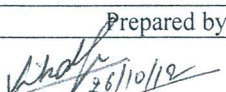
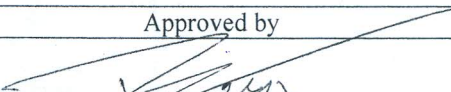


FINISH MACHINING OF RUNNER BLADE CASTING**i) PRE QUALIFICATION**

S.No.	BHEL Requirement	Vendor's Confirmation
1	Only those vendor should quote who have experience of finish machining of profile of Runner Blades (Hydro sets) to the full satisfaction of the customer(preferably similar in size and profile)	Vendor to Confirm and submit detail (including copies of P.O. & Inspection report alongwith the offer)
2	Vendor should have 5 axes CNC Machine with Table size suitable to accommodate the blade	Vendor to Confirm and submit detail
3	Vendor should have the facility for CNC programming for achieving the 3 dimensional profile	Vendor to Confirm
4	Vendor should have fixture making capability in house	Vendor to confirm
5	Vendor should have surface finish measuring equipment	Vendor to confirm
6	Vendor should have software for 3D modeling and machining capability as per model	Vendor to confirm

ii) TECHNICAL REQUIREMENT

S.No.	BHEL Requirement	Vendor's Confirmation
1	Blade should be machined as per the Profile Drawing (1-204-00-85001) & Welding edge detail drawing of Runner casting (Sheet 2 of 0-204-07-18603)	Vendor to confirm
2	Blades should be machined on all its surfaces (Pressure side, Suction side, Inlet edge, Outlet edge, Crown -Blade mating surface, Skirt-Blade mating surface)	Vendor to confirm
3	Blade should be machined keeping 2±1 mm allowance on both pressure and suction surfaces of the blade.	Vendor to confirm
4	6-8 mm machining allowance shall be available on pressure and suction surfaces. However, near the outlet edge of the blade (thinner area), the allowance shall be in the range of 10-15mm. Allowance on inlet, outlet, crown-blade and skirt-blade surfaces shall also be in the range of 10-15mm	Vendor to Note
5	Grinding should be done on all surfaces after final machining to achieve surface finish of 3.2 microns	Vendor to confirm
6	As cast weight of blade:- 1200 kg (approx.)	
7	Finish weight of blade:- 875 kg (approx.)	Vendor to Note
8	Material of blade shall be : ASTM A609 CA6NM (13%Cr-4%Ni Stainless Steel)	Vendor to Note
9	Complete Dimensional, Profile, Surface finish inspection shall be carried out by BHEL representative at Vendors works.	Vendor to Note
10	All required tools, instruments, jigs, fixtures, Templates, Gauges etc. for above should be arranged by the vendor	Vendor to confirm
11	After machining, blade should be given identification details by Hard punched	Vendor to confirm
12	Vendor to submit following with the offer:- - Details of the Organization - Details of the machine tools and other facilities installed in the company - Details of the similar works carried out in the past along with customer's detail	Vendor to submit
13	Vendor to submit Filled Supplier Registration Form along with Requisite Documents to SDC Cell in MM Deptt.of CFFP, BHEL, Haridwar. If already registered at any other unit of BHEL, then Vendor code may be furnished. Vendor may plan a visit to CFFP	Vendor to submit
14	BHEL team may visit vendor's works for facility/capacity verification.	Vendor to Note

Prepared by  26/10/19 Vikalp Bibhuti, Engineer (M/c shop)	Approved by  R.Mehra, AGM (Forge & M/c shop)
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