



We have one goal — improving the noise and vibration quality of our customers' products. Roush delivers innovative, effective noise and vibration control solutions. By combining advanced analysis capabilities, comprehensive engineering services, and state-of-the-art facilities, Roush has become a proven partner in identifying and resolving challenging noise and vibration issues. Backed by the diverse capabilities of the Roush family of companies, we are uniquely equipped to provide turnkey noise and vibration solutions.

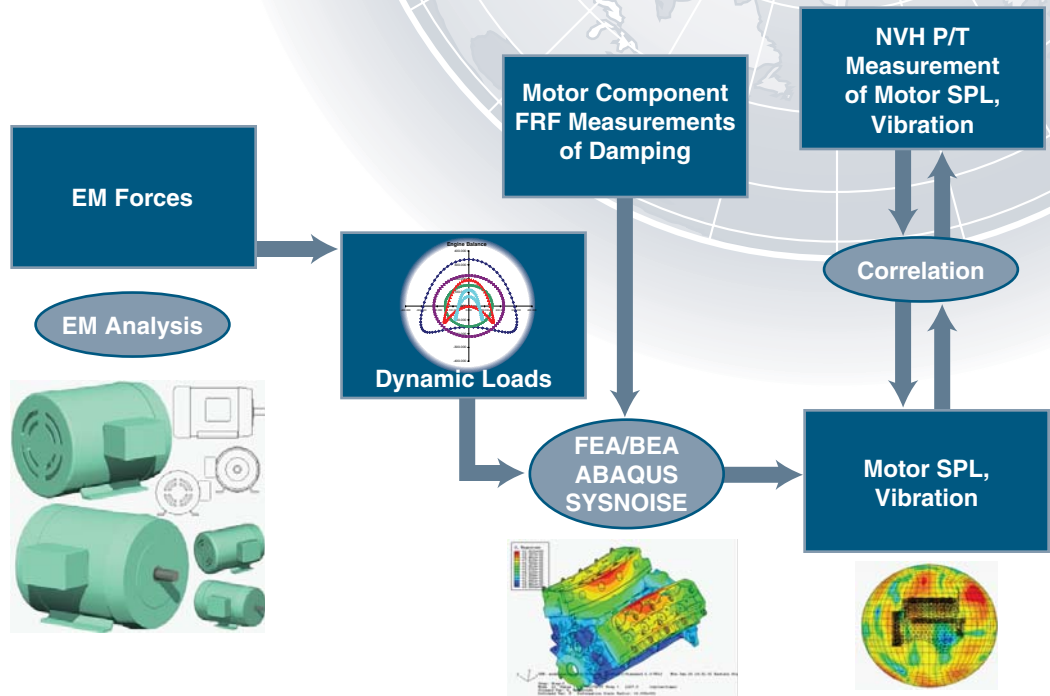
Contact us:
 12011 Market St.
 Livonia, MI 48150
 Phone: 734-779-7400 or
 800-486-3637
 Fax: 734-779-7903
 NVH@roushind.com

www.roushind.com

Electric Motor Noise Prediction

Because of the growing popularity of Hybrid Vehicles, demand for electric motors for transportation purposes is increasing. This trend will likely continue well into the future as energy economies change and automobiles become more sophisticated.

Noise radiation prediction is well established for internal combustion engines, but prediction technology for electric motors is in its infancy. To provide noise and vibration prediction for electric motors, Roush has teamed with a leading University. Roush provides expertise in predicting and controlling noise and vibration, and our University partner provides electro-magnetic force prediction and expertise in electric motor control strategy. Thus, we are able to provide electric motor noise and vibration predictions, and suggest remediation strategies which include conventional noise treatments, motor design changes, and motor-control-strategy changes. The team works together to provide model validation.



Schematic showing the Generalized Process for Electric Motor Noise and Vibration Prediction