

PROJECT : MANGDECHHU HE PROJECT, BHUTAN  
 NAME OF EQUIPMENT : GROUNDING SYSTEM

**QUALITY ASSURANCE PLAN (MODEL)**

CLIENT: MANGDECHHU HYDROELECTRIC PROJECT AUTHORITY,  
 VENDOR NAME & ADDRESS :  
 NIT/P.O. REFERENCE :

**ANNEXURE -IV**

Sl. NO.	ITEM /COMPONENTS	NATURE OF CHECKS	QUANTUM OF CHECKS	REFERENCE DOCUMENTS / ACCEPTANCE NORMS	RECORD FORMAT	INSPECTION AGENCY			REMARKS
						Perform	Witness	Verify	
1	Raw Material a) Rods/Wires b) Physical Properties c) Chemical Composition & Purity d) Dimension	Physical Chemical Measurement	10% Sample -do- -do-	As per Tech. Specn. / IS:613/IS:8130 -do- -do-	TC TC TC	3/2 3/2 3/2	- - -	1 1 1	TC TC TC
2	In Process	Measurement	-do-	-do-	TC	3/2	-	1	TC
2.1	Wire Drawing and Annealing Physical Properties Finish & Dimension	Physical Visual & Meas.	100% Spool At start & end	As per Tech. Specification / IS:8130 -do-	Log book Log book	3/2 3/2	- -	2 2	RR RR
iii)	Persulphate Test (for Trimer Cond.)	Chemical	1/Ty type	-do-	Log book	3/2	-	2	RR
2.2	Stranding of Wires i) Number of Wires ii) Surface finish iii) Dimension iv) Resistance	Counting Visual Measurement Electrical	Sample -do- -do- 100%	As per Tech. Specification / IS:8130 -do- -do-	Log book Log book Log book	3/2 3/2 3/2	- - -	2 2 2	RR RR RR
3	Final Inspection i) Surface finish ii) Dimension & Length iii) Conductor Resistance	Visual Measurement Electrical	100% Drum -do- -do-	As per Tech. Specification / IS:8130 -do-	TC TC TC	3/2 3/2 3/2	- - -	1 1 1	TC TC TC

Note: a. In Inspection Agency column figure 1,2,or 3 to be filled. 1- will indicate MHPA, 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 Hoag Point.  
 c. Test certificates shall be submitted at the time of final inspection.

Signature  
MHPA (Client)

Signature  
NHPC (Consultant)

Signature & Seal  
Vendor

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						Perform	Witness												
4	i) Packing Marking on Drums ii) Dimension of Members of Drums & Construction iii) Rust Prevention of Hard Ware	Visual Measurement	100%	Tech. Specn. / Relevant IS code As per Tech. Specn. / IS:10418 As per Tech. Specn. / IS:2829, IS:2833	Log book Log book Log book	3/2	-	2	RR RR RR										
										5	Field Tests i) Physical Verification ii) Continuity Test iii) Measurement of Earthing Resistance of Individual loops.	Visual Electrical Electrical	100% 100% 100%	As per Tech. Specn. As per Tech. Specn. / Relevant IS code As per Tech. Specn. / Relevant IS code	JIR JIR JIR	3/2 3/2 3/2	1 1 1	- - -	CHP CHP CHP

Note: a. In 'Inspection Agency' column figure 1,2,or 3 to be filled. 1- will indicate 'supplier' & 3- will indicate 'sub-supplier'.  
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 c. Test certificates shall be submitted at the time of final inspection.

Signature  
MHPA (Client)

Signature  
NHPC (Consultant)

Signature & Seal  
Vendor

To be witness  
by MHPA Site  
Engineer.