

गुणवत्ता आश्वासन योजना (QUALITY ASSURANCE PLAN) : MODEL

Page 1 of 3

परियोजना (PROJECT) :

उपस्कर का नाम (NAME OF EQUIPMENT) Lower & Upper Level/Crest Type Spillway Radial Gates

ग्राहक (CLIENT) :

विक्रेता (VENDOR) :

एनआईटी/ क्रय आदेश संदर्भ (NIT/P.O. REFERENCE) :

MODEL QUALITY ASSURANCE PLAN (MQAP)

SET Special instructions: -	
1	Contractors/Manufacturers/Sub-suppliers are advised to submit QAP for equipments/ materials after incorporating all tests for bought out items, in process inspection and final inspections as per their latest manufacturing practice and Indian/ International Standards (with latest amendments, if any).
2	Contractors/Manufacturers/Sub-suppliers are required to use properly calibrated instruments /equipments during testing/inspection, for which necessary calibration certificates are required to be provided/presented to the Inspecting Officer.
3	Contractors/Manufacturers/Sub-suppliers has to make on their own all arrangements for testing facilities at their works for testing of equipments/materials.
4	One set of complete test certificates as per the requirement of QAP be made available to the Inspecting Officer at the time of inspection/testing.
5	All the records, as per the requirement of QAP are to be made available for review by the Inspecting Officer during inspection.
6	Field tests are to be carried out as per the requirements of the contract / purchase order.

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क्र. सं. SR. NO.	मद/घटक एवं विशेषता ITEM /COMPONENTS & CHARACTERISTICS	जाँच की प्रकृति NATURE OF CHECKS	जाँच की मात्रा QUANTUM OF CHECKS	संदर्भ दस्तावेज़ / स्वीकृति मानदंड REFERENCE DOCUMENTS/ ACCEPTANCE NORMS	रिकॉर्ड प्रारूप RECORD FORMAT	निरीक्षण एजेंसी (INSP. AGENCY)			टिप्पणी REMARKS
						प्रदर्शन Perform	गवाह Witness	सत्यापन Verify	
1	Raw Material :								
1.1	Structural Steel-Skin Plates, Vertical Stiffners, Horizontal Girder, Arms, Bracings, Rolled Steel, Rest Beam etc.	Mechanical and Chemical properties	Sample/lot	Relevant Std./ App. Drg./Tech. Spec.	TC	3/2	-	1	TC
1.2	Stainless Steel - Plate / Flat (As applicable)	-do-	-do-	-do-	TC	3/2	-	1	TC
1.3	NDT of Plates (> 12mm)	RT, UT, MPI, DPT (as applicable)	100%	-do-	TC	3/2	-	1	TC
2	Bought Out Item :								
2.1	Guide Roller, Guide Roller Bearing, Bushing, Pin, Fasteners, Rubber Seals etc.	Material Properties, Dim. Report (As applicable)	100%	-do-	TC	3/2	-	1	TC
2.2	De-icing arrangement								
2.2.1	Heater (hot water generator), electrical heating elements, controller & heating cables etc.	Make, Type, Rating & Functional/Routine test	100%	-do-	TC	3/2	-	1	TC
2.2.2	Heating pipes	Material Properties & Pressure Test	100%	-do-	TC	3/2	-	1	TC
3	In Process								
3.1	Edge Preparation	Visual / Measurement	-do-	-do-	IR	3/2	-	1	RR
3.2	Dimensional Checks (Welding Tack Up)	Measurement	-do-	-do-	IR	3/2	-	1	RR
3.3	Curvature of Skin Plate with Template (Jigs & Fixtures)	-do-	-do-	-do-	IR	3/2	-	1	RR
3.4	Welding								
3.4.1	NDT of Fillet Weld	RT, UT, MPI, DPT (as applicable)	-do-	-do-	TC	3/2	-	1	TC
3.4.2	NDT of Butt Weld	RT, UT, MPI, DPT (as applicable)	-do-	-do-	TC	3/2	-	1	TC
3.4.3	Welder Certification	Visual	-do-	-do-	TC	3/2	-	1	TC
3.5	Guide Roller Assembly	Measurement (Fitment & Tolerance)	-do-	-do-	IR	3/2	-	1	RR

Signature
(QA&I DEPT.)

Signature & Seal
(VENDORS Q.C. DEPT. OR REPRESENTATIVE)

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						प्रदर्शन Perform	गवाह Witness	सत्यापन Verify	
4	Final Inspection								
4.1	BOM check & Verification of T.R. of Drawing	Visual	100%	Relevant Std./ App. Drg./Tech. Spec.	JIR	3/2	1	-	CHP
4.2	Profile of Skin Plate with Template (Jigs & Fixtures)	Measurement	100%	-do-	JIR	3/2	1	-	CHP
4.3	Welding Examination	Visual / Measurement	Random	-do-	JIR	3/2	1	-	CHP
4.3.1	NDT- Fillet welds	UT, MPI, DPT (as applicable)	10% of fillet weld	-do-	JIR	3/2	1	-	CHP
4.4	Cladding of Skin Plate (If applicable)	Visual / NDT	Random	-do-	JIR	3/2	1	-	CHP
4.5	Dimensional Check	Measurement	Critical Dim.	-do-	JIR	3/2	1	-	CHP
4.6	Shop Assembly on fixture (Dimensional Check, Match Marking)	Visual / Measurement	100%	-do-	JIR	3/2	1	-	CHP
4.7	Trail Assembly of Skin Plate with horizontal Girder	Visual / Measurement	-do-	-do-	JIR	3/2	1	-	CHP
5	Surface preparation & Painting	Visual /Measurement	-do-	-do-	TC	3/2	-	1	TC

- Note:
- a. In 'Inspection Agency' column figure 1,2,or 3 to be filled. 1- will indicate 'NHPC Ltd', 2- will indicate 'supplier' & 3- will indicate 'sub-supplier'.
 - b. In 'Remarks' column following abbreviations shall be used - RR-Review of Records, T.C. - Test Certificate Submission, CHP - Customer Hold Point & JIR-Joint Inspection Report.
 - c. The firm shall obtain acceptance/clearance of finished product for further activities based on Test Certificates & Internal Report (IR)
 - d. Any additional test required as per the requirement of equipment in accordance with Contract Agreement/Relevant standard apart from QAP will be carried out by the firm without any additional financial implication.
 - e. This QAP does not absolve the Contractor/sub-contractor of his responsibility to supply the correct products, strictly in conformity to the specifications given in the purchase order/contract. The above Model QAP stipulates the bare minimum requirements which shall be complied by the contractor. The above QAP has been made presuming subletting of work shall be allowed in the tender. In case subletting of work is not allowed in the tender, then "3/2" shall be replaced by "2" under the column " Perform".
 - f. At the time of Inspection the supplier shall arrange the requisite calibrated measuring instruments i.e. micrometer, vernier caliper, pie tape, surface roughness tester, dial gauge etc. Material testing shall be conducted from NABL accredited lab/Govt. approved lab. NDT shall be conducted from NABL accredited lab/Govt. approved lab/Level-2 or 3 certified person.

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