

# FIELD QUALITY PLAN

FOR

**LT MOTORS  
(ERECTION)**

FOR

**MUZAFFARPUR THERMAL POWER PLANT  
STAGE –II (2 X 195 MW)**

**CUSTOMER: KANTI BIJALEE UTPADAN NIGAM LIMITED**

PREPARED BY	BHEL, PSER. KOLKATA
BHEL DOC No.	QPE:MFP:195:EL:66
REVISION	01
REVISION DATE	13.08.2015
REVIEWED BY	M/S NTPC LTD, NOIDA
APPROVED BY	M/S NTPC LTD, NOIDA
NTPC DOC No.	0350-108-PS-QVE-G-028
REVISION	01



Certification signature by Abhishek Singh  
<abhisheksingh@ntpceoc> by Abhishek Singh

Digitally signed  
by Abhishek  
Kumar Singh  
Date: 2015.09.21  
17:09:06 IST  
Reason: CAT I  
Location:  
NTPCEOC

**BHARAT HEAVY ELECTRICALS LIMITED  
POWER SECTOR - EASTERN REGION  
KOLKATA - 700091**



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S. NO.	Reference Document	Issuing Authority

 PSER-QUALITY	AUTHORISATION FOR DIFFERENT CATEGORY OF CONSTRUCTION/ ERECTION CHECKS & NONCONFORMITY DISPOSITION				
Category of Check	Agency	Inspection Authority	Accepting Authority	Nonconformity Disposition Authority	
‘A’ Customer Hold Point	BHEL	Erection Engineer & QAE	Head of Erection	ENGG Center/ Head (Quality): PS-Region	
‘B’ Customer Hold Point	BHEL	Erection Engineer	Head of Erection	ENGG Center/ Head (Quality): PS-Region	
‘C’	BHEL	Erection Engineer	Head of Erection	ENGG Center/ Head (Quality): PS-Region	
Category of Check	Agency	Witness & Accepting Authority		Surveillance By NTPC	
‘A’	NTPC	FQA in association with Executing Engineer.		Head (FQA)	
‘B’	NTPC	Executing Engineer		FQA Engineer	
‘C’	NTPC	Executing Engineer		Another Engineer authorized by Head (executing Department)	


**LEGEND for TYPE OF CHECK:**  
R – Record Verification, V – Visual Check, P – Physical Check, M – Measurement, T – Test.

**Note:**


- Disposition authority for all categories of checks shall be as under:  
Product nonconformities: BHEL Engineering Center.  
Process/System nonconformities: BHEL, Head (Quality): PS Region.
- Wherever log sheet is not called for, suitable record shall be maintained in logbook/protocol.
- In case of nonconformity, accepting authority shall ensure the disposition of the nonconformity before acceptance, and disposition shall be reflected in the log sheets/protocols.
- QAE shall witness ‘A’ category checks. He is also authorized to carry out surveillance in any of B & C category of checks at his discretion.
- Concerned agencies shall ensure that instruments having valid calibration are only used for measurements.
- Quantum of check shall be 100% for all characteristics unless otherwise mentioned specifically in Field Quality Plan/ reference documents.

	<b>FIELD QUALITY PLAN FOR LT MOTORS (ERECTION)</b>	QP NO.: QPE:MFP:195:EL:66
		REV No.: 01
		Sheet 1 / 3 Sheets
<b>STATEMENT OF CHECKS</b>		
<b>Capacity / Type</b>	: <del>195 MW</del> <b>UPTO 200 MW</b>	
<b>System</b>	: <b>ELECTRICALS</b>	
<b>Sub-System</b>	: <b>LT MOTORS</b>	
<b>Area</b>	: <b>ERECTION</b>	
<p>* For checks where log sheets are not called for, suitable records shall be maintained in the form of log book / protocols.</p> <p>* As an evidence of having carried out the work satisfactorily, a general-purpose log sheet L-00 shall be maintained for all the checks.</p> <p>* Abbreviations used in the column "Type of Check" are:</p> <p>R : Record Verification</p> <p>M : Measurement</p> <p>V : Visual</p> <p>T : Test</p>		


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<div> PSR</div>		FIELD QUALITY PLAN FOR LT MOTORS (STATEMENT OF CHECKS)						QP NO.: QPE:MFP:195:EL:66 REV NO.: 01 SHEET 2 / 3 SHEETS	
SYSTEM: ELECTRICALS		SUB-SYSTEM: LT MOTORS		AREA: ERECTION					
SL NO.	CHARACTERISTICS / ITEM	TYPE OF CHECK	INSTRUMENT	CLASS	QUANTUM/ FREQUENCY OF CHECK	REFERENCE DOCUMENT/ ACCEPTANCE STANDARD	FORMAT OF RECORD	REMARKS	
1.	MATERIAL RECEIPT :								
1.1	Motor -Visual check for deformation, rust, pitting etc. and verify against packing list visual damages.	V/Free Rotation		B	One receipt at site	Packing list/MDCC/CHP, No visual damage, Completeness Qty & size as per packing list.	Receipt register	Check for identification, Qty. short supplies if any availability of erection manual and drawing tools tackles and fixture required for erection purpose.	
1.2	Report non conforming components to supplier and raise MDR						MDR		
2.	MATERIAL STORGAE:								
2.1	Motor- Type of storage – Store in top covered shed on raised and paved (concrete/ cemented) platform / floors. a) Space heaters on if motor is idle, subject to moisture , condensation b) Rotate shaft by quarter of a revolution every month in storage c) Use axial locking cover on shaft extension except while rotating. d) If long storage is required, check IR	V/Free Rotation		B	100%/ Every three month	Manufacturer's instruction manual/Material Std./No damage free rotation of shaft	Store stock register		
3.	ERECTION:								
3.1	MOTOR								
3.1.1	Check Foundation	V	Level Gauge type	C	100%	GA Drawing/ Manual/IS 900	Site register		
3.1.2	Check Installation Drawing & manual, motor name plate, shaft & terminal box position.	V	Level Gauge type	C	100%	GA Drawing/ Manual/IS 900	Site register		

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<div> PSER</div>		FIELD QUALITY PLAN FOR <b>LT MOTORS</b> (STATEMENT OF CHECKS)					QP NO.: QPE:MFP:195:EL:66	
							REV NO.: 01	
							SHEET 3 / 3 SHEETS	
SYSTEM: ELECTRICALS		SUB-SYSTEM: LT MOTORS			AREA: ERECTION			
SL NO.	CHARACTERISTICS / ITEM	TYPE OF CHECK	INSTRUMENT	CLASS	QUANTUM/ FREQUENCY OF CHECK	REFERENCE DOCUMENT/ ACCEPTANCE STANDARD	FORMAT OF RECORD	REMARKS
3.1.3	Mounting of motor, level & Alignment & clearances.	V	Level Gauge type	A	100%	GA Drawing/Manual/IS 900	Site register	
3.1.4	Check for terminal marking & earthing, cable termination & connection.	Continuity	Multimeter	B	100%	GA Drawing/Manual/IS 900	Site register	
3.1.5	Check for protection devices, fuses, checks RTD/BTD connection as application.	Continuity	Multimeter	B	100%	GA Drawing/Manual/IS 900	Site register	
3.1.6	Check continuity of space heater.	Continuity	Multimeter	B	100%	GA Drawing/Manual/IS 900	Site register	
3.1.7	Free running of shaft	V		A	100%	GA Drawing/Manual/IS 900	Site register	
3.1.8	Insulation resistance for LT motors.	Operation	Megger	A	100%	GA Drawing/Manual/IS 900	Site register	


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	<p align="center">FIELD QUALITY PLAN FOR <b>LT MOTORS</b> (ERECTION)</p>	QP NO.: QPE:MFP:195:EL:66
		REV No.: 01
		Sheet : 1 / 1 Sheet
<p align="center"><b>DOCUMENTS REFERRED IN FIELD QUALITY PLAN</b></p>		
<b>SL.NO.</b>	<b>Reference Document</b>	<b>Issuing Authority</b>

WI:QLY:03-F09/R0





 PSER		RECORD OF QUALITY CHECKS						
SHEET NO. OF FQP	CHECK NO.	RESULTS ACHIEVED OK / NOT OK	DRAWING / DOCUMENT REFERENCE	FORMAT OF RECORD	INSPECTED BY SIGN. & DATE	CLEARED BY SIGN. & DATE	REMARKS	
<b>Note :</b> Any protocol made is to be numbered & mentioned in “Format of Record” column.								
PROJECT		SYSTEM	SUB-SYSTEM	AREA	QP NO.: QPE:MFP:195:EL:66			
UNIT NO.					REV. NO. : R01			
RATING					LOG SHEET NO.: L-00			
					SHEET 1 / 1 SHEET			

WT:QLY:03-F10/R0