 EM DIVISION	<b>QUALITY PLAN</b>	DOC NO	323-QP-CF-032
	<b>QUALITY PLAN FOR SPROCKET CASTING - SUPPLIERS</b>	ISSUE NO	2
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**1 Purpose**

To establish procedures of inspection and testing of sprocket casting at supplier end.

**2 Scope**

Covers inspection and testing of sprocket casting of BD50, BD80, BE220, BE300, BE700, BE1000 & BE1600

**3 Responsibility**

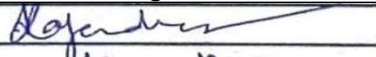

- (1) The section head of Castings/Forgings Materials group to ensure that the quality plan is sent to all suppliers along with the purchase order.  
(2) The suppliers shall ensure that quality plan is followed for testing and inspection of the Castings.



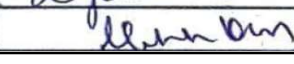
**4 Procedure**

The quality plan is applicable for sprocket castings of equipment mentioned in table 1. Supplier should carry out inspection and testing of castings as per Table - 2

**TABLE -1**

#	EQUIPMENT	CASTING PART NO	Supply Condition / Hardness
1	BD50	110FD31518	Normalise 183~243BHN
2	BD80	116FD31029	Normalise 183~243BHN
3	BE220	155FD31472	Normalise 183~243BHN
4	BE300	160FD31156	Normalise 183~243BHN
5	BE700	171FD31402	Normalise 183~243BHN
6	BE1000/BE1250	175FD31136	Quench & Tempered 241BHN minimum
7	BE1600	181FD31165 & 181FD31157	Normalise 183~243BHN

	Name	Signature	Date
Prepared by	RAJENDRA BABU K		16.09.2020
Approved by	MAHESH KULKARNI		16.09.2020

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<b>Table -2</b>				
<b>SLNO</b>	<b>TEST</b>	<b>PERIODICITY OF TESTS</b>		
1	Visual inspection	The Castings shall be free from foundry defects such as: shrinkage, porosity and blow holes, hot tear and cracks, hard spots, sand fusion etc. and other surface abnormalities, shall be checked on 100% of castings.		
2	Dimensions	100 % dimensions shall be checked for sample castings as per drawing requirements. Untoleranced dimensions shall be as per IS4897-1994 Class-1 For regular supplies, all tooth profile to be ensured by using template: i) Template should be as per the tooth details shown in drawing. ii) Template should cover minimum 3-teeths. iii) Template should be made of metal and prior approval of template to be obtained from BEML. Flatness to be ensured on 100% castings.		
3	Mandatory Requirement	Weld repairs are not permitted at red marked area as indicated in sketch enclosed.		
4	Mechanical Properties	One no. test bar per heat to be checked for mechanical properties report to be sent along with each consignment		
5	Composition	1 number sample /heat shall be checked and test report shall be sent along with every consignment.		
6	MPI	100% castings shall be checked after shot blasting on all surfaces to ensure freedom from cracks and hot tears.		
7	Radiography	During sample development, consecutive 3nos. of castings shall be checked by radiography and ensure for Level-II of ASTM-446 or better		
8	Fracture test	During sample development, a suitable sample to be taken from casting and subjected to fracture test. The fracture surface shall be fine grained and free from coarse columnar grains. Fractured samples to be sent to beml along with the sample castings.		
9	Identification / Traceability	The castings shall be marked with vendor code, part no. & sl.no., heat no. & BEML logo		
10	Supply Condition	Castings of sample batch and regular supplies to be in un-painted condition		
	Name		Signature	Date
Prepared by	RAJENDRA BABU K			16.09.2020
Approved by	MAHESH KULKARNI			16.09.2020

