

QUALITY ASSURANCE PROGRAMME	
To ensure that the equipment & services under the scope of the contract whether manufactured/ performed at Successful bidder's works or at Successful bidder's premises or at any other place of work are in accordance with the specifications The successful bidder shall adopt suitable quality assurance programme to control activities as necessary. Such programme shall be outlined by the successful bidder and shall be finally accepted by BHEL/ owner/ authorised representative. A quality assurance programme of the successful bidder shall generally cover the following:	
1	The organization structure and qualification data of key personnel for the management and implementation of the proposed quality assurance program.
2	System for site erection control including process controls and fabrication and assembly controls.
3	The procedure for purchase of materials, parts, components and selection of sub-Successful bidder's service including Successful bidder analysis, source inspection, incoming raw material inspection, verification of materials purchased, etc.
4	System for shop manufacturing and site erection control including process control, fabrication and assembly controls.
5	Control of non-conforming items and system for corrective actions.
6	Inspection and test procedure for all site related works.
7	Control of calibration and testing of measuring and testing equipment.
8	System for quality audit.
9	System for indication and appraisal of inspection status.
10	System for authorizing release of manufactured product to BHEL.
11	System for handling storage and delivery.
12	System for maintenance of records.
13	Furnishing of Quality Plan for manufacturing and Field activities detailing out the specific quality control procedures adopted for controlling the quality characteristics relevant to each item of equipment/ component.
INSPECTION PLAN	
1	Inspection agencies (Domestic supplies) Vendor shall give inspection call in line with approved QAP / Customer Hold Points to Regional BHEL-CQS center / Third Party Inspection Agency (TPIA) (as informed by BHEL) on "BHEL CQS Website"; with a copy of inspection call to BHEL-PSSR for arranging Customer/Third Party participation (wherever applicable), with an advance notice of 15 days for participation in inspection/ Joint inspection on the proposed date. The MDCC shall be issued by customer/BHEL based on the BHEL-CQS/TPIA report OR Joint inspection report of BHEL CQS/TPIA & Customer (wherever applicable)
2	Inspection Agency (Imported supplies) 2.1. In case of Imported Supplies advance notice of 30 days for participation in inspection (if applicable, in line with approved QAP / Customer Hold Points) to be given. 2.2. The Test Certificates & Inspection reports duly accepted by the Foreign Vendor Inspection agency in line with approved QAP/Customer Hold

	Points shall be submitted to BHEL-PSSR, CHENNAI. The above Inspection reports & Test certificates shall be reviewed by BHEL-PSSR in line with the Technical Specifications & Approved Data sheets and then sent to customer for their clearance. The customer dispatch clearance (MDCC) will be given to the Foreign Vendor or their representative in India through BHEL-PSSR after acceptance/clearance of above test certificates by Customer.
QUALITY ASSURANCE DOCUMENT	
	The successful bidder shall be required to submit the following Quality Assurance Documents within 2 weeks after dispatch of the equipment.
1.	Test report of components.
2.	The inspection plan with verification, inspection plan check points, verification sketches, if used and methods used to verify that the inspection and testing points in the inspection plan were performed satisfactorily.
3.	Non-destructive examination results/ reports including radiography interpretation reports.
4.	Welder identification list listing welder's and welding operator's qualification procedures and welding identification symbols.
5.	Sketches and drawings used for indicating methods of traceability of the radiographs to the location of the equipment.
6.	Stress relief time temperature charts.
7.	Factory test results for testing required as per applicable codes and standards referred to in the specification.
8.	Inspection Report duly signed by QA Personnel of BHEL (or third party inspection agency as approved by BHEL/ Owner) and successful bidder for the agreed inspection hold points. During course of inspection the following will also be recorded.
8.1.	When some important work repair work is involved to make the job acceptable.
8.2.	The repair work remain part of the accepted product quality.
8.3.	Letter of conformity certifying that that requirement is in compliance with finalised specification requirements.
INSPECTION, TESTING AND INSPECTION CERTIFICATE	
Inspection, Examination and Testing	
1.	All design, engineering, equipment, materials, Plant and workmanship supplied by Successful bidder or for which Successful bidder is responsible shall be subject to inspection, examination and testing by the BHEL/Employer's (TANGEDCO) and/ or Engineer's (DESEIN) designated consultants and/ or representatives at any and all times during design, engineering, manufacture, procurement, fabrication and construction and at any and all places where such design, engineering, manufacture, procurement, fabrication and construction are carried on. Provided such inspection, examination and testing shall to the extent possible be carried out in conjunction with Successful bidder's similar activities, and if not, upon prior consultation with Successful bidder in order to avoid any unnecessary delay in the performance of the Work.

2.	In furtherance of the foregoing, Successful bidder shall arrange for the aforesaid consultants and representatives of the Employer and/ or Engineer to have access to all places where manufacture or preparation of equipment, materials and Plant or construction activities are being carried out.
3.	In respect of the Work which the Employer and/ or Engineer are entitled to examine, inspect, measure and/or test, Successful bidder shall give notice (of not less than 15 working days) to the Employer and the Engineer whenever any such Work is ready and before it is covered up, put out of sight or packaged for storage or transport. The Employer and/or the Engineer shall then either carry out the examination, inspection, measurement or testing without unreasonable delay, or give notice to Successful bidder that Employer and/ or the Engineer (as applicable) does not require to do so after receipt of Successful bidder's notice for such examination, inspection, measurement or testing at Site.
4.	If Successful bidder fails to give such notice, it shall, if and when required by the Employer and/or the Engineer, uncover the work and thereafter reinstate and make good, all at Successful bidder's cost and expense. The Employer and the Engineer shall be responsible for their respective expenses in connection with inspection, examination and testing.
5.	The Successful bidder shall co-operate with and provide full opportunity to the Employer/Engineer to regularly monitor the progress of manufacturing in the Works of the Successful bidder to the detailed extent necessary to establish that satisfactory progress relative to the Contract Schedule is being achieved.
6.	All pertinent information such as shop loading, detailed manufacturing programs to enable the Employer and/ or Engineer to determine the adequacy of the advance planning for material procurement, machine and manpower resources to meet the Contract Schedule shall be made freely available to the Employer and/ or Employer 10 working days before visiting the manufacturing facilities.
Rejection and Replacement	
7.	The Employer and/ or the Engineer and their designated consultants and representatives shall have the right to reject any portion of the Work which is defective, deficient, not within specifications provided in the Contract or not according to Good Industry Practice or faulty workmanship and require its repair or replacement
8.	Rejected and other defective equipment, materials and Plant shall be satisfactorily replaced with proper replacements. The costs and expenses associated with such repairs and replacements shall be to the account of Successful bidder and not reimbursable
9.	After completion of the necessary repairs or replacements, the relevant equipment, materials and Plant, shall be subject to further inspection, examination and testing by the Employer and/ or Engineer and their designated consultants and representatives, all the costs and expenses of which shall be to the Successful bidder's account.
10.	If Successful bidder fails to proceed promptly with the replacement of rejected equipment, materials and Plant and the correction of defective workmanship, Employer and/ or the Engineer may, by contract with third parties or otherwise, replace such equipment, materials and Plant or correct such workmanship and/or may terminate this Contract and Successful bidder shall be liable and reimburse

	Employer and/ or the Engineer (as applicable) upon demand for all costs, expenses and damages incurred by the Employer and/ or Engineer relating to such replacement or correction along with BHEL's overhead if any.
11.	The Successful bidder shall be entitled to remove and retain all rejected components Work that the Employer and/ or may have replaced at the Successful bidder's cost.
12.	The Successful bidder shall furnish; at each location where inspection, examination and testing is carried out; all reasonable facilities, assistance, labour, equipment, materials, utilities, apparatus and instruments necessary for the safe and convenient inspection and testing of material and workmanship that may be required pursuant to this Contract.
13.	The right of inspection, examination and testing by Engineer or the Employer, their designated consultants and representatives provided herein is intended solely for the Engineer's and the Employer's benefit, it being understood that no exercise of or failure to exercise such right shall relieve Successful bidder of any of its obligations hereunder or prejudice any of the Engineer or Employer's rights under this Contract.
14.	The Engineer, his duly authorized representative and/ or an outside inspection agency acting on behalf of BHEL/ owner shall have access at all reasonable times to inspect and examine the materials and workmanship of the works during its manufacture and if part of the works is being manufactured or assembled on other premises or works, The successful bidder shall obtain for the Engineer and for his duly authorized representative permission to inspect as if the works were manufactured or assembled on Successful bidder's own premises or works. Necessary arrangement for carrying out inspection including supply of labour, IMTEs, area illumination and scaffolding, if required will be Successful bidder's responsibility and same has to be carried out within the quoted price.
15.	To facilitate advance planning of inspection in addition to giving inspection notice the successful bidder shall furnish quarterly inspection program indicating schedule dates of inspection at customer hold point and final inspection stages. Updated quarterly inspection plans will be made for each 3 consecutive months and shall be furnished before beginning of each calendar month.
16.	Before any plant/equipment leaves the place of manufacture BHEL shall be given the option of witnessing inspections and tests for compliance with the specifications and related standards. The successful bidder shall give the engineer/ Inspector 15 days written notice of any material being ready for testing. Such test shall be to the successful bidder's account except for the expenses of the Inspector .The Engineer/ Inspector, unless the inspection is waived will attend such tests within 15 days of the date on which the equipment is notified as being ready for test/ inspection failing which The successful bidder may proceed with test which shall be deemed to have been made in the Inspector's presence and he shall forthwith forward to the Inspector duly certified copies of test reports.
17.	The Engineer or Inspector shall within 15 days from the date of inspection as defined herein give notice to The successful bidder of any objection wrt drawing/ equipment/ workmanship which in his opinion not in accordance with the specification/ contract. The successful bidder shall either make modification as may be necessary to meet the said objection or explain to the engineer/ inspector giving reasons that no modifications are necessary to comply with the contract.

18.	When the factory tests have been completed at the successful bidder's works (or sub-vendor's works), the engineer or Inspector shall issue a certificate to this effect within reasonable time after completion of tests but if the tests are not witnessed by the engineer or Inspector the certificate shall be issued within 15 days of the receipt of Successful bidder's test certificate by the engineer or Inspector. The completion of these tests or the issue of the certificates shall not bind BHEL to accept the equipment, if on further tests after erection be found not in compliance with the terms and conditions of the contract.
19.	In all cases where The successful bidder provides the tests at the premises of The successful bidder or any sub-vendor, The successful bidder except where otherwise specified shall provide free of charge such items as labour, materials, electricity, fuel, water, stores, apparatus and instruments as may be reasonably demanded by the Engineer/ Inspector to carry out effectively such tests on the equipment in accordance with the contract and shall give facilities to the Engineer/Inspector to accomplish testing.
INSPECTION & JOINT VERIFICATION (AT SUCCESSFUL BIDDER'S WORKS)	
20.	Prior to dispatch, the materials would be offered by The successful bidder for joint inspection at The successful bidder's works as detailed in this tender specification for which The successful bidder would serve the advance notice of 15 days for inspection call to BHEL.
21.	For further information, Successful bidder shall visit web site http://cqir.bhel.in to login & lodge inspection related calls.
INSPECTION & JOINT VERIFICATION (AT SITE)	
	The successful bidder shall be intimated within 7 days from the date of receipt of each consignment at site to depute their representative for joint inspection and verification of the equipment/ materials received at site. The successful bidder shall depute their representative within 7 days from receipt of such intimation failing which BHEL shall proceed with the inspection and verification of equipment/materials and BHEL's decision in this regard shall be final and binding to The successful bidder.