LIST OF TABLES

Table 4.1 Number of swaps and comparisons for image with different Noise Densities........................................ 72

Table 4.2 Execution time of algorithms........................................ 74

Table 5.1 Zernike Moment Feature Vectors ........................................ 86

Table 5.2 Degree of membership after clustering using FCM........ 88

Table 6.1 Features Extracted using PCA of various weld defects Radiographic images ......................................................... 96

Table 7.1 Mean Square Error (MSE) of Training and Testing using LVQ, RBF and BPN based neural network................................. 109

Table 8.1 Performance parameters of reconstruction of Head Phantom Image ................................................................. 118

Table 8.2 Performance parameters of reconstruction of Lack of Penetration Phantom image ......................................................... 118

Table 9.1 Feature Vectors extracted by Radon Transform................. 135

Table 9.2 Feature Vectors extracted by Zernike Moments.............. 137

Table 9.3 Average Number of iterations consumed by objective function to get minimized ......................................................... 139

Table 9.4 Degree of membership after clustering using the feature vector extracted by Radon Transform................................. 139

Table 9.5 Degree of membership after clustering using the feature vector extracted by Zernike Moment........................................ 140