

Annexure -M
3DS&F TYPE GUIDE BLADES MPP:

SL.NO	Operation:	Machine	Dimensions to be Inspected	Remarks
1	Cut the raw material to size (blade length+40mm)	Band saw.	Length.	
2	Roughing of root and profile.	3 Axis CNC	--	
3	Root finish milling.	4 Axis CNC	Dimensions as per drg.	Dimensions to be filled in DIR.
4	Root radius milling.	4 Axis CNC	Dimensions as per drg.	-do-
5	Profile milling (both convex and concave).	4 Axis CNC	Dimensions as per drg.	-do-
6	Taper milling on front profile side.	4 Axis CNC	--	-do-
7	Taper milling on back profile side.	4 Axis CNC	--	-do-
8	Taper grinding on front side.	Surface Grinder	--	-do-
9	Taper grinding on back side.	Surface Grinder	--	-do-
10	Milling of extra material on both ends.	3 Axis M/Cing Centre.	--	-do-
11	Root bottom radius milling.	3 Axis M/Cing Centre.	--	-do-
12	Grinding on Shroud and Root transition areas.	Hand Grinding Tools.	--	-do-
13	Vibro Tumbling.	Vibro Tumbler.	--	-do-
14	Surface finish testing.	Surface Finish Tester.	Surface Finish as per drg.	-do-
15	Final Inspection	3D CMM	All dimensions as per drg.	As per Quality Plan.

NOTE: Operations No (3-7) are to be done on single setup.