

## RESUME

**George W. Kamperman, P.E., INCE Bd. Cert. Fellow**  
**Consulting Engineer in Acoustics**

**Education & Professional Experience:** B.S., Alma College 1951; graduate study (acoustics), Massachusetts Institute of Technology 1951-52; Noise and Vibration Laboratory, General Motors Proving Ground 1948-50 summers; Bolt Beranek and Newman Inc., Consultants in Acoustics 1952-1972; President of Kamperman Associates Inc 1972-2012.

**Professional Societies:** Fellow: Acoustical Society of America; Board Certified Fellow: Institute of Noise Control Engineering; National Council of Acoustical Consultants; Registered Professional Engineer.

**Professional Responsibilities:** Mr. Kamperman was in charge of the acoustical Instrumentation Laboratory at Bolt Beranek and Newman Inc., Cambridge, Mass., where he was responsible for developing new equipment and procedures for the measurement of sound and vibration. He opened a Chicago area office and developed a consulting activity in industrial noise control for Bolt Beranek and Newman Inc. In 1972 he established the firm of Kamperman Associates Inc., specializing in noise and vibration control and environmental impact studies. He has lectured at many courses and seminars. His project responsibilities have concentrated in the area of noise and vibration measurement and control in a wide variety of buildings and machinery.

**Standards & Test Codes:** Mr. Kamperman has had a major role writing numerous Noise Regulations, Standards, and Test codes to assist business, industry and agencies in the development of practical methodology:

City of Chicago Noise Ordinance.  
State of Illinois Noise Regulations.

SAE J184 Qualifying a Sound Data Acquisition System.  
SAE J952B Sound Levels for Engine Powered Equipment.  
SAE J1075 Measurement Procedure for Rating Sound Level of Construction Job Sites.  
SAE J88 Sound Level Measurement Procedure for Powered Mobile Construction Equipment.  
ANSI S1.2 Method for the Physical Measurement of Sound.  
ANSI S1.11 Octave, HalfOctave, & ThirdOctave Band Filter Sets.  
ANSI S1.4 Specification for General Purpose Sound Level Meters.  
ANSI S12.7 Methods for the Measurement of Impulse Noise.  
ANSI S162 Measurement and Evaluation of Community Noise.

ANSI S1.25 Specification for Personal Noise Dosimeters.

ANSI S12.9 Quantities/Procedures for Description and Measurement of Environmental Sound

# **BUILDING SOUND AND VIBRATION CONTROL**

**by George W. Kamperman**

**Air Liquide:** Large air separation facility enclosed in a custom noise reduction building  
**Baxter Travenol:** Headquarters office acoustics and sound isolation for research laboratories  
**Belltone Electronics:** Low noise anechoic test chamber for hearing aid research  
**Borg-Warner Corporation:** Anechoic chamber design for testing automotive components  
**Caterpillar Tractor:** New iron foundry plus product noise research facility  
**Chicago Board of Trade:** Trading floor design and scale modeling of trading floor alternatives  
**Chicago Public Building Commission:** Acoustic design of public high schools  
**Chicago, University of:** Lecture hall acoustics and Law Library noise control  
**Cummins Engine Company:** Engine test cells noise controls and engine research anechoic chamber  
**Detroit Diesel Corporation:** Reverberation chamber design for noise testing large engines  
**Dow Chemical Company:** Chamber design for static test firing Apollo Service Module  
**Eastman Kodak Company:** Headquarters offices acoustics and research laboratories  
**Elmhurst College:** Music building sound control and sound isolation  
**General Cinema:** Evaluation of acoustics in numerous theaters for future digital sound systems  
**General Motors Corporation:** Research Office & Proving Ground Noise and Vibration Laboratory  
**Hupp Corporation:** Acoustical test facility design and performance evaluation  
**Iowa State Court House:** Courtroom restoration acoustics and sound system design  
**John Hancock Center, Chicago:** Apartments and offices sound isolation and vibration control  
**Knox College:** Fine Arts Center, sound isolation and HVAC noise and vibration control  
**Lear Siegler, Inc.:** Anechoic chamber design used for product testing  
**Lever Brothers Co.:** New production plant with internal noise control to 80 dBA Max.  
**Levy Corporation:** HVAC fan rumble problems in high-rise office buildings  
**McQuay-Perfex Inc.:** Design of reverberation test facility for product research  
**Miami State University:** Micro Biology Building vibration control for electron microscopes  
**Michael Reese Hospital:** Sound and vibration control in electron microscope laboratories  
**NASA-Kennedy Space Center:** Noise and vibration design of Space Shuttle launch complex  
**Northwestern University:** Acoustics for lecture halls and HVAC noise controls  
**One Thousand Lake Shore Drive, Chicago:** High rise building sound isolation and noise control  
**Outboard Marine Corporation:** Engine test cells, sound isolation and noise control  
**Pickands & Mather Company:** Process noise control for several coal preparation plants  
**Pratt & Whitney Aircraft Group:** Teleconferencing facilities, acoustics and audio system  
**Quaker Oats:** Chicago headquarters, open plan office acoustics and noise control  
**Underwriters Laboratories:** Reverberation testing chamber design and evaluation  
**United States Gypsum Company:** Acoustical test facility and improved gypsum wall systems  
**Xerox Corporation:** Headquarters office acoustics plus noise and vibration control  
**Wisconsin, University of:** Psychology building sound isolation and HVAC noise control  
**Wisconsin, DNR:** Sportsmen gun firing range sound reduction enclosure

## ENVIRONMENTAL NOISE CONTROL AND IMPACT STATEMENTS

by George W. Kamperman

**Addison Wind Energy:** Analysis for multi-megawatt wind turbine generator sighting near residential area  
**Amax Coal Company:** Environmental noise impact statements for several open pit mines  
**Amcast-Automotive:** Quieting a metal casting facility located in a residential area  
**Argonne National Laboratory:** Environmental impact studies on noise for large projects  
**Blandin Paper Company:** Large facility environmental noise reduction  
**Bollinger & Mabillard:** Research and testing for significant roller coaster noise reduction  
**Burlington Northern:** Noise reduction in a large railroad classification yard  
**Busch Gardens Tampa:** Roller coaster noise assessment and control for “Kumba” and “Montu”  
**Busch Gardens Williamsburg:** Roller coaster noise assessment and control options  
**Central Counties Cooperative:** Noise reduction for large grain elevator located within a close community  
**Charter Steel Corporation:** Total facility noise reduction with rank ordering of annoying sources  
**Chicago, City of:** Development of the Chicago Noise Ordinance  
**Chicago Transit Authority:** Noise control design for an urban rail transit car yard  
**Clark Oil & Refining Company:** Reduction of refinery noise at the neighbors  
**Clifford Jacobs Forging Company:** Reduction of exterior forge shop noise emission  
**Commonwealth Edison:** Silencer design for gas turbine generating units  
**Corey Steel Company:** Material handling exterior noise control in a steel stockyard  
**Detroit, City of:** Numerous impact statements on noise for urban renewal projects  
**Dames & Moore:** Environmental impact statement reviews for highways  
**General Railway Signal Company:** Elimination of railcar wheel squeal in railroad retarder yards  
**Honeywell Inc.:** Control of blast noise from Army ordnance production testing  
**Illinois Bell Telephone:** Cooling tower noise control for residential location  
**Illinois, State of:** Development of State wide noise regulations  
**International Harvester:** Forge hammer isolation to reduce ground vibration  
**Liquid Carbonic:** Special inlet silencer design for large compressors  
**Material Service Corporation:** Stone quarries, noise assessment and noise reduction  
**Merriweather Post Pavilion:** Pop music sound control for neighboring areas  
**Miller Brewing Company:** Spotter truck noise control at freight handling facility  
**Northeast Illinois Planning Commission:** Noise impact statement for O'Hare Airport  
**Morton Arboretum:** Expressway noise berm design and expressway EIS review  
**National bureau of Standard:** Consultations on noise measurement methodology  
**Nederlander Inc.:** Environmental sound control for all amphitheaters  
**Pioneer Service Engineering Company:** Scale model tests on gas turbine silencer designs  
**Poplar Creek Music Theatre:** Contemporary music sound control beyond property  
**Resource Assessment Inc.:** Numerous urban noise environmental impact statements  
**RMT, Inc.:** Noise assessment and controls for combustion turbine and coal fired power plants  
**Sea World Orlando:** Noise criteria and control for “Kraken” roller coaster  
**Shell Oil Company:** Environmental noise control for an entire large refinery  
**Standard Brands:** Exterior environmental noise control for a number of process vents  
**Tenneco:** Noise barrier design for heavy vehicle test track in urban area  
**United States Army CERL:** Design of environmental noise monitoring systems  
**Universal Studios Florida:** First quieted all steel roller coaster “Dueling Dragons”  
**USA Ft Belvoir:** Noise emission and control for air cushion vehicles over water  
**US EPA:** Quarry and pit mine blast noise and vibration measurements and impact on dwellings  
**United States Gypsum:** Large ventilation fan noise controls for underground mine  
**Wisconsin Department of Natural Resources:** Gun firing range noise reduction  
**Vital Resources Inc.:** Camp Grayling cannon fire and bombing noise impact on residents  
**Yellow Freight Company:** Environmental noise control for a truck freight terminal yard

# INDUSTRIAL NOISE CONTROL ENGINEERING

by George W. Kamperman

**Advanced Transformer Company:** Production facility noise control  
**Allis-Chalmers:** Noise control on dozers, tractors, loaders, lift trucks  
**Amcast Meta-Mold Corporation:** Interior noise reduction for aluminum casting operations  
**American Air Filter Company:** Noise control in product development  
**American Bridge:** Vibration analysis of bridge operating mechanism  
**American Can Company:** Plant noise control seminar  
**American Motors Company:** Auto production line noise control  
**Amoco Oil Company:** Process noise control at Whiting oil refinery  
**Ampacet Corporation:** Noise control in plastics manufacturing  
**Appleton Papers:** Reduced noise exposure on high-speed paper coating systems  
**Aqua-Chem, Inc.:** Quiet reverse osmoses water purification systems in ISO Container enclosure  
**Brumund Foundry:** Noise control in foundry operations  
**J. I. Case:** Noise test facility design and tractor noise control  
**Caterpillar Tractor:** Crawler tractor noise control  
**Chrysler Airtemp:** Development of low noise domestic air conditioning unit  
**Colt Industries, Fairbanks-Morris:** Large engine noise and vibration control  
**Cooper-Bessemer Company:** Noise reduction on a 10,000 HP engine/compressor  
**Dayton T. Brown:** Quieting an Army 10-ton rough terrain forklift truck  
**Dickson Weatherproof Nail Co.:** Earth borne impact noise reduction from a large cold header  
**General Electric Company:** Quieting through the wall air conditioning units  
**Gorman-Rupp Company:** Quieting mobile engine/pump systems for Army  
**Harley Davidson:** Engine/transmission production facility with lower noise exposure  
**Illinois Tool Works:** Noise control on plastic granulators and air conveyors  
**International Harvester:** Large construction vehicle noise control  
**Kelsey-Hayes:** Auto wheel rim plant noise reduction to 85 dBA  
**Kimble Office Furniture Company:** Noise control in wood working facility  
**Kohler Company:** Brass manufacturing facility noise control  
**Lamb Electric:** Design of quieter high-speed vacuum cleaner blowers  
**Libby Corporation:** Quiet Army mobile electric generator sets of 5, 10, 15, 30, 60, 200 KW  
**M&M Mars Inc.:** Process noise reduction in a chocolate factory  
**Outboard Marine Corporation:** Quieting outboard motors and lawn mowers  
**Peabody Barns Incorporated:** Noise enclosure for mobile 100 HP engine/pump for Army  
**Roberts & Schaefer Company:** Process plant engineering noise control  
**Sears Roebuck & Company:** Design and testing of quieted outboard motors  
**Standard Oil Company:** Fibers Division plant noise control to 85 dBA  
**Stora Enso Kimberly:** Residential noise emission measurement and controls for a large paper mill  
**Superior Engineering Company:** Vibration control in a steel mill laboratory  
**Sweetheart Cup Corporation:** Quieting plastic forming machines  
**Turner Construction Company:** Conveyor noise reduction for new USPS mail center  
**USA Corps of Engineers:** Vibration isolation of massive inertial guidance test platform  
**USA Ft Belvoir:** Off-road heavy construction equipment noise control projects  
**VSE Corporation:** Noise control for mobile diesel engine powered Army equipment