

ENDORSEMENT SHEET FOR QP
REFERENCE/STANDARD/FIELD QUALITY PLAN (RQP/SQP/RFQP/SFQP)

TO BE FILLED BY SUPPLIER AT TIME OF SUBMISSION		To be filled by NTPC	
PROJECT NAME	2X660MW KHURJA-STG PACKAGE		
CONTRACT NO	THDC/RKSH/CC-9915-371-FC-NOA-3115 DATED 03.10.2019		
PACKAGE	FACTORY FABRICATED STRUCTURE OF MAIN POWER HOUSE BUILDING (UNIT 1 & 2)		
MAIN SUPPLIER	BHEL		
MANUFACTURERS WORKS & ADDRESS	FSIP, BHEL JAGDISHPUR-AMETHI (U.P.)		
ITEM /EQUIPMENT / SYSTEM/ SUB-SYSTEM DETAILS i.e. MODEL TYPE/SIZE/RATING etc.	COLUMNS, BUILT-UP BEAMS, CRANE GIRDERS, ROOF GIRDERS, PURLINS ETC		
APPROVED QP NO.: RQP/SQP/RFQP/SFQP	AEL/PVUNI./BHEL/NTPC/QAP-01 REV-03 DATED 30.09.2019		
NTPC Approved drawing/Data Sheet No:	9915-371-110-PEM-QVC-Q-085: MOP FOR STRUCTURAL FABRICATION		
✓ The project specific technical specification requirements have been incorporated Confirmation by main supplier (TICK WHEREVER APPLICABLE)			
I. That the item/ component is identical to that considered for QP approval. OR.		The QP is endorsed for this project without any change. The QP is endorsed for this project PACKAGE with changes as indicated. DISTRIBUTION OF ENDORSEMENT OF A) RQP/SQP: 1. MAIN SUPPLIER (WITH A COPY OF QP) 2. MANUFACTURER 3. RIO B) RFQP/SFQP: 1. MAIN SUPPLIER (with a copy of QP) 2. MANUFACTURER	
II. That there are minor changes in the item/ component with respect to that considered for QP approval, however the same do not change affect the contents of QP. OR			
III. That there are minor changes in the item/ component affect the QP slightly, as-inflated-below / in attached sheet.			
SIGN: (Main Supplier)  DATE:		Atul Verma, Manager/Q&BE P C Mondal, DGM/Q&BE SIGN: (Manufacturer)  DATE:  P.C. MONDAL	
NTPC (Reviewed/ Approved by/ Date & Seal)			

गुण प्रमाणित (गुणित प्रमाणित)

Dy. General Manager (Quality-Head)
 अथवा/या, गुण प्रमाणित, अथवा/या, गुण प्रमाणित (गुणित प्रमाणित)
 BHEL, FSIP, Jagdishpur, Amethi (U.P.) 227617

ENDORSEMENT SHEET FOR QP/ क्यूपी हेतु पुष्टि शीट
REFERENCE / STANDARD / FIELD QUALITY PLAN (RQP / SQP/RFQP/SFQP)
संदर्भ / मानक / क्षेत्र क्वालिटी प्लान (आरक्यूपी / एसक्यूपी / एसएफक्यूपी / आरएफक्यूपी)

TO BE FILLED IN BY SUPPLIER AT TIME OF SUBMISSION/ जमा करते समय आपूर्तिकर्ता द्वारा भरा जाएगा		To be filled in by NTPC/ एनटीपीसी द्वारा भरा जाएगा	
PROJECT NAME/ परियोजना का नाम		REVIEW & ENDORSEMENT BY NTPC PROJECT	
CONTRACT NO / सविदा सं.		SPECIFIC QP NUMBER ALLOTTED / एनटीपीसी	
PACKAGE/ पैकेज		परियोजना की आवंटित विशिष्ट क्यूपी संख्या द्वारा समीक्षा तथा पुष्टि	
MAIN SUPPLIER/ मुख्य आपूर्तिकर्ता		QP NO क्यूपी सं.:	
MANUFACTURER WORKS & ADDRESS		REV. NO/संशोधन: DATE/ दिनांक:	
निर्माता का कार्य और पता		** The RQP/SQP/RFQP/SFQP once endorsed for a particular contract shall remain valid even though the original QP may have expired or revised, unless / otherwise mutually agreed with the supplier. ①	
ITEM /EQUIPMENT / SYSTEM/ SUB-SYSTEM DETAILS i.e. MODEL TYPE / SIZE /RATING etc.		** आरक्यूपी / एसक्यूपी / आरएफक्यूपी / एसएफक्यूपी एक बार किसी विशेष सविदा (अनुबंध) का समर्थन करता है, तो वही मूल क्यूपी भले ही समाप्त या संशोधित हो गयी हो, वह मान्य होगा, जब तक कि /अन्यथा आपूर्तिकर्ता से पारस्परिक सहमत न हो।①	
मद / उपकरण / प्रणाली / उप-प्रणाली का विवरण अर्थात माडल का प्रकार / आकृति / रेटिंग आदि।		(TICK APPLICABLE)/ (मान्य पर टिक करें)	
APPROVED QP NO.: RQP/SQP/RFQP/SFQP		The QP is endorsed for this project without any change/क्यूपी बिना किसी बदलाव के इस परियोजना के लिए समर्थित है	
अनुमोदित क्यूपी सं.: आरक्यूपी/एसक्यूपी/आरएफक्यूपी/एसएफक्यूपी		The QP is endorsed for this project PACKAGE with changes as indicated./क्यूपी निम्नलिखित बदलाव के साथ इस परियोजना / पैकेज के लिए समर्थित है, जैसा कि नीचे वर्णित है-	
NTPC Approved drawing/Data Sheet No:		DISTRIBUTION OF ENDORSEMENT OF/ निम्नलिखित की पुष्टि -	
एनटीपीसी द्वारा स्वीकृत 00000000/0		A) RQP/SQP: आरक्यूपी / एसक्यूपी:	
सं. 4		1. MAIN SUPPLIER (WITH A COPY OF QP)/ मुख्य आपूर्तिकर्ता (क्यूपी की एक प्रति सहित)	
Signature Not Verified		2. MANUFACTURER/ निर्माता	
SONKAR			
Date: 2021.03.20			
Reason: CAT-I			
Location: NTPC/QC			
I. That the item/component is identical to the one considered for QP approval. OR			
यह कि मद / अवयव क्यूपी अनुमोदन के लिए विचार किया जा सके। अथवा			
II. That there are minor changes in the component with respect to that considered for QP approval, however the same do not affect the contents of QP. OR			
यह कि क्यूपी अनुमोदन के लिए सुविचारित मद / अवयव में मामूली परिवर्तन हो, हालांकि वही क्यूपी की विषय-सूची को प्रभावित नहीं करता हो। अथवा,			



2021/03/20

FORMAT NO.: QS-01-QAI-P-03/ F3

ENDORSEMENT SHEET FOR QP/ क्यूपी हेतु पुष्टि शीट
REFERENCE / STANDARD / FIELD QUALITY PLAN (RQP / SQP/RFQP/SFQP)
संदर्भ / मानक / क्षेत्र क्वालिटी प्लान (आरक्यूपी / एसक्यूपी / आरएफक्यूपी / एसएफक्यूपी)

TO BE FILLED IN BY SUPPLIER AT TIME OF SUBMISSION/ जमा करते समय आपूर्तिकर्ता द्वारा भरा जाएगा  **To be filled in by NTPC/ एनटीपीसी द्वारा भरा जाएगा**

That there are minor changes in the item/ component with respect to that considered for QP approval, however the same affect the QP slightly, as indicated below / in attached sheet.

कि क्यूपी अनुमोदन के लिए सुविचारित मद / अवयव में मामूली परिवर्तन हो, हालांकि वही क्यूपी को थोड़ा प्रभावित करता है, जैसा कि नीचे लग्न पत्रक में दर्शाया गया है।

3. RIO/ आरआईओ

B) RFQP/SFQP आरएफक्यूपी / एसएफक्यूपी:

1. MAIN SUPPLIER (with a copy of QP)/ मुख्य आपूर्तिकर्ता (क्यूपी की एक प्रति के साथ)
2. MANUFACTURER/ निर्माता

FN.: (Main Supplier)
 निर्माता: (मुख्य आपूर्तिकर्ता)

DATE
 तिथि

SIGN.: (Manufacturer)
 हस्ताक्षर: (निर्माता)

DATE: 20.03.21
 तिथि

NTPC (Reviewed /Approved by/ Date & Seal)
 एनटीपीसी (द्वारा समीक्षा /अनुमोदित/ मुहर सहित तिथि)

previous site of BHEL

Supplier's name:
M/S BHEL
FSIP, BHEL Jagdishpur - Amethi
(U.P.)

ur - Amethi		TED PLOT UR (M.H.)		MANUFACTURING QUALITY PLAN (MQP)									
				QAP NO		AEL/PVUNL/BHEL/NTPC/QAP-01		PROJECT :		3X800MW PATRATU VIDYUT UTPADAN NIGAM LTD.PATRATU STPP.			
				Rev		R-03		PACKAGE :		POWER HOUSE STRUCTURE FABRICATION - (UNIT#2)			
				Date		30.09.2019		CONTRACT NO:		01/PVUN-CS-9585-001-2/NOA/SC			
				ITEM		Columns, Built UP Beams,Crane girders, Roof Girders		MAIN CONTRACTOR :		BHEL-PSWR (Bharat Heavy Electricals Limited- PSWR)			
Maximum weight of structure in single piece should be 25 MT Approx.(as per approved BHEL Drg)													
SL-No.	Component & Operations	Characteristics	Class	Type of Check	Quantum of check		Reference Document	Acceptance Standard	Format of Record	AGENCY			Remark
					M	C/N				M	C	N	
1	2	3	4	5	6	7	8	9	D	**10			11
1.0	RAW MATERIAL (The Actual Material Shall Be As Per Drg)												
1.1	Raw Materials: IS 2062 E250 A,BR & E350 B0.	Chemical and Mechanical Properties	A	TC Verification	100%	100%*	As Material Specification		Mfg TC	V	P	V	V
		Soundness (UT*)	A	TC Verification	100%	100%	A578 Level-B	A578 Level-B	Mfg TC				
For Materials IS 2062 E250BR& E350 B0: i) plates of thickness t _a ≥ 12mm ≤ 40mm Shall be Normalized rolled and Fully killed. ii) Plates of thickness t > 40mm shall be fully killed, vacuum degassed and furnace normalized. Impact Testing as per material specification: i) IS 2062 E250BR at room temperature. ii) IS2062E350B0 at 0°C * Raw materials correlated to T for L>40mm													
2.0	WELDING :												
2.1	Procedure Qualification	Welding Parameter	B	Test	100%	100%	ASME Sec IX / AWS D1.1	ASME Sec IX / AWS D1.1	Author Signature by R.K.JHA MR01@ntpc.co.in Signature Not Valid Date: 30/09/2019 16:12:36 IST By: R.K.JHA Location: NTPCEOC				
2.2	Personal Qualification	Performance	B	Test	100%	100%	ASME Sec IX / AWS D1.1	ASME Sec IX / AWS D1.1	Reviewed by Approved by Approved Seal				
Vivek Pandey		R.O. Jadhav	Legend : Records , identified with * tick" shall be essentially included by supplies in QA documentation. M: Manufacturer/sub supplier, C : BHEL/BHEL Appointed TPJA, N : NTPC, A-Critical, B-Major ,C-Minor, P : Perform, V: Verification, W: Witness, R : Report, PT : Penetrant Testing, MT :Magnetic Particle Testing. NDE : Non Destructive Examination NOTE: ALL applicable procedure approved by BHEL to be followed					FOR NTPC USE		REV: NTPCEOC			
M/s. ARTSON ENGINEERING LIMITED		M/s.BHEL-PSWR						Page 1 of 3		M/s.NTPC			

Supplier's name:
M/S BHEL
FSIP, BHEL Jagdishpur - Amethi (U.P.)

SUPPLIERS NAME :				MANUFACTURING QUALITY PLAN (MQP)											
ARTSON ENGINEERING LIMITED PLOT NO. D-1, MIDC UMRED NAGPUR (M.H.) 441203		QAP NO		AEL/PVUNL/BHEL/NTPC/QAP-01		PROJECT :		3X800MW PATRATU VIDYUT UTPADAN NIGAM LTD,PATRATU STPP.							
		Rev		R-03		PACKAGE :		POWER HOUSE STRUCTURE FABRICATION - (UNIT#2)							
		Date		30.09.2019		CONTRACT NO:		01/PVUN-CS-9585-001-2/NOA/SC							
		ITEM		Columns, Built UP Beams, Crane girders, Roof Girders		MAIN CONTRACTOR :		BHEL-PSWR (Bharat Heavy Electricals Limited-PSWR)							
Maximum weight of structure in single piece should be 25 MT Approx.(as per approved BHEL Drg)															
Sl. No.	Component & Operations	Characteristics	Class	Type of Check	Quantum of check		Reference Document	Acceptance Standard	Format of Record		AGENCY			Remark	
					M	C/N					M	C	N		
1	2	3	4	5	6	C/N	7	8	9	10		**10		11	
2	In-Process														
3.1	Edge preparations(Shop Welds)	NDE	C	LPI/MPI	100%		BHEL Approved Drawing		✓	P	V	-			
3.2	Back gouging weld grooves	Surface Check	B	LPI	100%	100% / 10%	BHEL Approved Procedure	R		P	W	V			
4.0	Production Test coupon for main columns,Built-up beams And Crane Girders Of TG hall structures														
4.1	For Butt Welds	Weld Soundness	B	KI & MELH	**	**	ASME Sec-V and BHEL approved Drg. & procedure			P	V	V	** (1) For "+" columns, one test plate per column For other column one test plate per PGMA/Per S/C for each work order For built beams one test plate per PGMA/Per S/C for each work order (2) for crane girder one test plate per crane girder		
4.2	For Hillet Welds	Weld fusion	B	MACRO ETCH	**	**	AWS D1.1, ASTM E 340	AWS D1.1, ASTM E 340	R		P	W	V	** (1) For "+" columns, columns, Built-up Beams (+37mm) one test per column	
5	NDT & PWHT														
5.1	Visual Inspection of butt welds	Weld quality	B	Visual	100%	100%	ASME Sec-V & BHEL approved procedure			P	W	V			
5.2	Butt welds-weld quality & weld soundness	Plate thick ≥ 32	B	RT/UT	100% #	100%	ASME Sec-V & BHEL approved procedure	ASME Sec V / AWS D1.1	R		P	W	W	# 100% RT for Butt welds of Tension Flange of Crane Girders	
		25mm ≤ plate thick < 32mm	B	RT & MPI	10% RT, 100% MPI	100% MPI / 10%					P	W	W		
		Plate thick < 25mm	B	MPI/LPI	100%	10%					P	W	V		
 Vivek Pandey				Legend : Records , identified with " tick" shall be essentially included by supplies in QA documentation. M: Manufacturer/sub supplier, C : BHEL /BHEL Appointed TPIA, N : NTPC, A-Critical, B-Major ,C-Minor, P : Perform, V: Verification, W: Witness, R : Report, PT : Penetrant Testing, MT :Magnetic Particle Testing, NDE : Non Destructive Examination				FOR NTPC USE		Reviewed by		Approved by		Approved Seal	
M/s. ARTSON ENGINEERING LIMITED		M/s.BHEL-PSWR		NOTE: ALL applicable procedure approved by BHEL to be followed				Page 2 of 3		M/s.NTPC					

SUPPLIER'S NAME :		MANUFACTURING QUALITY PLAN (MQP)													
Supplier's name: M/S BHEL FSIP, BHEL Jagdishpur - Amethi (U.P.)		QAP NO	AEL/PVUNL/BHEL/NTPC/QAP-01		PROJECT :		3X800MW PATRATU VIDYUT UTPADAN NIGAM LTD, PATRATU STPP. POWER HOUSE STRUCTURE FABRICATION - (UNIT#2)								
		Rev	R-03		PACKAGE :		01/PVUN-CS-9585-001-2/NOA/SC								
		Date	30.09.2019		CONTRACT NO:		BHEL-PSWR (Bharat Heavy Electricals Limited-PSWR)								
		ITEM	Columns, Built UP Beams, Crane girders, Roof Girders		MAIN CONTRACTOR :										
Maximum weight of structure in single piece should be 25 MT Approx.(as per approved BHEL Drg)															
SL- No.	Component & Operations	Characteristics	Class	Type of Check	Quantum of check		Reference Document	Acceptance Standard	Format of Record		AGENCY			Remark	
					M	C/N			M	C	N				
1	2	3	4	5	6		7	8	9	10	11	12	13		
5.3	Visual Inspection of fillet welds	weld quality	B	Visual	100%	100%	BHEL approved Procedure			P	W	V			
5.4	Fillet welds	NDE	B	LPI /MPI	100%	10%#	BHEL approved Procedure	R		P	W	V	#25% weld length of tension member of crane girder		
5.5	PWHT	Time & Temperature	B	Review of documents	100%*	100%	As per WPS & Tech. specification, BHEL Approved Procedure	R		P	V	V	*All butt welds when t > 50mm		
6	End Plates/ Splice Joint Plates for bolted Connections														
6.1	Machining/End milling (If Applicable)	Surface finish, Squareness, Flatness	B	Measurement	100%	Random	BHEL Approved Drawing	R		P	W				
6.2	Trial Assy. of columns & Roof girders	Orientation	B	Visual & Measurement	100%	100%	As per BHEL Approved Drawing/ Trial Assembly procedure	R	V	P	W	W*	* Any one assy. in case of roof girders		
Dimensions															
Match marks															
7.0	Verification of completion	Dimensions*	B	Visual & Measurement	100%	100%	*As per BHEL approved Drawing, NDT reports, HT chart extracts, Trial assembly reports & Final CIP clearance	R		P	V	V			
Orientation*															
Data Folder compilation for columns and girders															
8.0	Painting, Preservation & protection	Material	B	Review of hatch TC	100%	100%	As per NTPC Painting scheme	R		P	V	V			
		Surface preparation	B	Physical/visual	100%	10%	As per NTPC Painting scheme	R	V	P	V	V			
		Painting thickness	B	Physical	100%	10%	As per NTPC Painting scheme	R		P	V	V			
 Vivek Pandey				Legend : Records , identified with " tick " shall be essentially included by supplier in QA documentation. M: Manufacturer/sub supplier, C : BHEL /BHEL Appointed TPIA, N : NTPC, A-Critical, B-Major, C-Minor, P : Perform, V: Verification, W: Witness, R : Report, PT : Penetrant Testing, MT : Magnetic Particle Testing, NDE : Non Destructive Examination NOTE: ALL applicable procedure approved by BHEL to be followed				FOR NTPC USE							
M/s. ARTSON ENGINEERING LIMITED		M/s. BHEL-PSWR						Page 3 of 3		Reviewed by		Approved by		Approved Seal	
												M/s. NTPC			

Inspection categorisation is as under:

- 1- Floor beams and bracing made of rolled section, Handrail, staircase, Walkways/galleries, Bolts, Nuts and washers shall be treated as inspection CAT-III.
- 2- All Columns, Girders and built up beams/bracing shall be treated as inspection CAT-I.
3. No inspection by NTPC is envisaged for CAT-III Items. BHEL to submit the COC.
4. Material to be procured from NTPC approved sources with correlated TCs and same shall be verified by RIO.