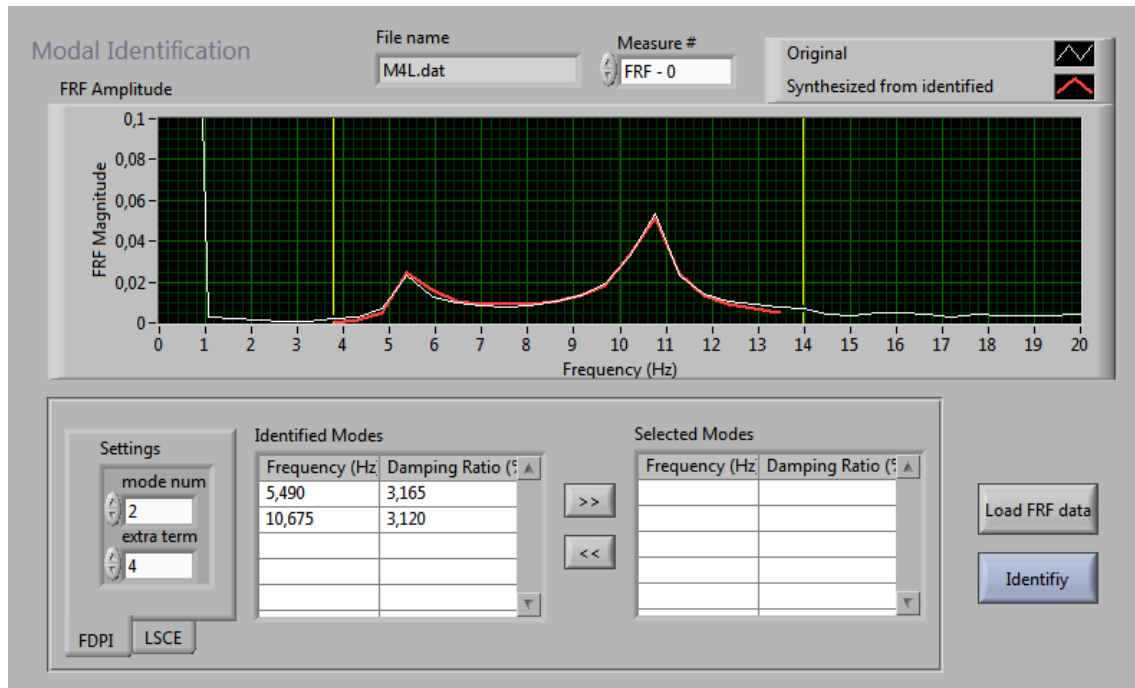


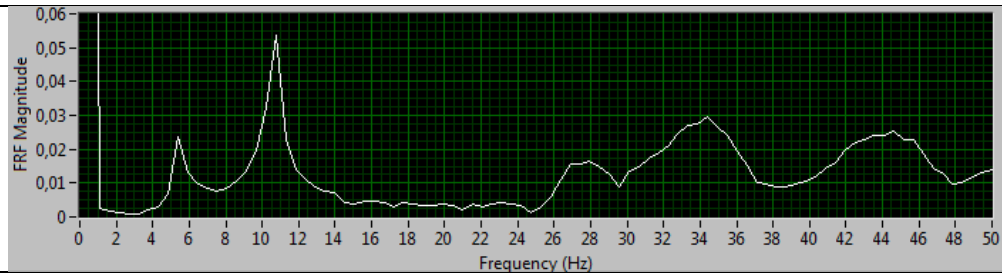
Observations in LabVIEW.

M4L

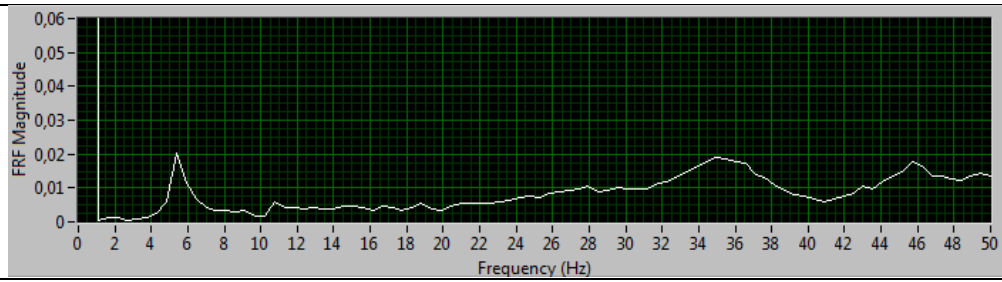
Two natural modes are observed, the first is a straight mode in the test plane and the second is a torsional mode. The first mode has a frequency of approximately 5.5Hz and the second is approximately 10.7Hz, damping ratios of 3.17% and 3.12% respectively.



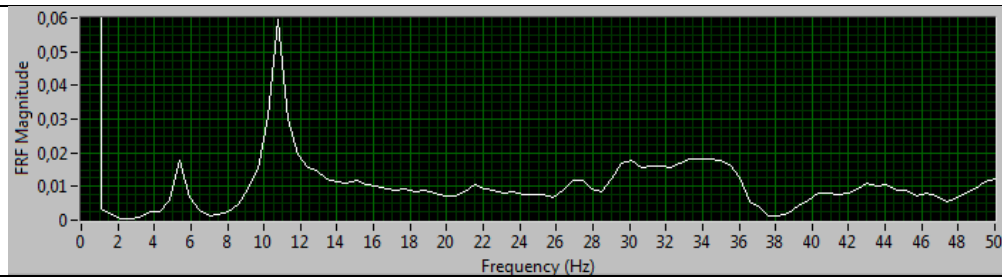
M4L Node 0



M4L Node 1

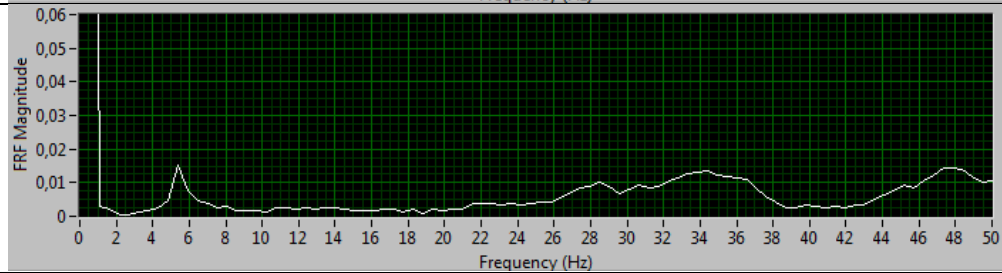
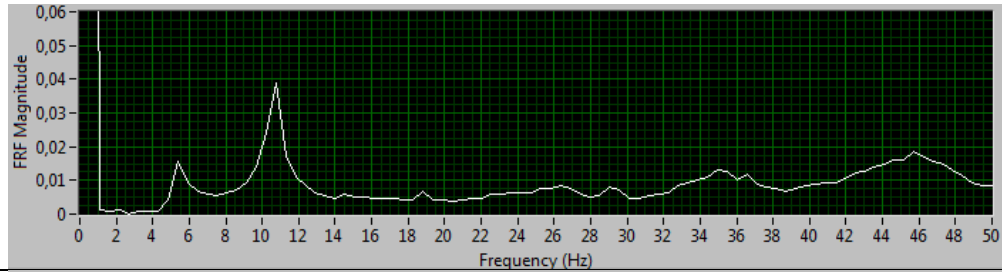


M4L Node 2

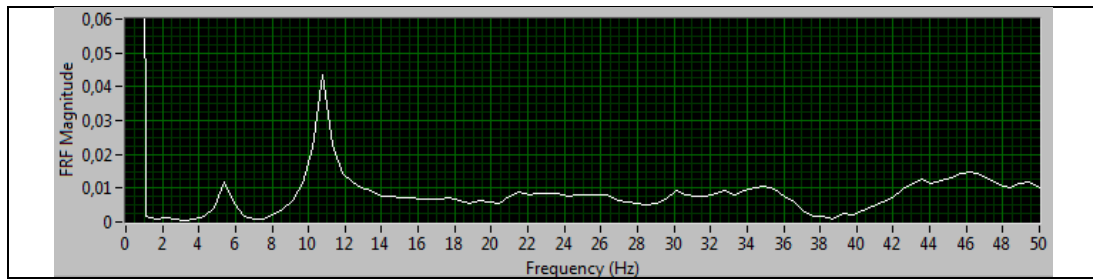


M4L Node 3

M4L Node 4

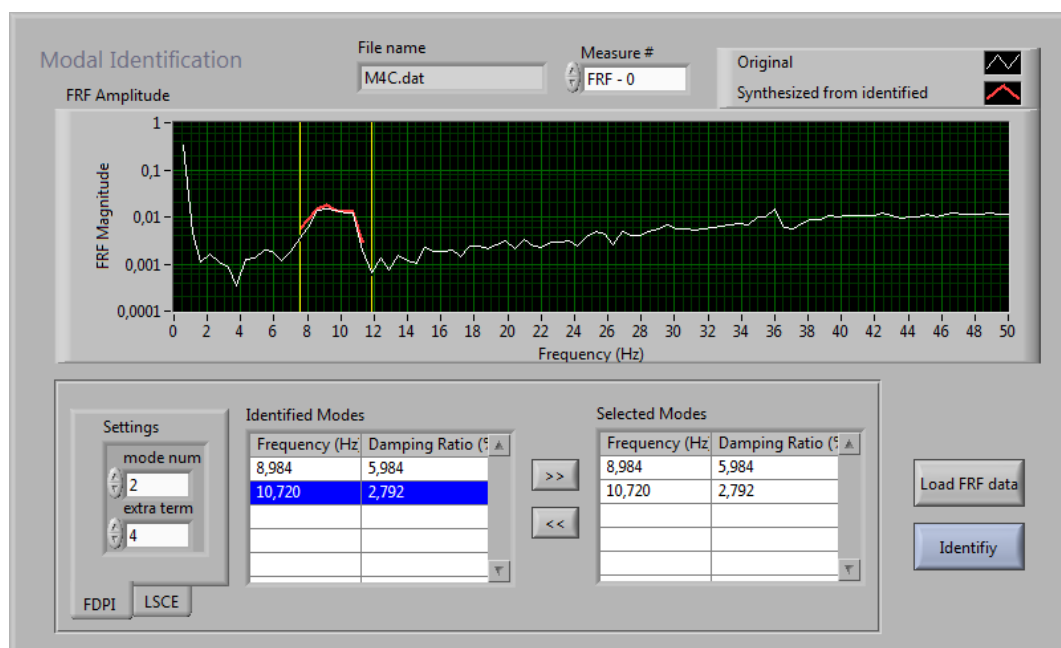


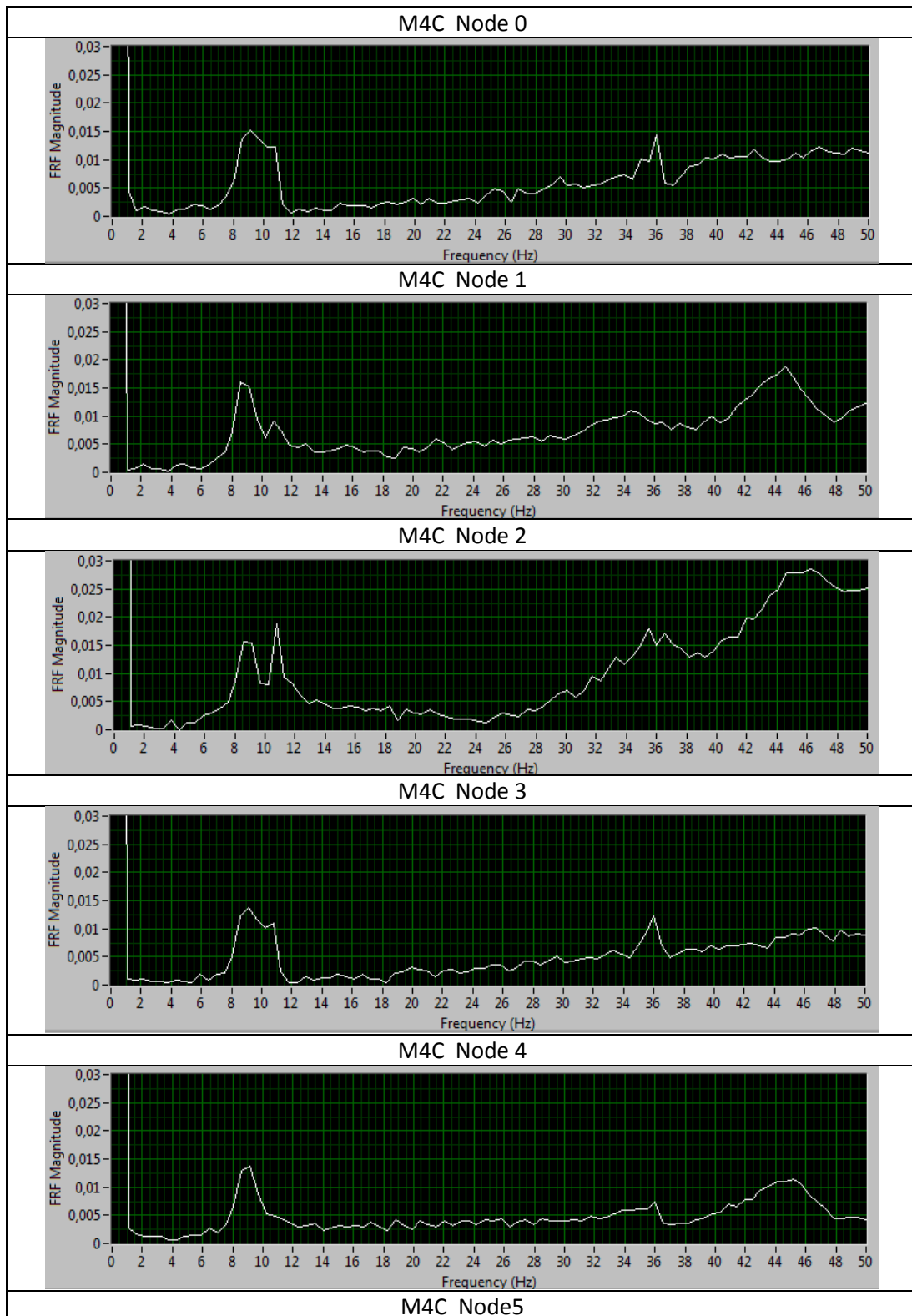
M4L Node5

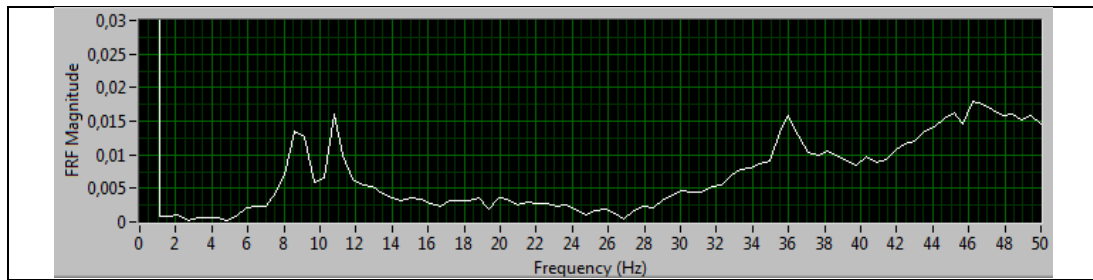


M4C.

Two natural modes are observed, the first is a straight mode in the test plane and the second is a torsional mode. The first mode has a frequency of approximately 9 Hz and the second is approximately 10.7 Hz, damping ratios of 6% and 2.8% respectively.





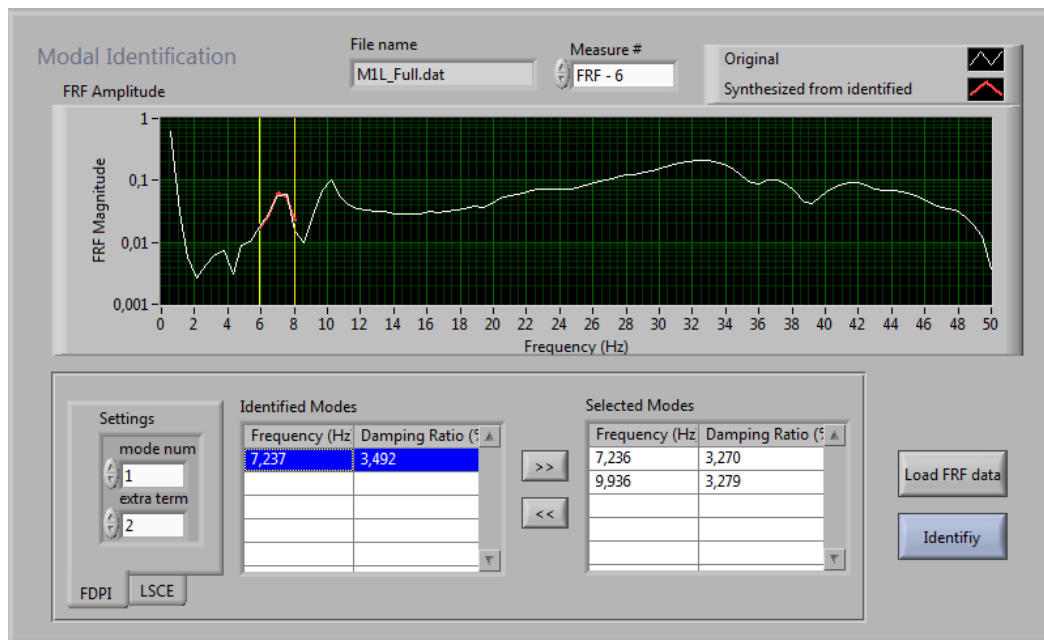


M1L

Two tests were performed

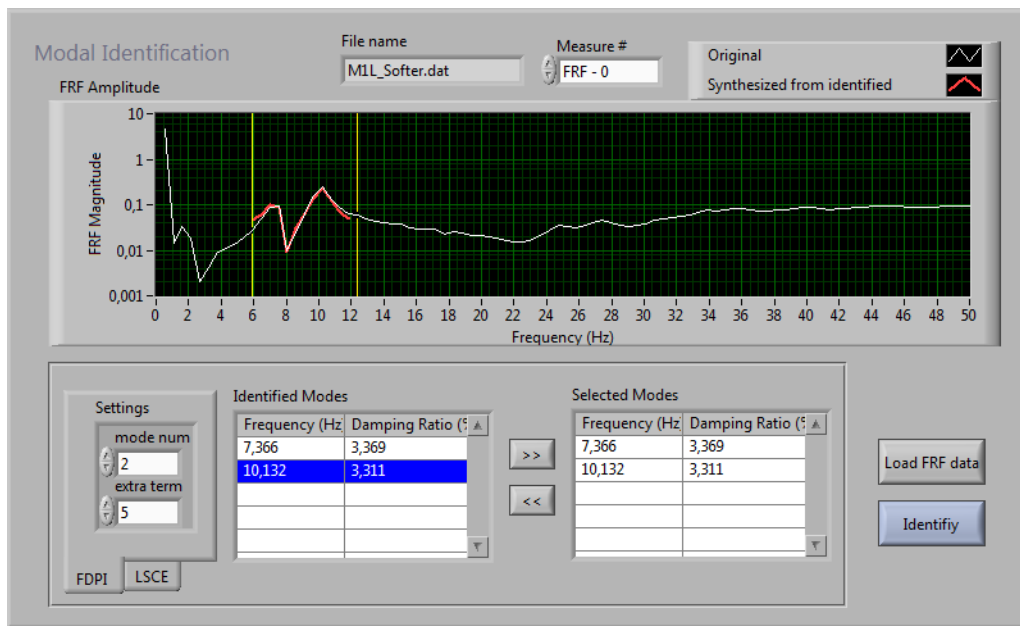
1. Normal impact

Two natural modes are observed, the first is a straight mode in the test plane and the second is a torsional mode. The first mode has a frequency of approximately 7.2Hz and the second is approximately 10Hz, damping ratios of 3.2% and 3.2% respectively.

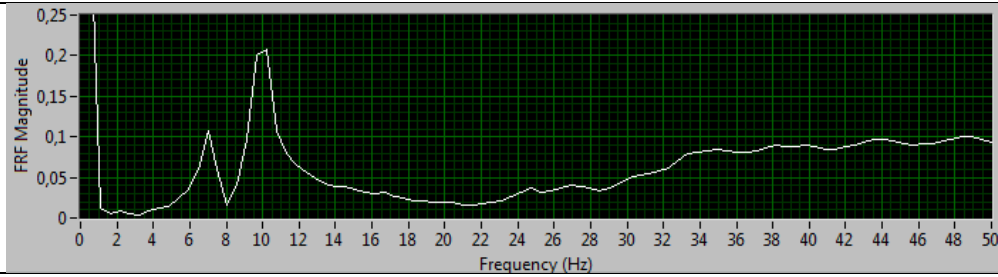


2. Soft impact

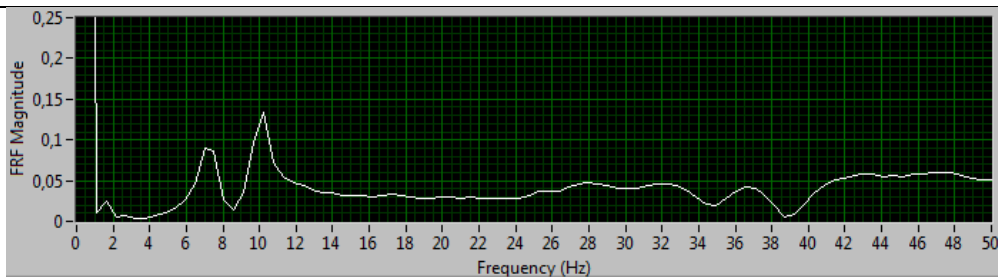
Two natural modes are observed, the first is a straight mode in the test plane and the second is a torsional mode. The first mode has a frequency of approximately 7.2Hz and the second is approximately 10Hz, damping ratios of 3.2% and 3.2% respectively.



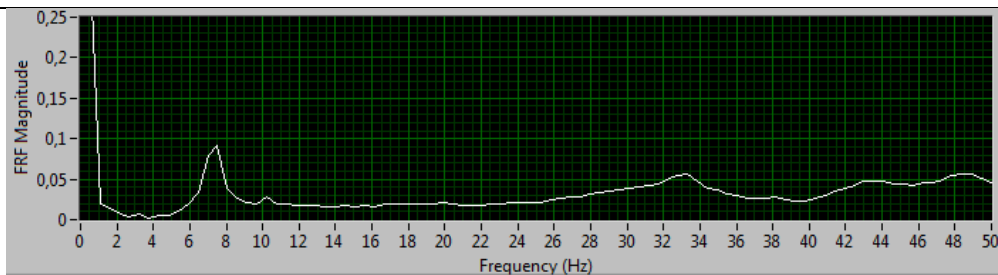
M1L – Normal - Node 0



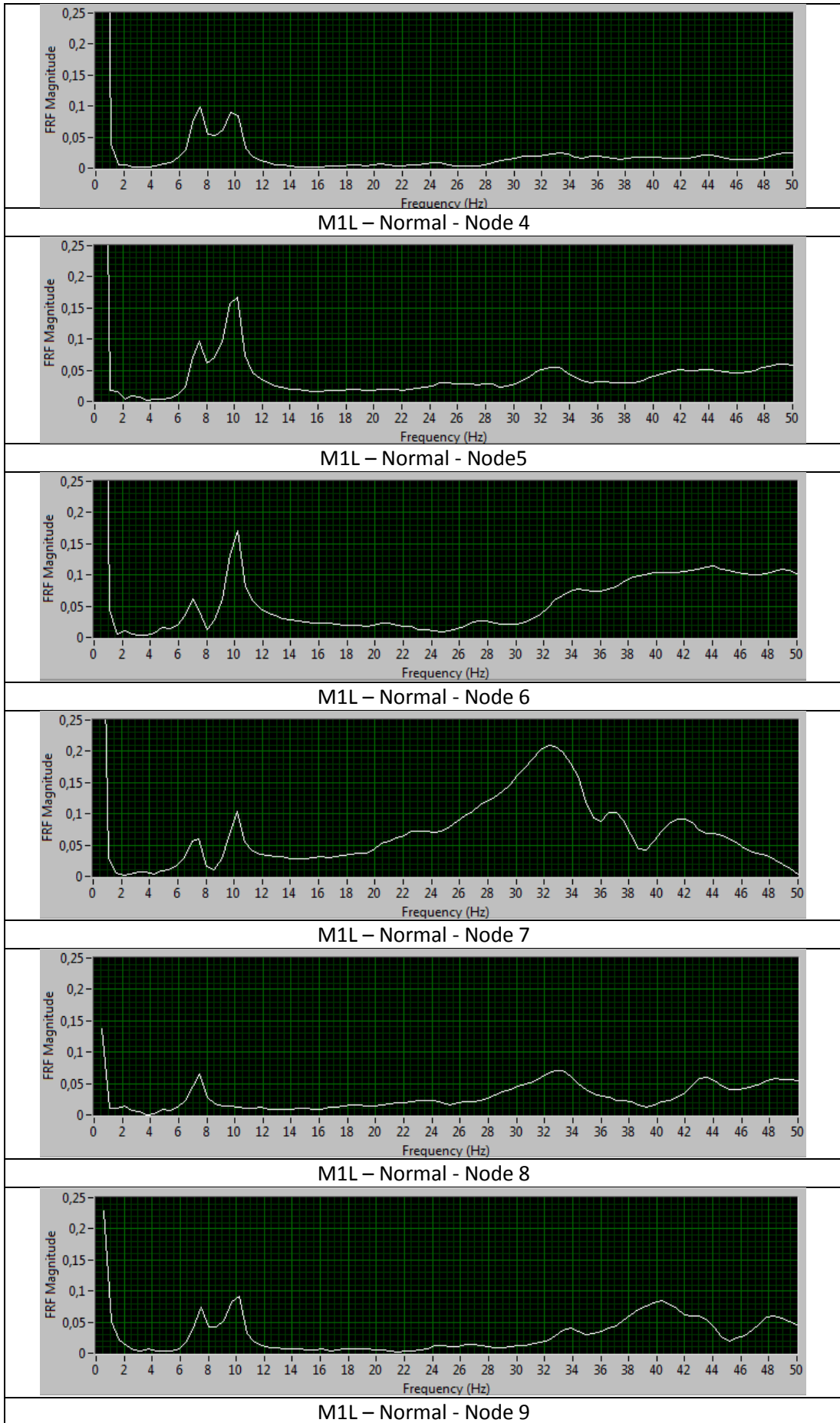
M1L – Normal - Node 1

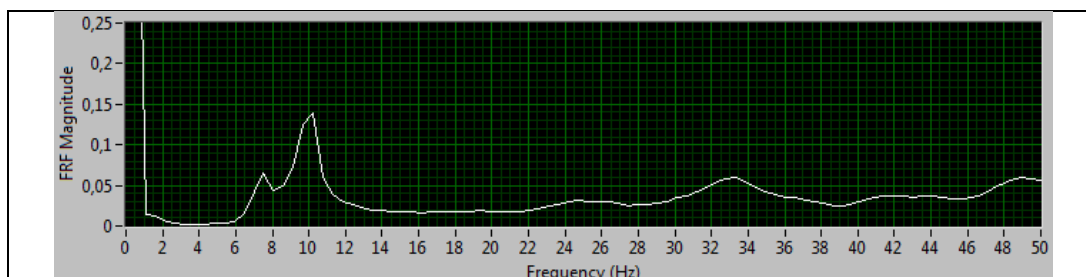


M1L – Normal - Node 2

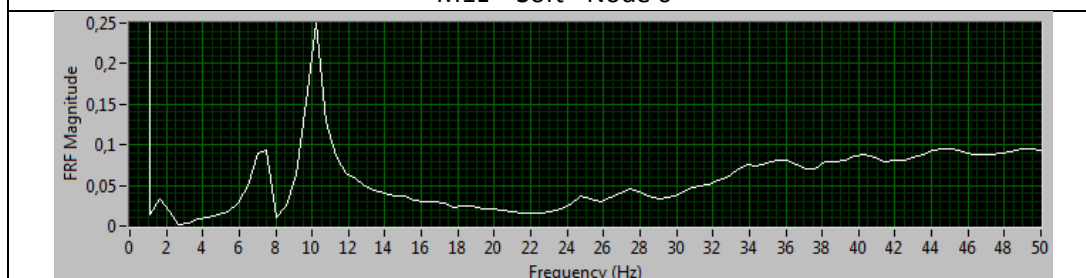


M1L – Normal - Node 3

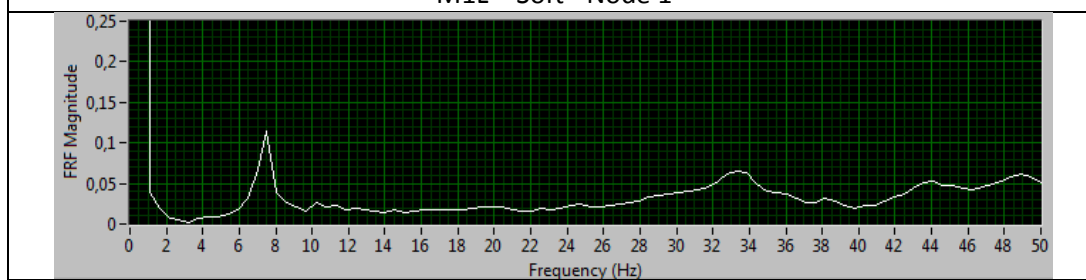




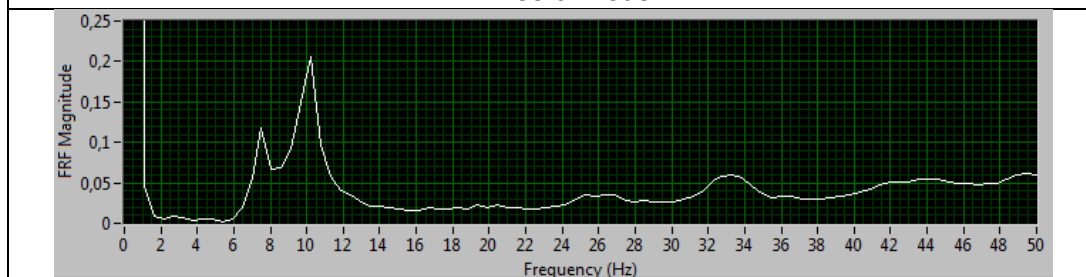
M1L – Soft - Node 0



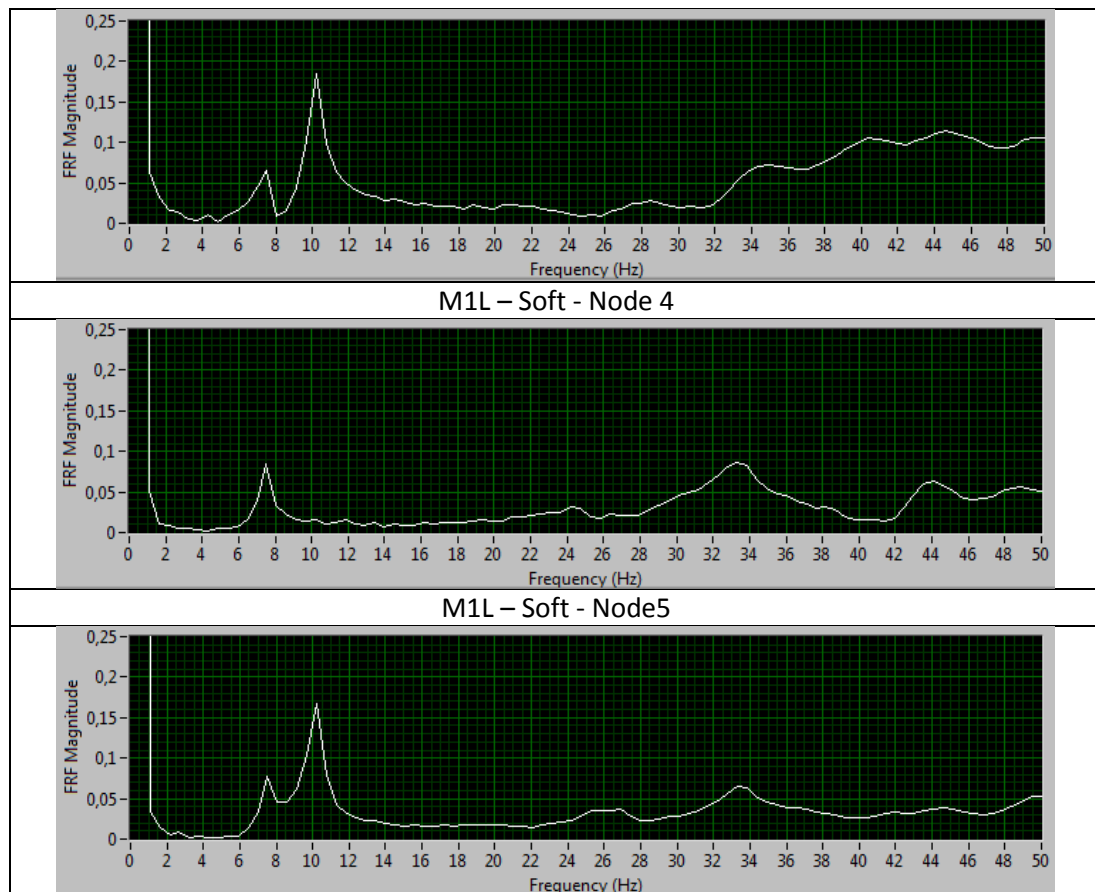
M1L – Soft - Node 1



M1L – Soft - Node 2

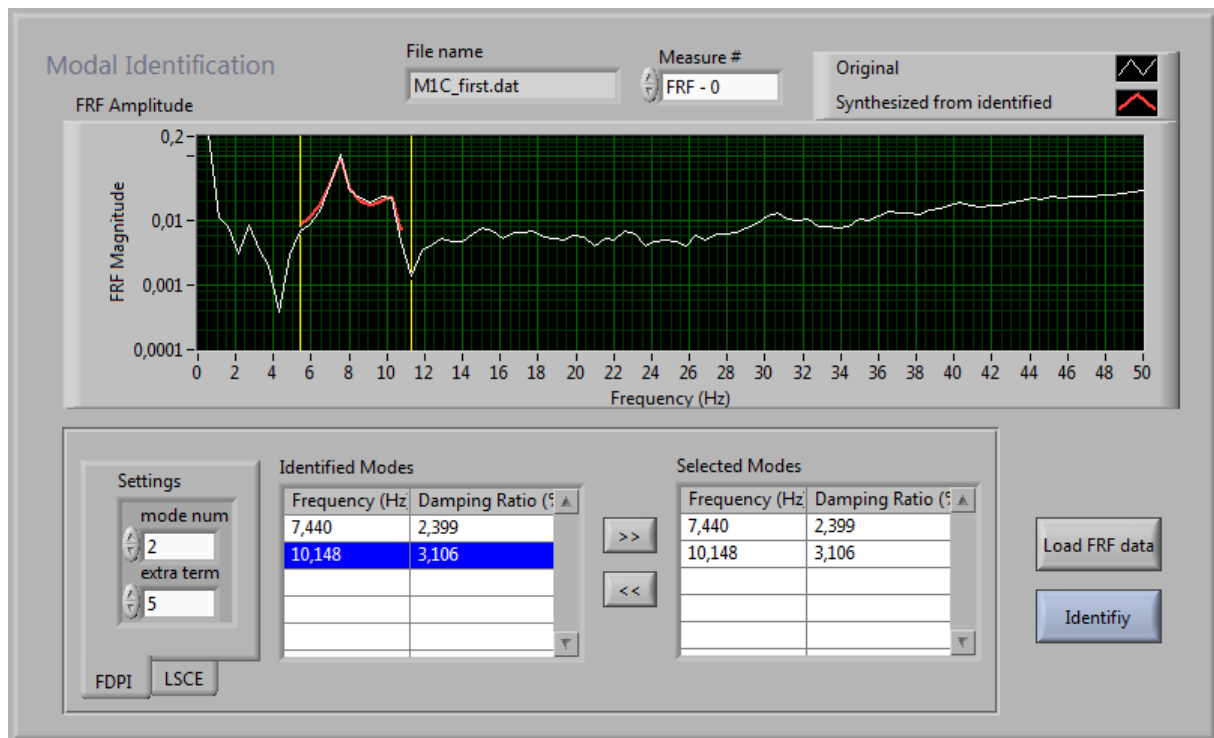


M1L – Soft - Node 3

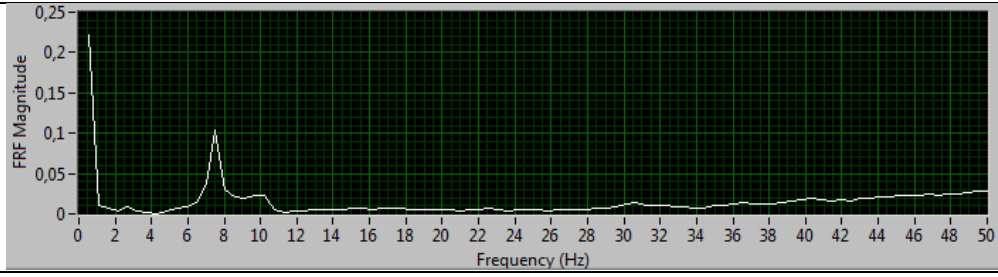


M1C

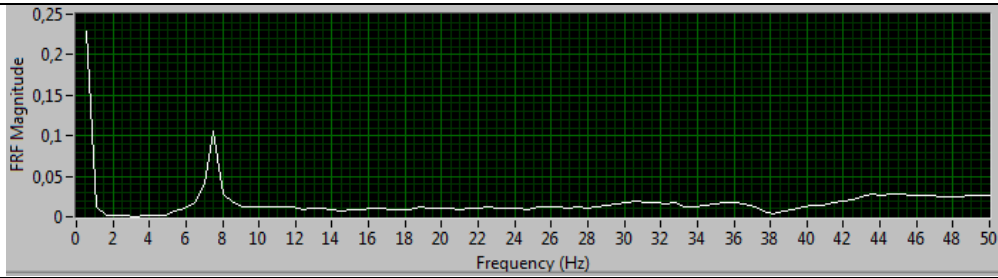
Two natural modes are observed, the first is a straight mode in the test plane and the second is a torsional mode. The first mode has a frequency of approximately 7.4Hz and the second is approximately 10.1Hz, damping ratios of 2.4% and 3.1% respectively. These modes are affected by the foundation.



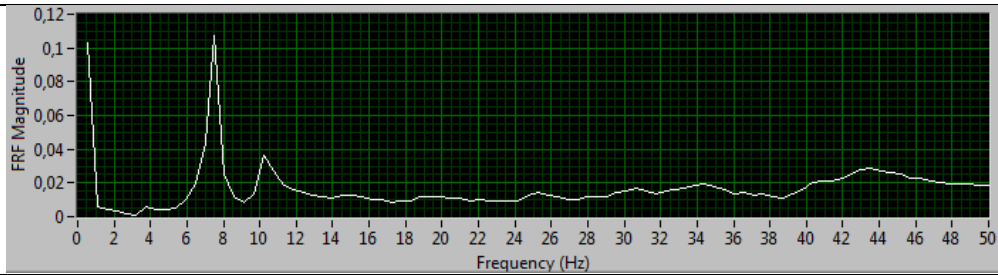
M1C – First -Node 0



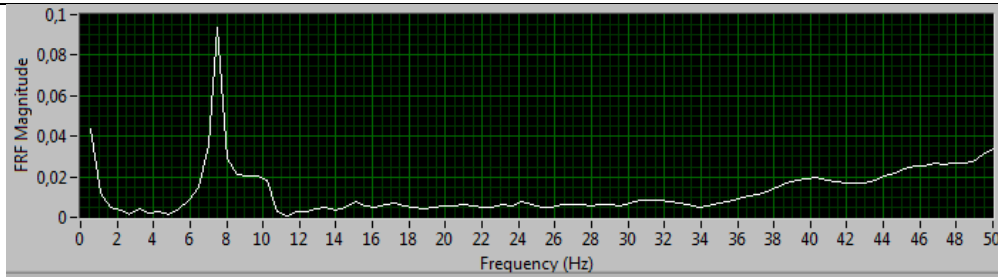
M1C – First - Node 1



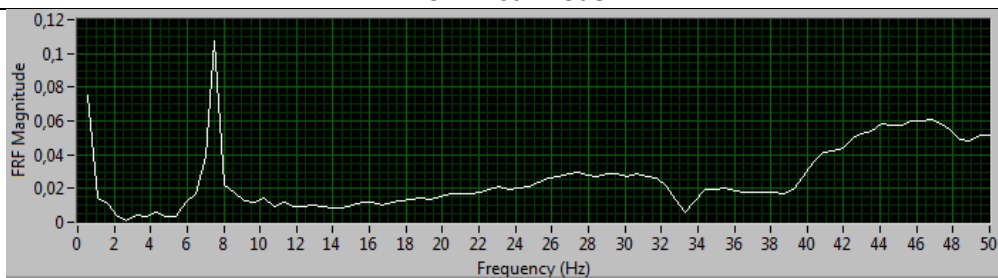
M1C – First - Node 2



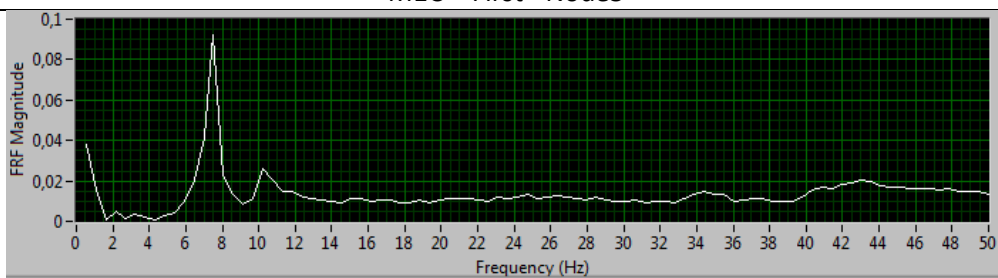
M1C – First - Node 3



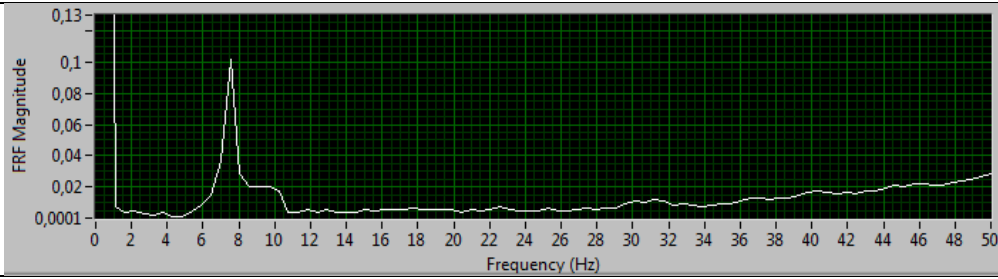
M1C – First - Node 4



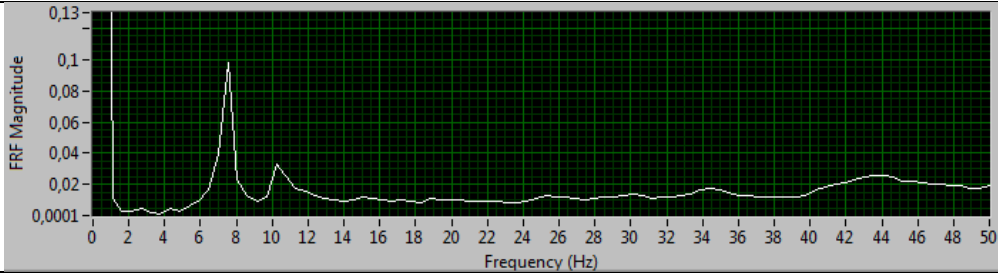
M1C – First - Node5



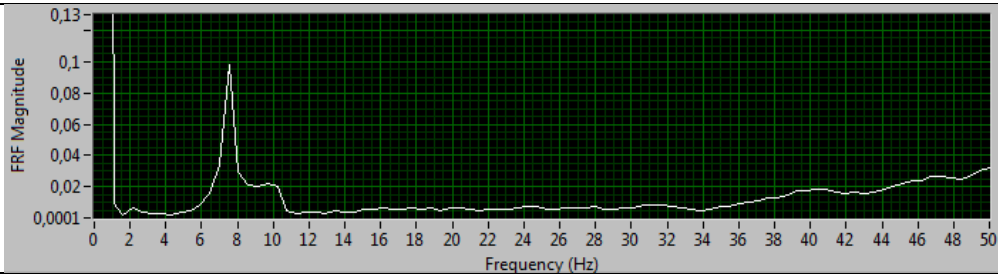
M1C – Second – Node 0



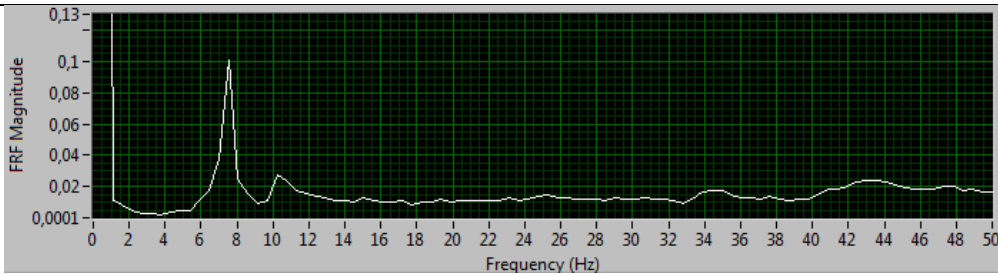
M1C – Second - Node 1



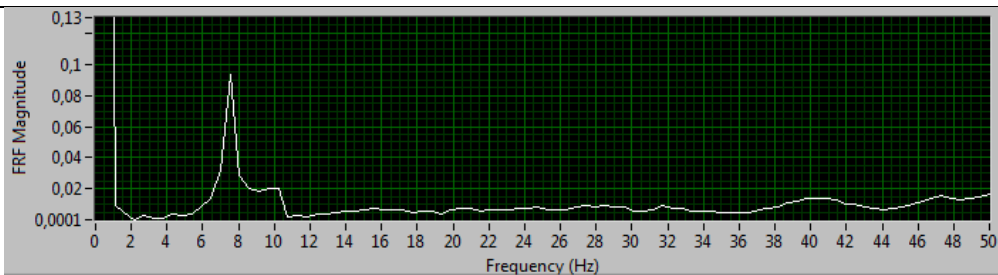
M1C – Second - Node 2



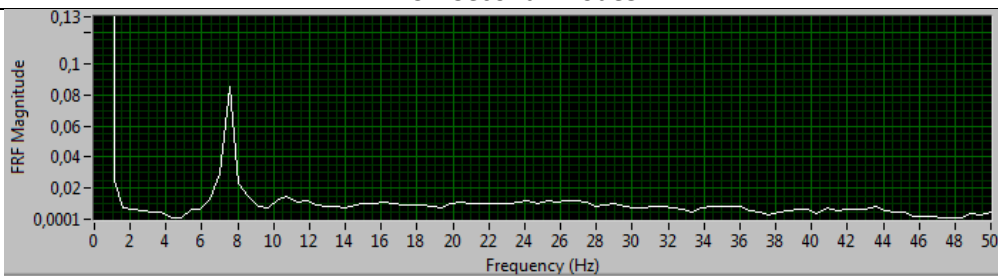
M1C – Second - Node 3

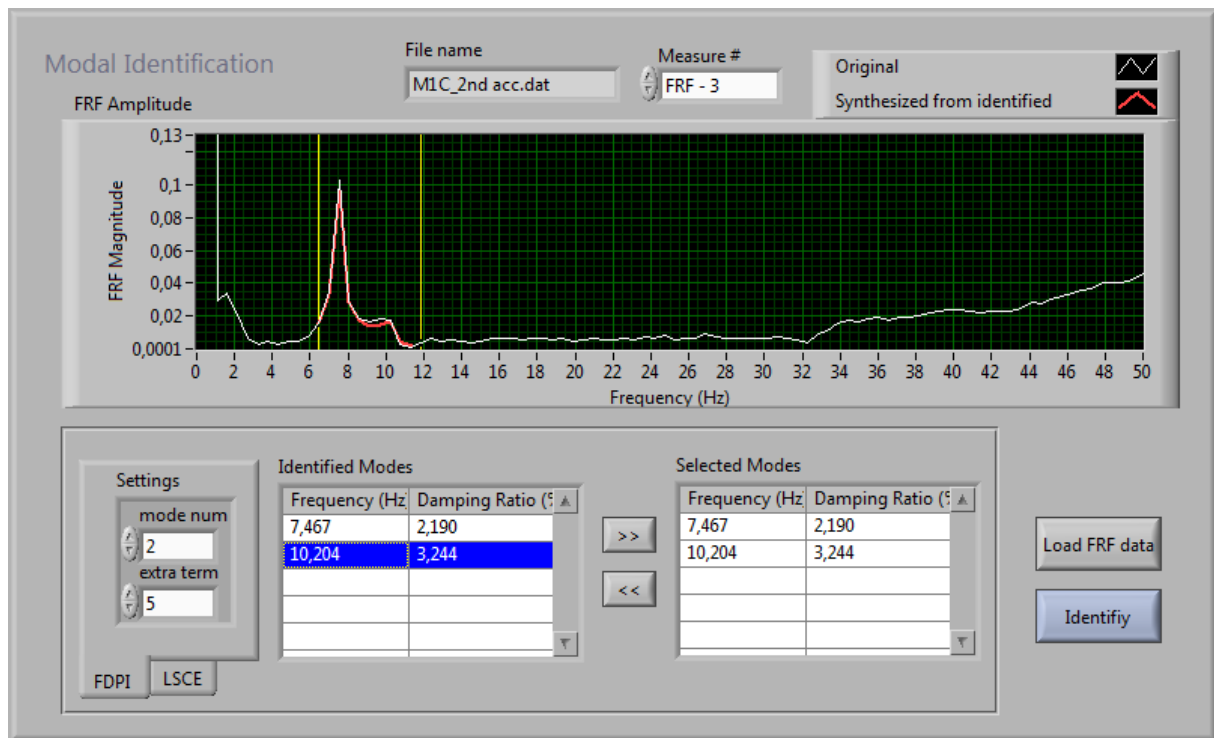


M1C – Second - Node 4

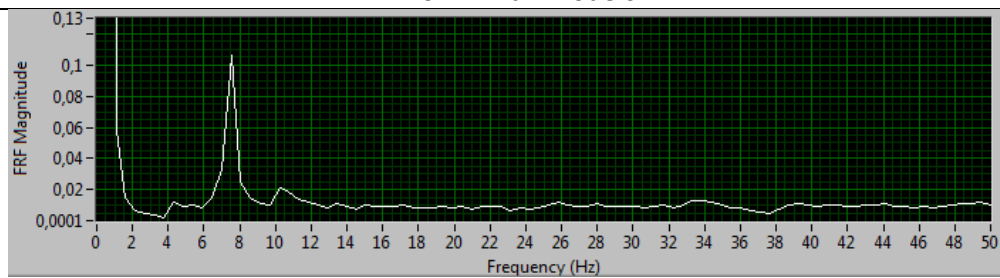


M1C – Second - Node5

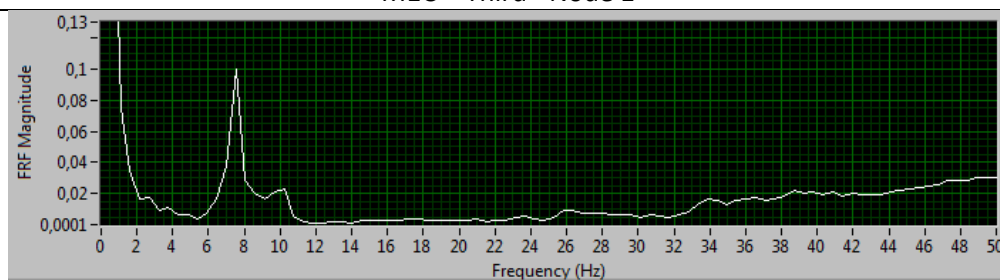




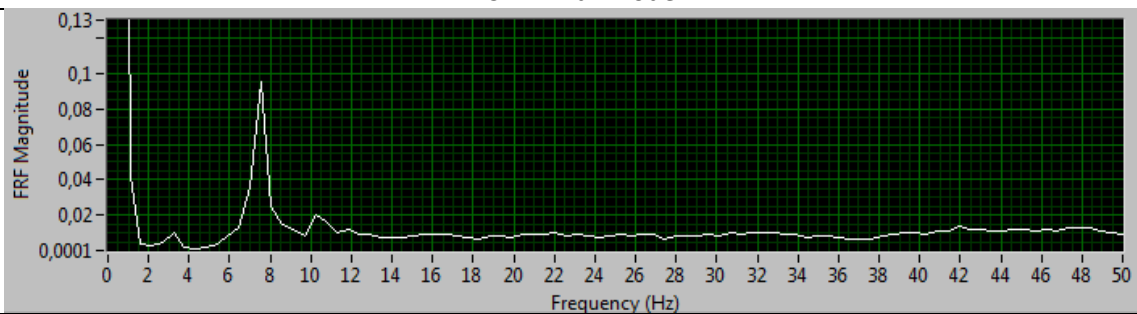
M1C – Third – Node 0



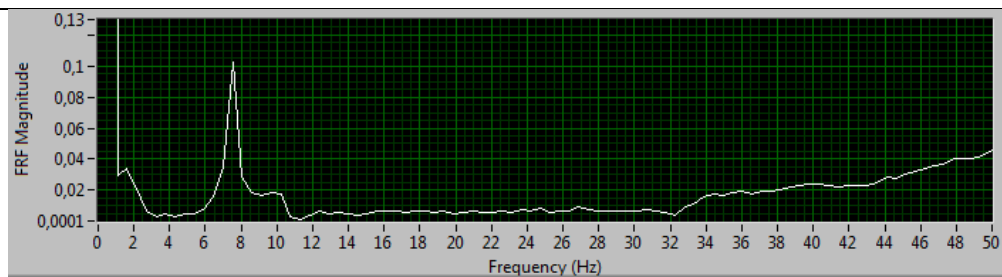
M1C – Third - Node 1



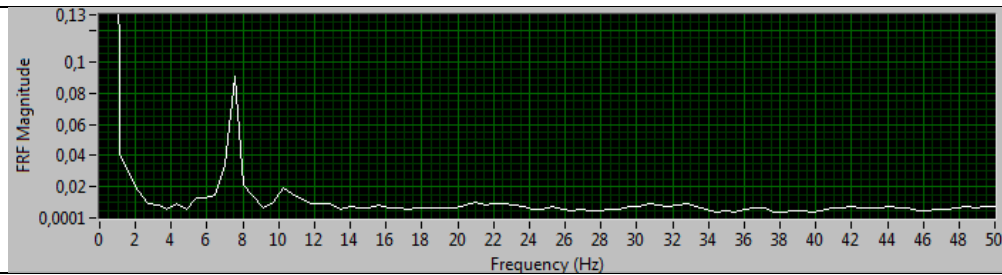
M1C – Third - Node 2



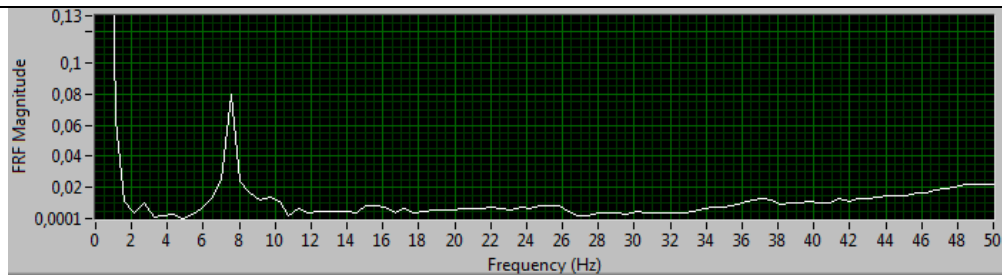
M1C – Third - Node 3



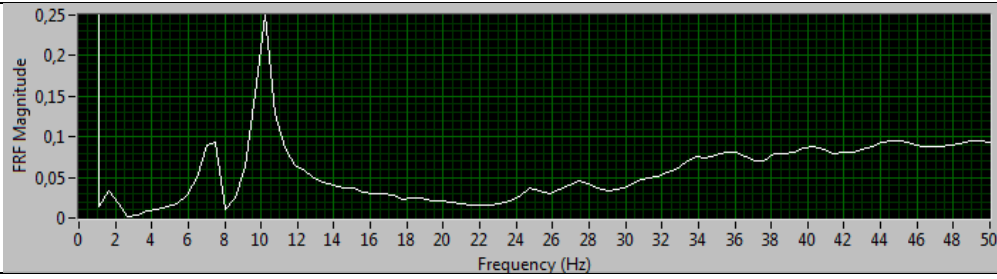
M1C – Third - Node 4



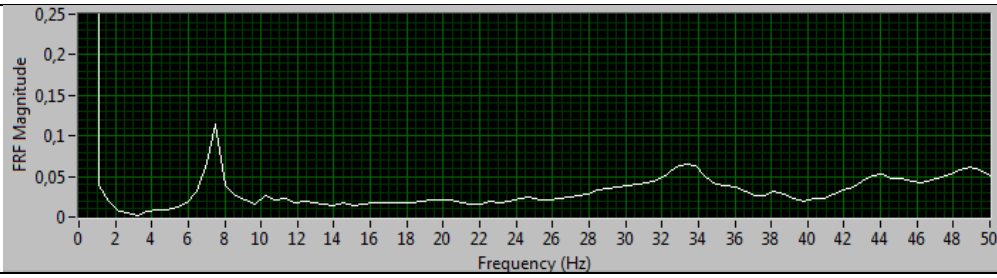
M1C – Third - Node5



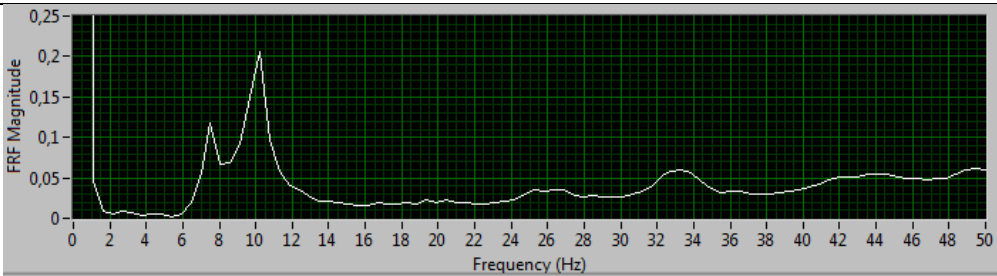
M1L Node 0



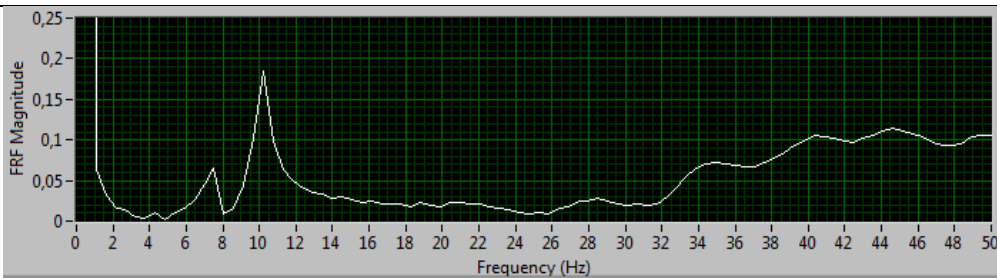
M1L Node 1



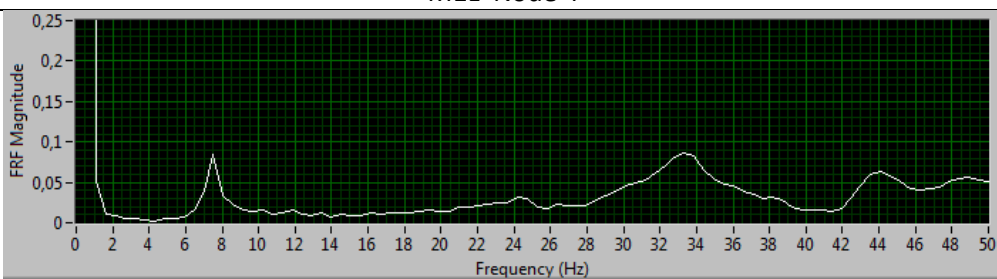
M1L Node 2



M1L Node 3



M1L Node 4



M1L Node5

