



BHEL-HERP, VARANASI
QUALITY PLAN

AA-19332

Rough Machined Forging

Sl.No.	Component/ Operation	Characteristic Checked	Type/Method of Check	Extent of Check	Reference Documents	Acceptance Norm	Format of Record	Agency			Remarks	
								P	W	V		
1	Ingot/Billet/Blooms	i. Material Identification ii. Composition	Visual i. Chemical Analysis	100% 1 Sample per melt	AA19332	AA19332	I.R. T.C.	3 3	- -	- 2	Review of Mill TC	
2	Forging	i. Heat Treatment ii. Test Piece Marking (Integral Test Piece) iii. (a) Mechanical Properties (b) Composition	H.T.Chart Transfer of Marking Mechanical Test on identified test piece Chemical Analysis	1 Sample per H.T.batch -do- -do- -do-	AA19332 -do- AA19332 -do-	AA19332 -do- AA19332 -do-	HT Chart Q.C.Record T.C. -do-	3 3 3 3	- 2 2 -	- - - 2		
3	In Process (After Rough Machining)	i. Dimensions ii. Soundness of Forging after skin cut	Measurement Ultrasonic Testing	100% 100% (Refer Remark)	Drawing Tech.Spec. AA0850118	Drawing Tech.Spec. AA0850118	D.R. U.T.Report	3 3/2	- 2	- -		100% UT as per Cat.2 to be witnessed for Critical forging like UJ Housing, LJ Housing, Journal Shaft and Trunnion shaft. In case of Shafts, UST to be carried out before Centre thru hole drilling. Rest of the other forging, random 10% UT as per Cat.2 to be witnessed by BHEL representative.
		iii. Surface / Sub surface cracks	M.P.I.	100% (Refer Remark)	Tech.Spec. AA0850133	AA0850136 CAT-II	I.R.	3/2	2	-		
4	Final Inspection	i. Cleanliness ii. Identification & Marking iii. Prevention (from rust)	Visual Punching Heat No. Inspector Seal Visual	100% 100% 100%	---- ---- ----	---- ---- ----	I.R. I.R. I.R.	3 3 3	2 2 2	- - -	100% MPI to be witnessed for Critical forging like UJ Housing, LJ Housing, Journal Shaft and Trunnion shaft. Rest of the other forging, random 10% MPI to be witnessed by BHEL representative.	
Q.P.No.	RV/C&F/21 Rev.10	Approved by	PK Prajapati	Approved by	SK Tiwari	Legend P=Perform W=Witness V=Verify 3=Vendor/Supplier						TC=Test Certificate HT=Heat Treatment DR=Dimension Report IR=Inspection Report
Date	06-04-2019	Signature & Date		Signature & Date								
Page No.	1 of 1											

प्रदीप कुमार प्रजापति / P.K. Prajapati
उप प्रबंधक (अ. एवं वि.) / Dy. Manager (E&M)
भारत हेवी इलेक्ट्रिकल्स लि. / BHEL-HERP
तरना, शिवपुर, वाराणसी / Tarna, Shivpur, Varanasi

Rev-08 BHEL approved sources and Review of Mill TC added for Ingot/Billet/Blooms
Rev-09 clause for UST test of Shaft to be done before centre thru hole drilling added
Rev-10 BHEL approved sources for Ingot/Billet/Blooms deleted and remark of UT and MPI modified.