CRGO supplier/ Authorised Agency

Purchase Order (unpriced) to Core Cutter

Manufacturer test certificate

Invoice of the Supplier

Packing List

Bill of Lading

Bill of Entry Certificate by Customs Deptt.

Reconciliation Statement as per format below

Certificate of origin

BIS Certification

**Format for Traceability records as below:-**

Packing List No./date /Quantity of PRIME CRGO received

Name of Manufacturer

Manufacturer test certificate No./date

Serial No.	Name of Customer	Deetails of Package/Job	Drawing Reference	Quantity Invoved	Commulative Quantity Consumed	Balance Stock	Dispatch details

(ii) .1 Inspection of PRIME CRGO Coils:

PRIME CRGO-Manufacturer's Identification Slip on PRIME CRGO Coils

Visual Inspection of PRIME CRGO Coils offered as per packing list ( for verification of coil details as per Test certificate & healthiness of packaging).

Unique numbering inside of each sample of PRIME CRGO coil and verification of records to be maintained in the register for consumption of CRGO coil.

ISI logo sticker on packed mother coil and ISI logo in Material TC.

2.2. During inspection of PRIME CRGO, surveillance testing of sample shall be carried out for Stacking Factor, Permeability, Specific watt loss at 1.5 Tesla and/or 1.7 Tesla, thickness depending on the grade of PRIME CRGO and aging test etc. applicable as per relevant IS/ IEC standard, Tech. Spec., MQP and Transformer manufacturer plant standard.

**Inspection Clearance Report would be issued after this inspection**

3 Inspection of PRIME CRGO laminations:

Transformer manufacturer representative will inspect laminations and issue their internal Inspection Clearance Report. Inspection will comprise of review of traceability to prime CRGO coils, visual Inspection of PRIME CRGO laminations and record of burr/bow. After clearance given by transformer manufacturer, Utility will issue an Inspection Clearance Report after record review. If so desired by Utility, their representative may also join transformer manufacturer representative during this inspection.

**Inspection Clearance Report would be issued after this inspection**

vi) Inspection at the time of core building:

Visual Inspection of PRIME CRGO laminations. In case of suspected mix-up/rusting/decoloration, samples may be taken for testing on surveillance basis for tests mentioned in B.2.2.

**Inspection Clearance Report would be issued after this inspection**

**NOTE :-**

a) Transformer Manufacturer to ensure that PRIME CRGO is procured from POWERGRID approved vendors and CRGO manufacturer should have valid BIS Certificate for respective offered Grade.

14.1 Transformer Manufacturer should also involve themselves for ensuring the quality of CRGO laminations at their Core Cutter's works. They should visit the works of their Core cutter and carry out

necessary checks.

**a) General**

If a surveillance sample is drawn and sent to TPL (if testing facility not available with the manufacturer), the Transformer manufacturer can continue manufacturing at their own risk and cost pending TPL test report on PRIME CRGO sample drawn. Decision for acceptance of PRIME CRGO shall be based upon report of the sample drawn.

**These checks shall be read in-conjunction with approved Quality Plan, specification as a whole and conditions of contract.**

**Sampling Plan (PRIME CRGO)**

33 / 11 kV

-1<sup>st</sup> transformer and subsequently at random 10% of

Transformers (min. 1) offered for inspection.

DTs and other ratings

-1<sup>st</sup> transformer and subsequently at random 2% of

Transformers (min. 1) offered for inspection.

**NOTE:-** One sample for each lot of CRGO shall be drawn on surveillance basis.

CRGO has to be procured only from POWERGRID approved vendors. List of such vendors is available at the following website. Since the list is dynamic in nature, the site may be checked from time to time to see the list of approved vendors.

<http://apps.powergridindia.com/ims/ComponentList/Power-former%20upto%20420%20kV-CM%20List.pdf>



Lr No: REC/DDUGY/QA&FM/F-RQM/FY-2017-19-8/D.No. **3085** dt 20.09.2017

To:  
All Project Implementing Agencies (PIA)  
DDUGJY Scheme  
DISCOM(s)/SEB(s)/CPSU(s)/Power Department(s)

**Subject: Stage inspection by PIA during manufacturing of Power transformers and Distribution Transformers**

Ref: 1 REC Lr No.REC/DDUGJY/QA/2065 dt 29.06.2017  
2. REC Lr No.REC/DDUGJY/QA/2087 dt 11.07.2017

Sir,

Advisory letters have been issued to all the PIAs vide the above cited letters for carrying out the stage inspection by PIA as per the check list mentioned at Annexure-A of technical Specification (Refer Section-I Volume-III of Standard Bidding Document)

Queries has been raised by Indian Electrical & Electronics Manufacturer's Association (IEEMA) vide their letter dated 19.09.2017 and also by few transformer manufacturers that whether only prime quality CRGO type of core is acceptable for manufacturing of Power transformer and Distribution Transformer.

In this connection, following is clarified:

- As per the technical specification mentioned under Clause 6.1.1, Section-I, Volume-III of SBD, *the core used for manufacturing of **Distribution transformer** shall be either prime quality CRGO or Amorphous core.*
- However, for manufacturing of **Power Transformer**, the core used shall only from high grade non-ageing Cold Rolled Grain Oriented (CRGO) Silicon steel as per technical specification mentioned under Clause No. 7.5.2 & 7.5.3 Volume-III under Section-I of SBD.

This is for your kind information please. The relevant pages of the Standard Bidding Document (SBD) are attached herewith.

Thank you,

Yours faithfully,



(G S BHATI) 29/9/17

Executive Director (Q&FM)

Copy for kind information to:

- The CMD/MD/Directors/Chief Engineer, PIA, DDUGJY Scheme
- Sr. CPM/CPM, Regional Office(s) and Project Offices
- DDUGJY web portal

**Regional** : Hyderabad, Kolkata, Mumbai, Panchkula & Lucknow  
**and** : Bangalore, Bhopal, Bhubaneswar, Chennai, Guwahati, Jaipur, Jammu, Patna, Ranchi, Shillong, Shimla,  
**State** : Thiruvananthapuram & Vadodara  
**Offices** : Dehradun, Raipur  
**Training Centre** : Central Institute for Rural Electrification (CIRE), Hyderabad



- 7.2.2 Tank shall be designed to permit lifting by crane or jacks of the complete transformer assembly filled with oil. Suitable lugs and bossed shall be provided for this purpose.
- 7.2.3 All breams, flanges, lifting lugs, braces and permanent parts attached to the tank shall be welded and where practicable, they shall be double welded.
- 7.2.4 The main tank body of the transformer, excluding tap changing compartments and radiators, shall be capable of withstanding pressure of 760mm of Hg.
- 7.2.5 Inspection hole(s) with welded flange(s) and bolted cover(s) shall be provided on the tank cover. The inspection hole(s) shall be of sufficient size to afford easy access to the lower ends of the bushings, terminals etc.
- 7.2.6 Gaskets of nitrile rubber or equivalent shall be used to ensure perfect oil tightness. All gaskets shall be closed design (without open ends) and shall be of one piece only. Rubber gaskets used for flange type connections of the various oil compartments, shall be laid in grooves or in groove- equivalent sections on bolt sides of the gasket, throughout their total length. Care shall be taken to secure uniformly distributed mechanical strength over the gaskets and retains throughout the total length. Gaskets of neoprene and / or any kind of impregnated / bonded core or cork only which can easily be damaged by over-pressing are not acceptable. Use of hemp as gasket material is also not acceptable.
- 7.2.7 Suitable guides shall be provided for positioning the various parts during assemble or dismantling. Adequate space shall be provided between the cores and windings and the bottom of the tank for collection of any sediment.

### 7.3 Tank Cover

The transformer top shall be provided with a detachable tank cover with bolted flanged gasket joint. Lifting lugs shall be provided for removing the cover. The surface of the cover shall be suitable sloped so that it does not retain rain water.

### 7.4 UNDER CARRIAGE

- 7.4.1 The transformer tank filled with oil shall be supported on steel structure with detachable plain rollers. Suitable channels for movement of roller with transformer shall be space accordingly, rollers wheels shall be provided with suitable rollers bearings, which will resist rust and corrosion and shall be equipped with fittings for lubrication.

### 7.5 CORE *Used for Manufacturing of Power Transformer (PTR)*

- 7.5.1 Each lamination shall be insulated such that it will not deteriorate due to mechanical pressure and the action of hot transformer oil.
- 7.5.2 The core shall be constructed either from high grade, non-aging Cold Rolled Grain Oriented (CRGO) silicon steel laminations conforming to HIB grade with lamination thickness not more than 0.23mm to 0.27mm or better( Quoted grade and type shall be used). The maximum flux density in any part of the cores and yoke at normal voltage and frequency shall not be more than 1.69 Tesla. The Bidder shall provide saturation curve of the core material, proposed to be used. Laminations of different grade(s)\_ and different thickness (s) are not allowed to be used in any manner or under any circumstances.

CRGO steel for core shall be purchased only from the approved vendors, list of which is available at <http://apps.powergridindia.com/ims/ComponentList/Power-former%20upto%20420%20kV-CM%20List.pdf>

7.5.3 The bidder should offer the core for inspection starting from the destination port to enable Employer for deputing inspecting officers for detail verification as given below and approval by the Employer during the manufacturing stage. Bidder's call notice for the purpose should be accompanied with the following documents as applicable as a proof towards use of prime core material: The core coils, if found suitable, are to be sealed with proper seals which shall be opened in presence of the inspecting officers during core-cutting at the manufacturer's or its sub-vendor's premises as per approved design drawing.

- a) Purchase Order No. & Date.
- b) Invoice of the supplier
- c) Mills test certificate
- d) Packing list
- e) Bill of lading
- f) Bill of entry certificate to customs

Core material shall be directly procured either from the manufacturer or through their accredited marketing organization of repute, but not through any agent.

Please refer to "**Check-list for Inspection of Prime quality CRGO for Transformers**" attached at Annexure-A. It is mandatory to follow the procedure given in this Annexure.

- 7.5.4 The laminations shall be free of all burrs and sharp projections. Each sheet shall have an insulating coating resistant to the action of hot oil.
- 7.5.5 The insulation structure for the core to bolts and core to clamp plates, shall be such as to withstand 2000 V DC voltage for one minute.
- 7.5.6 The completed core and coil shall be so assembled that the axis and the plane of the outer surface of the core assemble shall not deviate from the vertical plane by more than 25mm.
- 7.5.7 All steel sections used for supporting the core shall be thoroughly shot or sand blasted, after cutting, drilling and welding.
- 7.5.8 The finally assembled core with all the clamping structures shall be free from deformation and shall not vibrate during operation.
- 7.5.9 The core clamping structure shall be designed to minimize eddy current loss.
- 7.5.10 The framework and clamping arrangements shall be securely earthed.
- 7.5.11 The core shall be carefully assembled and rigidly clamped to ensure adequate mechanical strength.
- 7.5.12 Oil ducts shall be provided, where necessary, to ensure adequate cooling inside the core. The welding structure and major insulation shall not obstruct the free flow of oil through such ducts.
- 7.5.13 The design of magnetic circuit shall be such as to avoid static discharges, development of short circuit paths within itself or to the earth clamping structure and production of flux component at right angle to the plane of the lamination, which may cause local heating.



Sl.No.	Item	11 kV Distribution Transformers	33 kV Distribution Transformers
1	System voltage (Max.)	12 kV	36 kV
2	Rated Voltage (HV)	11 kV	33 kV
3	Rated Voltage (LV)	433 - 250 V*	433 - 250 V*
4	Frequency	50 Hz +/- 5%*	50 Hz +/- 5%
5	No. of Phases	Three	Three
6	Connection HV	Delta	Delta
7	Connection LV	Star (Neutral brought out)	Star (Neutral brought out)
8	Vector group	Dyn-11	Dyn-11
9	Type of cooling	ONAN	ONAN

Audible sound levels (decibels) at rated voltage and frequency for liquid immersed distribution transformers shall be as below (NEMA Standards):

kVA rating	Audible sound levels (decibels)
0-50	48
51-100	51
101-300	55
301-500	56
750	57
1000	58
1500	60
2000	61
2500	62

**TECHNICAL REQUIREMENTS:**

**6.1.1 CORE MATERIAL** *for Distribution Transformer (DT)*

6.1.2.1 The core shall be stack / wound type of high grade Cold Rolled Grain Oriented or Amorphous Core annealed steel lamination having low loss and good grain properties, coated with hot oil proof insulation, bolted together and to the frames firmly to prevent vibration or noise. The core shall be stress relieved by annealing under inert atmosphere if required. The complete design of core must ensure permanency of the core loss with

continuous working of the transformers. The value of the maximum flux density allowed in the design and grade of lamination used shall be clearly stated in the offer.

- 6.1.2.2 The bidder should offer the core for inspection and approval by the purchaser during manufacturing stage. CRGO steel for core shall be purchased only from the approved vendors, list of which is available at <http://apps.powergridindia.com/ims/ComponentList/Power-former%20upto%20420%20kV-CM%20List.pdf>
- 6.1.2.3 The transformers core shall be suitable for over fluxing (due to combined effect of voltage and frequency) up to 12.5% without injurious heating at full load conditions and shall not get saturated. The bidder shall furnish necessary design data in support of this situation.
- 6.1.2.4 No-load current up to 200kVA shall not exceed 3% of full load current and will be measured by energising the transformer at rated voltage and frequency. Increase of 12.5% of rated voltage shall not increase the no-load current by 6% of full load current.

or

No-load current above 200kVA and upto 2500kVA shall not exceed 2% of full load current and will be measured by energising the transformer at rated voltage and frequency. Increase of 12.5% of rated voltage shall not increase the no-load current by 5% of full load current.

- 6.1.2.5 Please refer to "**Check-list for Inspection of Prime quality CRGO for Transformers**" attached at Annexure-A. It is mandatory to follow the procedure given in this Annexure.

## 7 WINDINGS:

### (i) Material:

- 7.1.1 HV and LV windings shall be wound from Super Enamel covered /Double Paper covered Aluminum / Electrolytic Copper conductor.
- 7.1.2 LV winding shall be such that neutral formation will be at top.
- 7.1.3 The winding construction of single HV coil wound over LV coil is preferable.
- 7.1.4 Inter layer insulation shall be Nomex /Epoxy dotted Kraft Paper.
- 7.1.5 Proper bonding of inter layer insulation with the conductor shall be ensured. Test for bonding strength shall be conducted.
- 7.1.6 Dimensions of winding coils are very critical. Dimensional tolerances for winding coils shall be within limits as specified in Guaranteed Technical Particulars (GTP Schedule I).
- 7.1.7 The core/coil assembly shall be securely held in position to avoid any movement under short circuit conditions.
- 7.1.8 Joints in the winding shall be avoided. However, if jointing is necessary the joints shall be properly brazed and the resistance of the joints shall be less than that of parent conductor. In case of foil windings, welding of leads to foil can be done within the winding.

## 8 TAPPING RANGES AND METHODS:

- 8.1.1 No tapping shall be provided for distribution transformers up to 100 kVA rating.
- 8.1.2 The tapping shall be as per provisions of IS: 1180 Part-I (2014).
- 8.1.3 Tap changing shall be carried out by means of an externally operated self-position switch and when the transformer is in de-energised condition. Switch position No.1 shall correspond



**Annexure - A**

**Check-list for Inspection of Prime quality CRGO for Transformers**

During inspection of PRIME CRGO, the following points needs to be checked by the Transformer manufacturer. Utility's inspector shall verify all these points during inspection:-

iii) **In case PRIME CRGO cutting is at works of Transformer Manufacturer:**

Review of documents:

- Purchase Order (unpriced) to PRIME CRGO supplier/Authorised Agency
- Manufacturer's test certificate
- Invoice of the Supplier
- Packing List
- Bill of Lading
- Bill of Entry Certificate by Customs Deptt.
- Reconciliation Statement as per format below
- Certificate of Origin
- BIS Certification

**Format for Reconciliation/Traceability records**

Packing List No./date /Quantity of PRIME CRGO received

Name of Manufacturer

Manufacturer test certificate No./date

Serial No.	Details of package/job	Drawing Reference	Quantity Involved	Cumulative Quantity Consumed	Balance stock

.1 Inspection of PRIME CRGO Coils:

- PRIME CRGO-Manufacturer's Identification Slip on PRIME CRGO Coils
- Visual Inspection of PRIME CRGO Coils offered as per packing list ( for verification of coil details as per Test certificate & healthiness of packaging).**
- Unique numbering inside of each sample of PRIME CRGO coil and verification of records to be maintained in the register for consumption of CRGO coil.**
- ISI logo sticker on packed mother coil and ISI logo in Material TC.**

2.2. During inspection of PRIME CRGO, surveillance testing of sample shall be carried out for Stacking Factor, Permeability, Specific watt loss at 1.5 Tesla and/or 1.7 Tesla depending on the grade of PRIME CRGO and aging test etc. applicable as per relevant IS/ IEC standard, Tech. Spec., MQP and Transformer manufacturer plant standard.

**Inspection Clearance Report would be issued after this inspection**

3. **Inspection of PRIME CRGO laminations:** Transformer manufacturer will maintain records for traceability of laminations to prime CRGO coils and burr/bow on laminations shall be measured. Utility can review these records on surveillance basis.
  
4. **Inspection at the time of core building:**  
 Visual Inspection of PRIME CRGO laminations. In case of suspected mix-up/ rusting/decoloration, samples may be taken for testing on surveillance basis for tests mentioned in A.2.2 above.

Above tests shall be witnessed by Utility. In case testing facilities are not available at Manufacturer's work, the sample(s) sealed by Utility to be sent to approved labs for testing.

**Inspection Clearance Report would be issued after this inspection**

- (iii) **In case PRIME CRGO cutting is at Sub-vendor of Transformer Manufacturer:**  
 Review of documents:

- Purchase Order (unpriced) to PRIME CRGO supplier/ Authorised Agency
- Purchase Order (unpriced) to Core Cutter
- Manufacturer test certificate
- Invoice of the Supplier
- Packing List
- Bill of Lading
- Bill of Entry Certificate by Customs Deptt.
- Reconciliation Statement as per format below
- Certificate of origin
- BIS Certification

**Format for Traceability records as below:-**

- Packing List No./date /Quantity of PRIME CRGO received
- Name of Manufacturer
- Manufacturer test certificate No./date

Serial No.	Name of Customer	Details of package/job	Drawing Reference	Quantity Involved	Cumulative Quantity Consumed	Balance stock	Dispatch Details

.1 Inspection of PRIME CRGO Coils:

- PRIME CRGO-Manufacturer's Identification Slip on PRIME CRGO Coils
- Visual Inspection of PRIME CRGO Coils offered as per packing list ( for verification of coil details as per Test certificate & healthiness of packaging).**
- Unique numbering inside of each sample of PRIME CRGO coil and verification of records to be maintained in the register for consumption of CRGO coil.**
- ISI logo sticker on packed mother coil and ISI logo in Material TC.**

- 2.2. During inspection of PRIME CRGO, surveillance testing of sample shall be carried out for Stacking Factor, Permeability, Specific watt loss at 1.5 Tesla and/or 1.7 Tesla, thickness depending on the



grade of PRIME CRGO and aging test etc. applicable as per relevant IS/ IEC standard, Tech. Spec., MQP and Transformer manufacturer plant standard.

**Inspection Clearance Report would be issued after this inspection**

**3 Inspection of PRIME CRGO laminations:**

Transformer manufacturer representative will inspect laminations and issue their internal Inspection Clearance Report. Inspection will comprise of review of traceability to prime CRGO coils, visual inspection of PRIME CRGO laminations and record of burr/bow. After clearance given by transformer manufacturer, Utility will issue an Inspection Clearance Report after record review. If so desired by Utility, their representative may also join transformer manufacturer representative during this inspection.

**Inspection Clearance Report would be issued after this inspection**

**viii) Inspection at the time of core building:**

Visual Inspection of PRIME CRGO laminations. In case of suspected mix-up/rusting/decoloration, samples may be taken for testing on surveillance basis for tests mentioned in B.2.2.

**Inspection Clearance Report would be issued after this inspection**

**NOTE :-**

- a) Transformer Manufacturer to ensure that PRIME CRGO is procured from POWERGRID approved vendors and CRGO manufacturer should have valid BIS Certificate for respective offered Grade.
- 14.3 Transformer Manufacturer should also involve themselves for ensuring the quality of CRGO laminations at their Core Cutter's works. They should visit the works of their Core cutter and carry out necessary checks.

**c) General**

If a surveillance sample is drawn and sent to TPL (if testing facility not available with the manufacturer), the Transformer manufacturer can continue manufacturing at their own risk and cost pending TPL test report on PRIME CRGO sample drawn. Decision for acceptance of PRIME CRGO shall be based upon report of the sample drawn.

**These checks shall be read in-conjunction with approved Quality Plan, specification as a whole and conditions of contract.**

**Sampling Plan (PRIME CRGO)**

33 / 11 kV	-1 <sup>st</sup> transformer and subsequently at random 10% of Transformers (min. 1) offered for inspection.
DTs and other ratings	-1 <sup>st</sup> transformer and subsequently at random 2% of Transformers (min. 1) offered for inspection.

**NOTE:-** One sample for each lot of CRGO shall be drawn on surveillance basis.

CRGO has to be procured only from POWERGRID approved vendors. List of such vendors is available at the following website. Since the list is dynamic in nature, the site may be checked from time to time to see the list of approved vendors.

<http://apps.powergridindia.com/ims/ComponentList/Power-former%20upto%20420%20kV-CM%20List.pdf>



Lr No: REC/DDUGY/QA&FM/F-RQM/FY-2017-18/D.No. 3202

Dt 09.10.2017

All Project Implementing Agencies (PIA)  
DDUGJY Scheme  
DISCOM(s)/SEB(s)/CPSU(s)/Power Department(s)

**Subject: Procurement of Prime CRGO core by manufacturer for manufacturing of Distribution Transformers under DDUGJY New Scheme.**

Reference: 1. REC Lr No.REC/DDUGJY/QA/2065 dt 29.06.2017.  
2. REC Lr No.REC/DDUGJY/QA/2087 dt 11.07.2017.  
3. REC Lr. No. REC/DDUGY/QA&FM/F-RQM/FY-2017-19-8/D.No. 3085 dated 20.09.2017.

Sir/ Madam,

Advisory letters have been issued to all the PIAs vide the above cited letters for carrying out the stage inspection by PIA as per the check list mentioned at Annexure-A of technical Specification (Refer Section-I Volume-III of Standard Bidding Document).

Indian Electrical & Electronics Manufacturer's Association (IEEMA) has requested vide their letter dated 18.09.2017 to accept processors/core cutters/laminations manufacturers for supplying Prime quality CRGO for manufacturing transformers, only in such cases where complete traceability reports are provided from the mill manufacturers.


In this connection, the following is clarified in respect of procurement of CRGO core for manufacturing of distribution transformers as mentioned under clause 6.1.2.2 Volume-III: Section-I of Technical specification (page no. 69) of Standard Bidding Document (SBD):

*"CRGO supplied by Core cutter/ lamination manufacturers shall also be accepted for manufacturing of Distribution Transformers provided the Core cutter/ core laminator provides the complete traceability report for having procured the prime quality CRGO steel core material from authorized vendors as per the requirement of SBD for DDUGJY/IPDS".*

All PIAs shall ensure compliance of above.

Thanking you,

Yours faithfully,



(A Veluchamy)  
Addl. General Manager (Engg.)  
(DDUGJY-QA&FM)

Copy for kind information to:

1. The CMD/MD/Directors/Chief Engineer, PIAs, DDUGJY New Scheme
2. Sr. CPM/CPM, Regional Office(s) and State Offices
3. All RQM agencies of DDUGJY new scheme.
4. IT Division – for uploading in DDUGJY web portal.

**Regional and State Offices Training Centre** : Hyderabad, Kolkata, Mumbai, Panchkula & Lucknow  
: Bangalore, Bhopal, Bhubaneswar, Chennai, Guwahati, Jaipur, Jammu, Patna, Ranchi, Shillong, Shimla,  
: Thiruvananthapuram & Vadodara  
: Dehradun, Raipur  
: Central Institute for Rural Electrification (CIRE), Hyderabad