



MANUFACTURER'S NAME AND ADDRESS:

## STANDARD MANUFACTURING QUALITY PLAN

ITEM: MACHINING OF PELTON RUNNER (FROM FORGED DISC)

QP NO.: QA/HT/2143

REV.NO.: 00

DATE: 11/06/2022

PAGE: 01 OF 01

PO NO. & DATE (To be filled by the vendor)

REFERENCE DOCUMENT: PURCHASE ORDER & BHEL DRAWING AND INSPECTION SHEET

SL. NO	OPERATIONS & CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REF. DOC.	ACCEPTANCE NORMS	FORMAT OF RECORD	AGENCY			REMARKS
				M	B				M	B		
1.	2.	3.	4.	5.		6.	7.	8.	D*	**	10.	11.
1.	Template check (check of templates with 1:1 drawing)	Critical	Measurement	100%	100%	1.1 drawing / BHEL drawing		QCR	✓	P	W	
2.	Checking of bucket Chord / pitch	Critical	Measurement	100% (each bucket)		Drawing / Drawing TR / BHEL inspection sheet		QCR	✓	P	W	
3.	Checking of bucket Inner & outer width	Critical	Measurement	100% (each bucket)		-do-		QCR	✓	P	W	Each bucket to be identified with running serial number hard punched
4.	Checking of bucket PCD	Critical	Measurement	100%	100%	-do-		IR	✓	P	W	
5.	Check of complete bucket profile (longitudinal & transverse) including root area, splitter section, bucket angle w.r.t. hub, blending radius & bucket thickness	Critical	Measurement	100% (each bucket)		-do-		QCR	✓	P	W	
6.	Final main dimensions (Runner OD, ID, Hub thickness)	Major	Measurement	100%	100%	-do-		QCR	✓	P	W	
7.	Surface finish (to be recorded separately for hub, central bore and each bucket inside & outside region)	Critical	Measurement	100%	100%	-do-		QCR	✓	P	W	
8.	Waviness check & undulation check	Major	Measurement	100% (each bucket)		-do-		QCR	✓	P	W	
9.	Visual inspection (check for sling, tool marks etc)	Minor	Measurement	100%	100%	-do-		QCR	✓	P	W	
10.	Identification	Major	Visual	100%	100%	-do-		QCR	✓	P	W	
11.	Packaging & bucket protection	Major	Visual	100%	100%	-do-		CoC	✓	P	W	
12.	Weight of finished runner	Minor	Measurement	100%	100%	-do-		CoC	✓	P	V	Photographs to be approved by BHEL before dispatch
								QCR	✓	P	V	

LEGEND: \* RECORDS, IDENTIFIED WITH "TICK" (✓) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION.

\*\* M: MANUFACTURER/SUB-SUPPLIER C: SUPPLIER/SUPPLIER NOMINATED INSPECTION AGENCY, B: BHEL'S CUSTOMER/ BHEL QC/ BHEL APPOINTED INSPECTION AGENCY (OR ANY COMBINATION OF 2 AGENCIES)

P: PERFORM W: WITNESS AND V: VERIFICATION IR-INSPECTION REPORT

QCR-QC REPORT TC-TEST CERTIFICATE RR-REVIEW OF RECORD

CoC: CERTIFICATE OF COMPLIANCE

ACCEPTED BY  
(VENDOR'S QC REPRESENTATIVE)

Dy. Manager

1. QWTD Division

BHEL, BHOPAL

3. In case of any discrepancy / interpretational issue, BHEL PO and Drawing shall be binding.