LIST OF TABLES

Table 3.1 Input data for the model

Table 4.1 Dimensions of test bearing
Table 4.2 Specifications of PCB triaxial accelerometer (Model 356A01)
Table 4.3 Specifications of modal impact hammer
Table 4.4 Specifications of sound and vibration card (NI 9234)
Table 4.5 Particulars of defect for test bearings

Table 5.1 Summary of wavelet families and properties
Table 5.2 List of wavelets used in the study

Table 6.1a Ranking of wavelets as per scheme 1
Table 6.1b Weighting schemes for comparison
Table 6.2 Value of attributes for defective outer race
Table 6.3 Best mother wavelets selected by individual criteria
Table 6.4 An example for deciding overall rating of mother wavelet
Table 6.5 Overall rating of mother wavelets for defective outer race
Table 6.6 Overall rating of mother wavelets for defective inner race
Table 6.7 Overall rating of mother wavelets for combined defect on ball and outer race
Table 6.8 Decomposition level and corresponding frequency bands
Table 6.9 Dimensions of TMK 71450
Table 6.10 Defect frequencies for TMK 71450 at 528 rpm
Table 6.11 Value of attributes for TMK 71450
Table 6.12 Overall rating of mother wavelets for TMK 71450
Table 6.13 Vibration severity chart as per ISO 10816
Table 6.14 Value of attributes for TRB 32212 on lathe 2
Table 6.15 Overall rating of mother wavelets for TRB 32212 on lathe 2 for different weighting schemes
Table 6.16 Value of attributes for TRB 32212 on lathe 1

Table 6.17 Overall rating of mother wavelets for TRB 32212 on lathe1 for different weighting schemes

Table 6.18 Summary on best mother wavelet for different bearings and conditions

Table 6.19 Overall rating of mother wavelets for TRB32212 on lathe 2 as per five different weighting schemes

Table A.1 Bill of materials

Table A.2 Different sections along length of shaft

Table A.3 Ratio of $F_a/F_r$

Table A.4 Power loss for support and test bearings

Table A.5 Radial spring details

Table A.6 Axial spring details