



BOËT STOPSON 2019

Your global partner for noise pollution treatments



BOËT *STOPSON*
The Sound of Silence

Acoustic products & solutions

WHO ARE WE ?

Your acoustic partner

BOËT StopSon designs and manufactures noise reduction products or systems for energy, industry, building, medical and aviation markets





OUR JOB

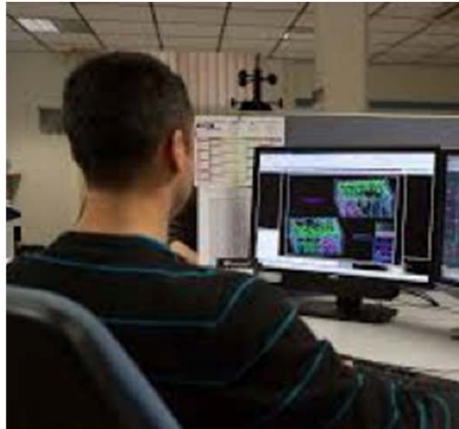
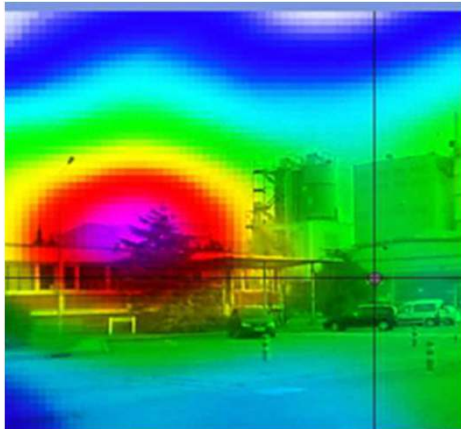
From acoustic engineering, through design, manufacturing until reception on site, BOËT StopSon helps you throughout the whole realization of your acoustic projects.

ACOUSTICS ENGINEERING

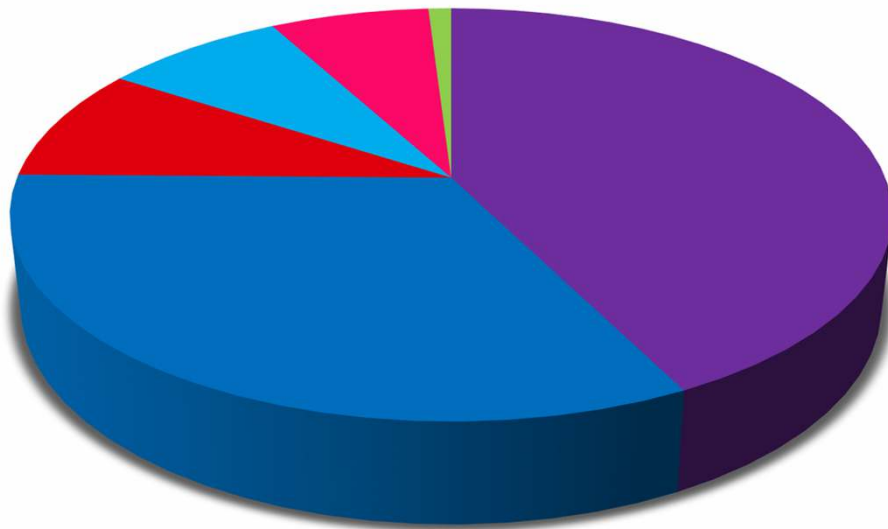
- Acoustic measurements
- Acoustic for industries
- Vibrations
- Monitoring
- Acoustic for buildings

RANGE OF PRODUCTS

- Any type of silencer
- Noise enclosure and acoustic screens
- Acoustic doors and windows
- Acoustic louvres
- Audiometric booths
- Acoustic Tarpaulins
- Acoustic decorative panels



OUR KEY NUMBERS



Turnover: 13 million EUR (2020)



Workforce: 110 employees



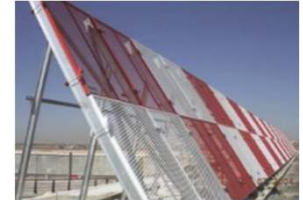
Production capacity: 10,000 m²

OUR CUSTOMER-ORIENTED ORGANIZATION

Our markets

OUR CLIENTS

- Manufacturers (OEM) / Packagers
- Engineering (EPC) / Design offices
- Installers
- End-users
- All types manufacturing industries
- Builders and Promoters
- Communities
- Health care establishments



OUR INDUSTRIAL AND R&D CAPABILITIES

PRODUCTION UNIT

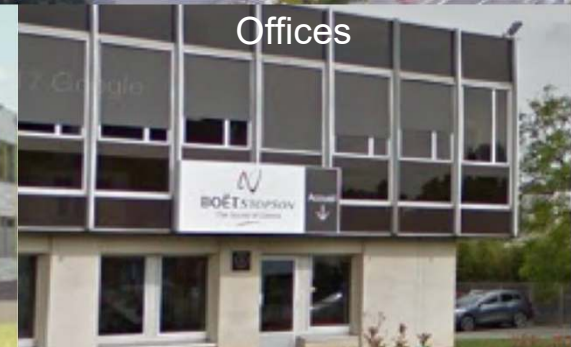
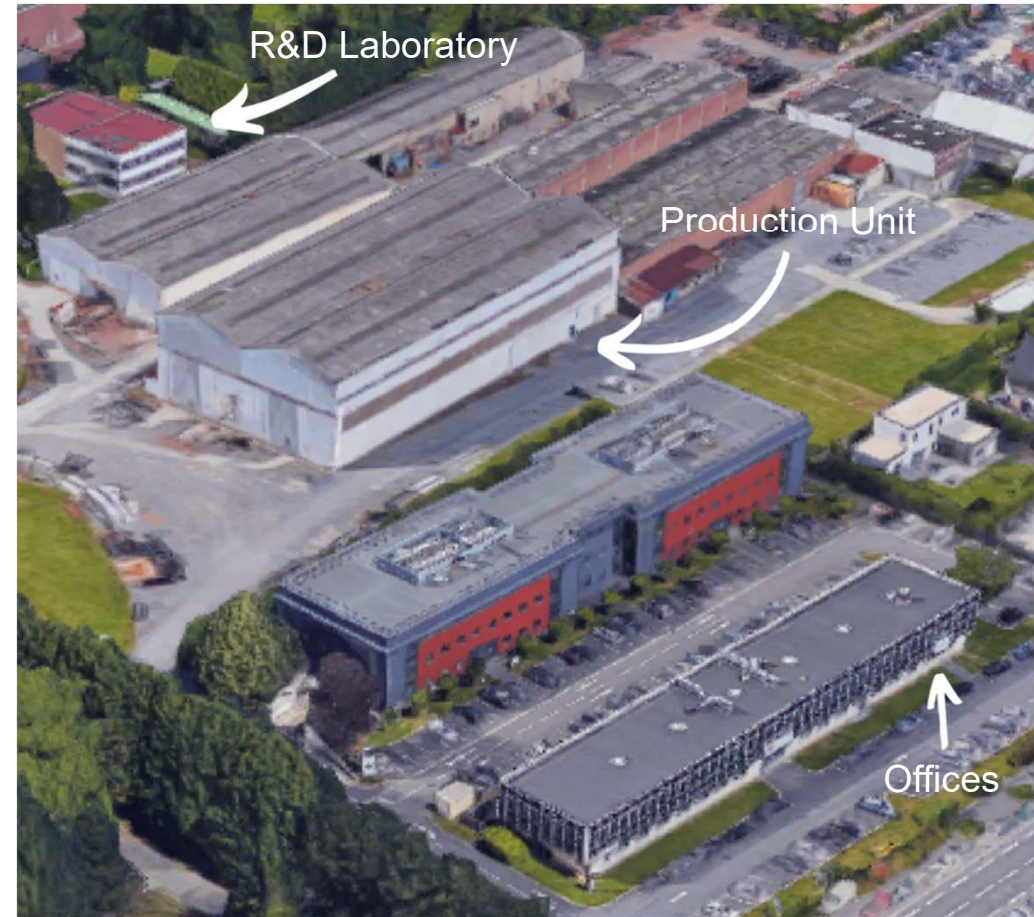
- Surface area 6,000 m²
- Preparation workshop
- Production workshop - Light products
- Production workshop - Heavy products
- Production workshop - Acoustic doors
- Painting area

OFFICES

- Engineering Department
- Sales Department
- Project Management Department
- Administrative & Financial Department

R&D LABORATORY

Equipped with a reverberant and anechoic chamber
Monitoring, Noise measurements, Vibration, Simulation



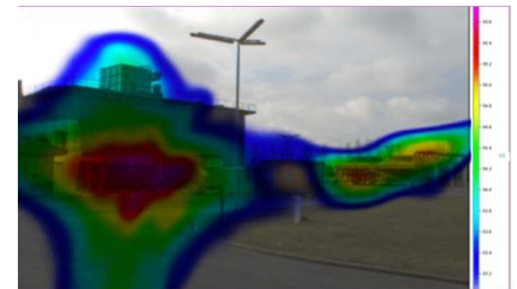
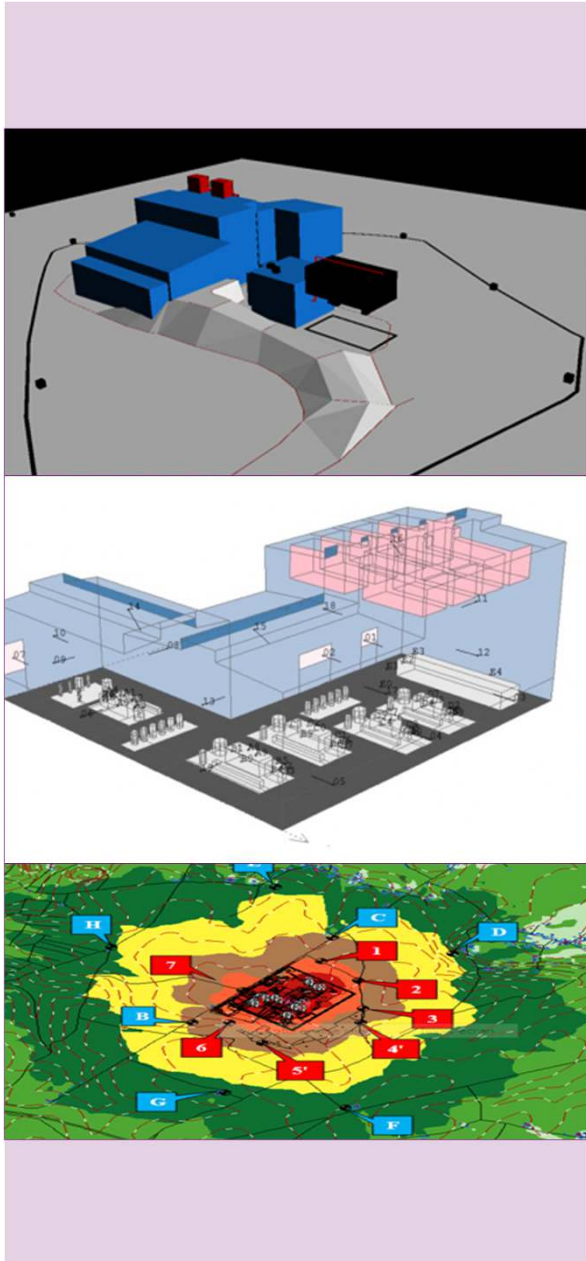
ACOUSTICAL ENGINEERING: DIGITAL MEASUREMENT & MODELLING

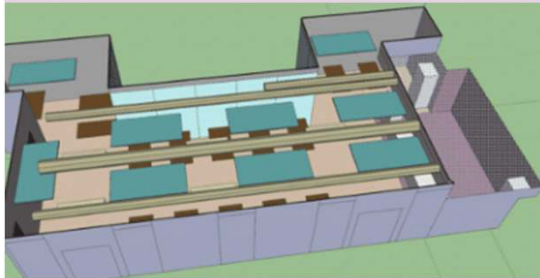
APPLICATIONS

- Industry
- Energy
- Gas & Petrochemical

CHARACTERISTICS

- Acoustical study
- Acoustic camera
- 3D Modelling
- Acoustic mapping
- Impact studies
- Product and solution design
- Acoustic specification





Durée de réverbération (T_{90})

Lieu de mesures	Méthode d'évaluation	Fréquences - Bandes d'octave						Moyenne 500-2kHz
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	
Zone 1 Volume principal	Actuel	0,53	0,60	0,65	0,63	0,73	0,77	0,67
	Traité	0,52	0,53	0,53	0,53	0,62	0,61	0,56
	delta	-0,01	-0,08	-0,11	-0,10	-0,12	-0,17	-0,11
	%	-2%	-13%	-18%	-16%	-16%	-22%	-16%

ACOUSTICAL ENGINEERING: DIGITAL MEASUREMENT & MODELLING

CHARACTERISTICS

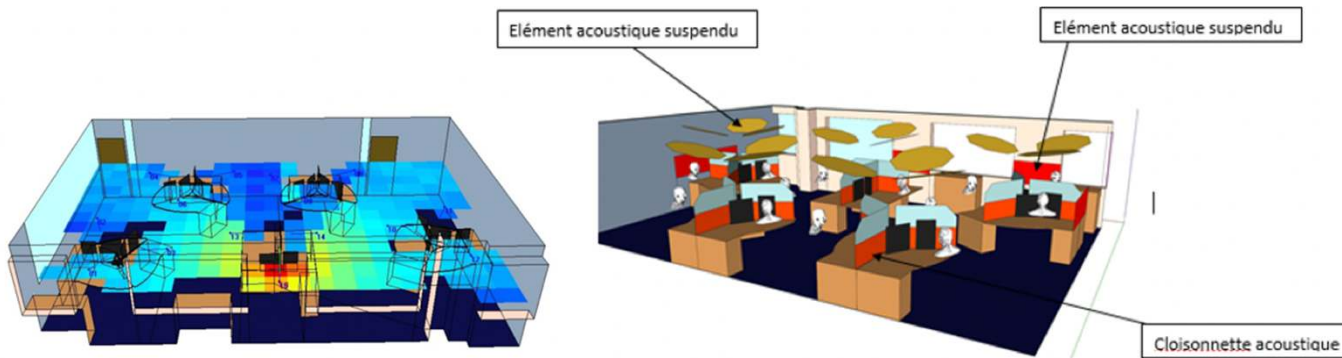
- Acoustical study
- 3D Modelling
- Acoustic mapping
- Impact studies
- Product and solution design
- Acoustic specification

APPLICATIONS

- Building
- Tertiary



L'EXPERTISE ACOUSTIQUE POUR LA PROTECTION SONORE DE VOS CHANTIERS



ACOUSTIC AND AERODYNAMIC DESIGN

APPLICATIONS

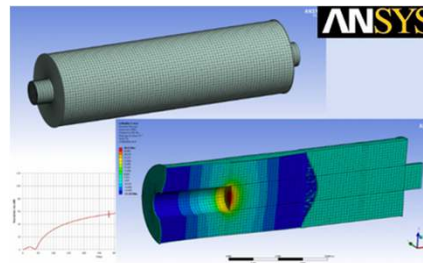
- Stationary (power plant)
- Mobile - Rail/Marine
- Compression line

PRODUCTS

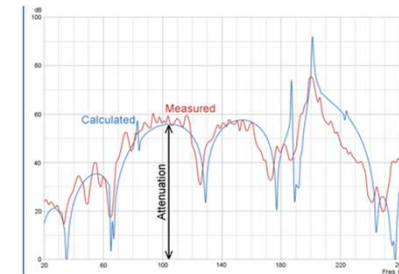
- Engine Silencer
- Gas Turbine Silencer
- Compressor Silencer
- Vacuum Pump Silencer
- Vent Silencer



ANSYS Acoustics & Sound Performance Calculations

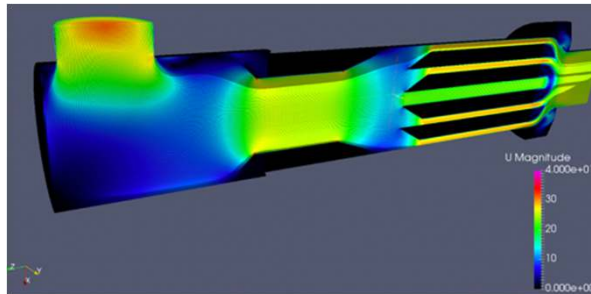


3D Modelling

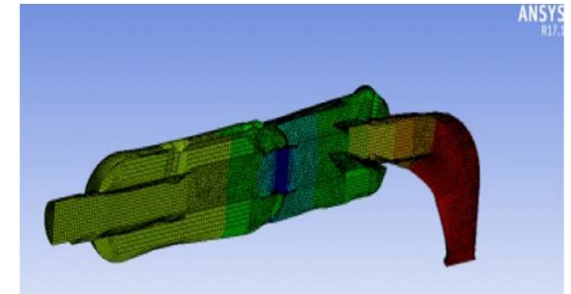


Calculated vs measured attenuation

Calculation of flows & pressure losses



Acoustic and mechanical design of exhaust silencer
for engine gases, turbines and boilers



Acoustic and mechanical design
of booster silencers, vacuum pumps and compressors

AERO-ACOUSTIC AND MECHANICAL PIPELINE DESIGN FOR THE COMPLETE EXHAUST OR COMBUSTION AIR SYSTEM

APPLICATIONS

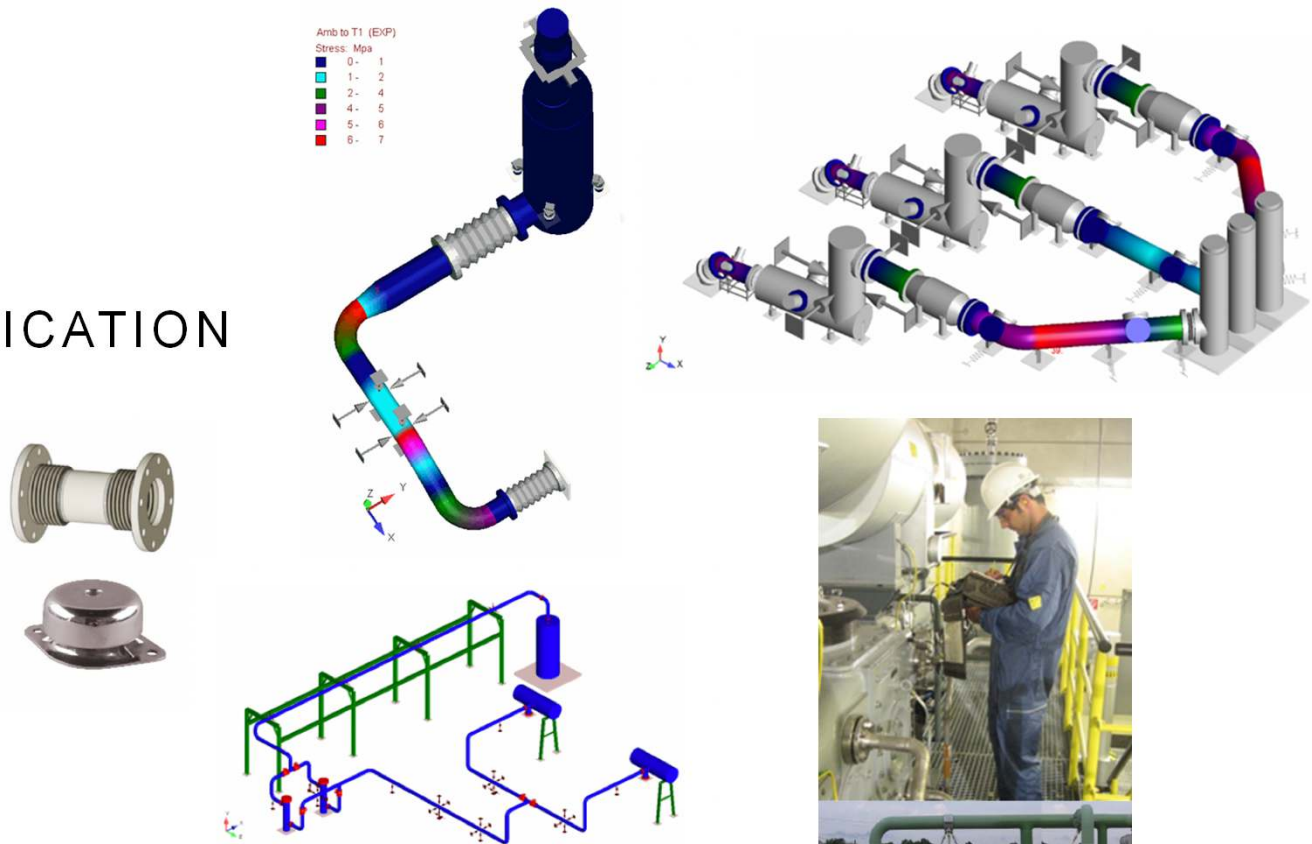
- Stationary (Power Station)
- Mobile - Railways
- Compressors line
- Mobile - Marine

DIMENSIONING AND VERIFICATION

- Acoustic studies
- Acoustic and vibration Monitoring
- Pulsation study re API 618
- Mechanical analysis (thermal, analysis)
- Anti-vibration mounts
- Supports brackets

CONSIDERATIONS

- Weight
- Temperature variations (20°C to $\pm 600^{\circ}\text{C}$)
- Engine vibrations
- Accelerations (rail applications)
- Forces of nature (earthquake, snow, wind) for fixed applications



STANDARDS AND QUALIFICATIONS

- CERTIFICATION ISO 9001:2015
- TEST FACILITIES AND PRODUCT QUALIFICATION
 - Kundt tube
 - Anechoic and reverberant chambers
 - Static and dynamic test bench
 - Finite element calculation
- DESIGN/CONSTRUCTION CODES
 - EN 13445
 - PED 2014 68 UE
 - CODAP & CODETTI
 - RCC-M
 - ASME VIII div1
 - ASME B31.1 & ASME B31.3
- QUALIFICATION OF WELDERS AND PROCEDURES
 - EN287 & ASME IX
- NON-DESTRUCTIVE TESTING
 - Dye penetrant
 - Radiography
 - PMI, Ultrasound

BOËT STOPSON
26 RUE PAUL DOUMER
59657 VILLENEUVE D'ASCQ CEDEX - FRANCE

Bureau Veritas Certification France certifie que le système de management de l'organisme susmentionné a été audité et jugé conforme aux exigences de la norme :

Standard
ISO 9001:2015

Domaine d'activité
COMMERCIALISATION, CONCEPTION, FABRICATION, RENOVATION, MONTAGE ET LOCATION DE PRODUITS ET SOLUTIONS POUR LA REDUCTION DES NUISANCES SONORES.
SALES, ENGINEERING, DESIGN, MANUFACTURING, REFURBISHMENT, INSTALLATION AND RENTAL OF SOLUTIONS FOR NOISE TREATMENT.

Date d'entrée en vigueur : 22 janvier 2018
Sous réserve du fonctionnement continu et satisfaisant du système de management de l'organisme, ce certificat est valable jusqu'au : 15 décembre 2020

Certificat n° : FR040508-1 Date : 30 janvier 2018
Affaire n° : 7072353

Jacques Mailhon - Directeur général

Adresse de l'organisme certifié : Bureau Veritas Certification France
80, avenue du Général de Gaulle - Immeuble Le Guillemer - 92083 Paris La Défense

Des informations supplémentaires concernant le périmètre de ce certificat ainsi que l'application des exigences du système de management peuvent être obtenues en consultant l'organisme. Pour vérifier la validité de ce certificat, vous pouvez téléphoner au : +33 (0)1 41 97 00 00.

Performance

The image also features a bar chart with five bars of increasing height (blue, green, red, yellow, brown) and a red line graph showing an upward trend, held in a hand.



Fossil Fuels



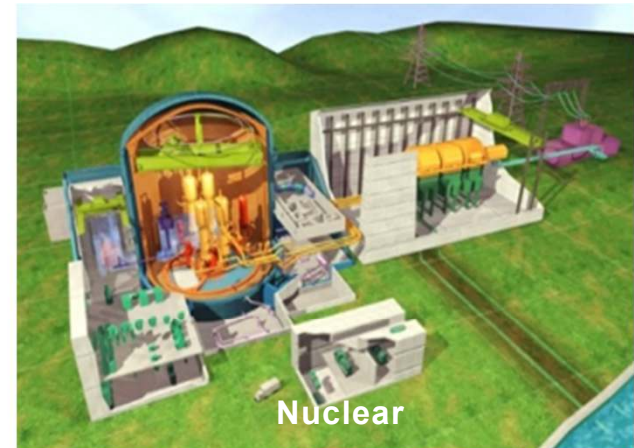
Cogeneration



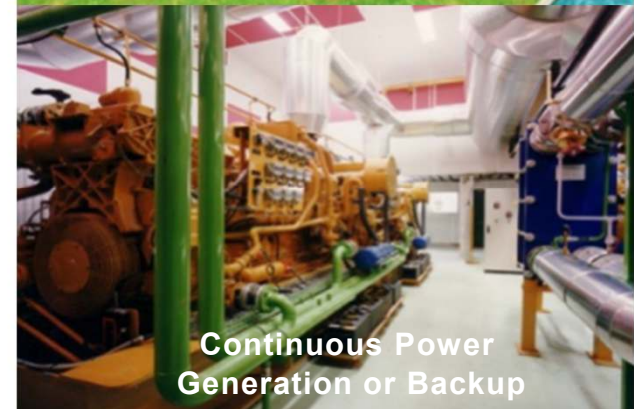
Combined Cycle


BOËT *STOPSON*

E N E R G Y



Nuclear



Continuous Power
Generation or Backup



Gas & Petrochemical

ENERGY APPLICATIONS: OUR PRODUCTS



Reciprocating Engines	Exhaust: Silencers - Different technologies and shapes
	Exhaust: Emission control
	Inlet silencers and filters
	Accessories
Compressors	Inlet
	Exhaust
Positive Displacement Blower	Positive Displacement Blower Silencer

Gas Turbines	Exhaust Silencers and Stacks: Primary
	Exhaust Silencers: Secondary & HRSG
	Inlet silencers and filters
	Accessories
High Pressure Gases	Vent Silencers
	Inline Silencers
ISO Containers	

OUR RANGE OF ENGINE SILENCERS



Applications



**Marine
Military & Civil**



Railways



**Energy Production mobile
Container
Enclosure**



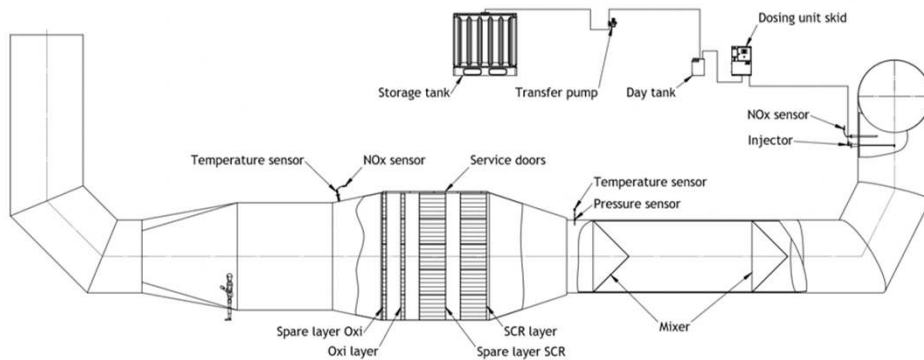
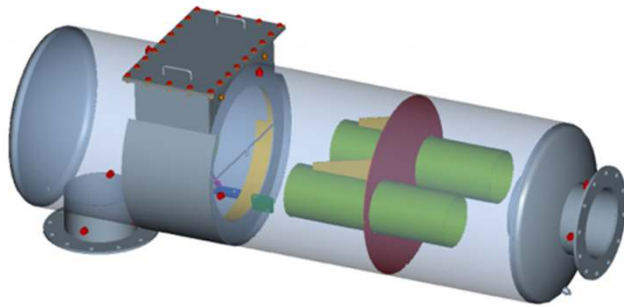
**Electricity
networks**



Diesel or Gas Engines


BOËTSTOPSON
ENERGY

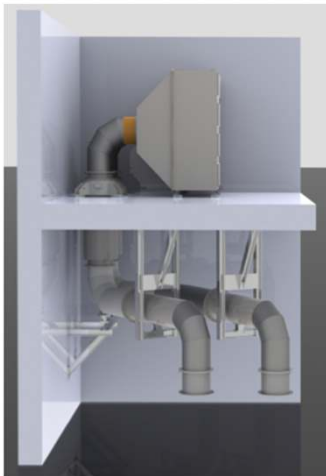
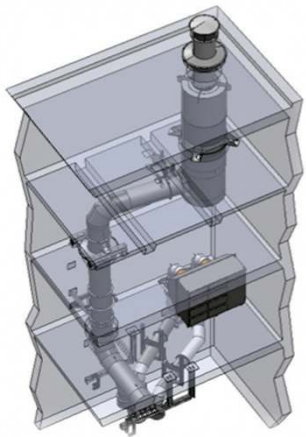
ANTI-POLLUTION: GAS TREATMENT



- Treatment of CO and/or NOx
- Cylindrical catalyst stand alone or integrated into the BOËT StopSon exhaust silencer
- Available sizes: from DN 200 to DN800
- Removable catalyst
- The QCS model is equipped with a quick access cover
- Quick access to catalyst
- Easy maintenance of catalyst
- 2 into 1: sound reducing & gas treatment in 1 package
- Catalytic silencer with low pressure losses



Vent Silencer



Exhaust system and air intake system with filtration for nuclear application diesel engine

NUCLEAR APPLICATIONS: PRODUCTS & SOLUTIONS

Acoustic, aeraulic and mechanical study

- Noise mapping
- Acoustic analysis
- Pulsation and acoustic vibration analysis
- Piping system analysis
- Analysis of pressures and thermal loads
- Simulation of acoustic treatment and solutions

Acoustic treatment

- Steam vent silencer
- Intake and discharge silencer
- Machine enclosures
- In-line silencers
- Silencers for venting gas
- Diesel engine exhaust system
- Engine air intake system
- Filtration system

GAS TURBINES

Characteristics

- Acoustic performance from 15 dB(A) to 50 dB(A)
- Pressure loss: from 30 mm wg to 150 mm wg
- Materials for high temperatures (550°C - 600°C)
- Shape: cylindrical or rectangular
- Thermal insulation / skin temperature
- Accessories: supports, flanges, counter-flanges, bolts, gaskets...
- Turbine gas interface (flange, fabric bellows)
- Flanges to EN, DIN, BS...
- Resistance to environmental condition (indoor/outdoor)



Air Intake Silencer



Gas Turbine & Acoustic Package



Bypass Exhaust System



Primary Gas Silencer Turbine

HRSG SILENCER: BOILER DISCHARGE

Characteristics

- Pressure loss: 25 mm wg
- Acoustic performance: 35 dB(A)
- Horizontal or vertical heat recovery steam generators
- Chimney or insert silencer
- Galvanized or stainless steel
- Acoustic treatment of combustion gases
- Acoustic treatment of auxiliaries



Silencer for HRSG



Acoustic enclosures



Vent Silencers for safety
or start-up valves



HRSG Ventilation silencer



Discharge insert
silencer

FANS AND PUMPS

Fans

- Centrifugal fans
- Reactive or absorptive tuned
- Low pressure loss
- Anti clogging

Pumps

- Reciprocating compressors
- Rotary compressors
- Spectrum above 125 Hz
- Anti-pulse system
- Pressure vessel coded design



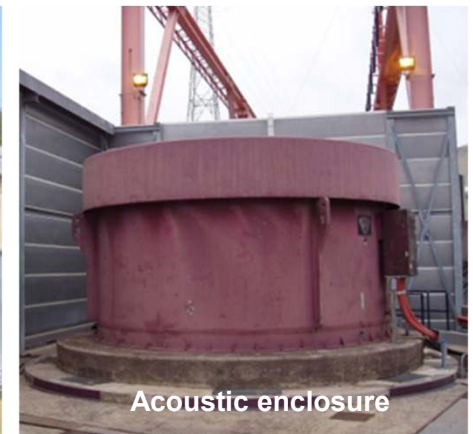
Reactive compressor silencer



Discharge silencer



Ventilation silencer



Acoustic enclosure



Vent Stack



Steam Purge Silencer



Oxygen Vent Silencer

VENT SILENCER



Characteristics

- Acoustic performance from 20 dB(A) to 65 dB(A)
- Valve flow rate 500 T/h (up to 5,000 T/h and more)
- Pressure upstream of the valve: no limit
- Temperature upstream of the valve: from - 200°to 650°C
- Counter pressure: as per process requirements
- Shape: cylindrical or rectangular
- Low skin temperature when required
- Accessories: supports, flanges, counter-flanges, bolts, gaskets, rain cap, expansion valve, internal or external insulation
- Flange standards: EN, DIN, BS, ASME ...
- Inlet pipe/diffuser designed to CODAP – CODETI - ASME B31.1. B31,3 ou VIII div I
- Conforms with PED for European installations

IN-LINE SILENCER

Characteristics

- Reactive and Absorptive
- Compliant with PED & CE
- Without internal fiber
- Radial & Axial connections
- Oil / Water separation
- Design according to relevant international standards
- Anti-pulsation analysis



In-Line Silencer under pressure



Oxygen In-Line Silencer



COMPRESSORS



Characteristics

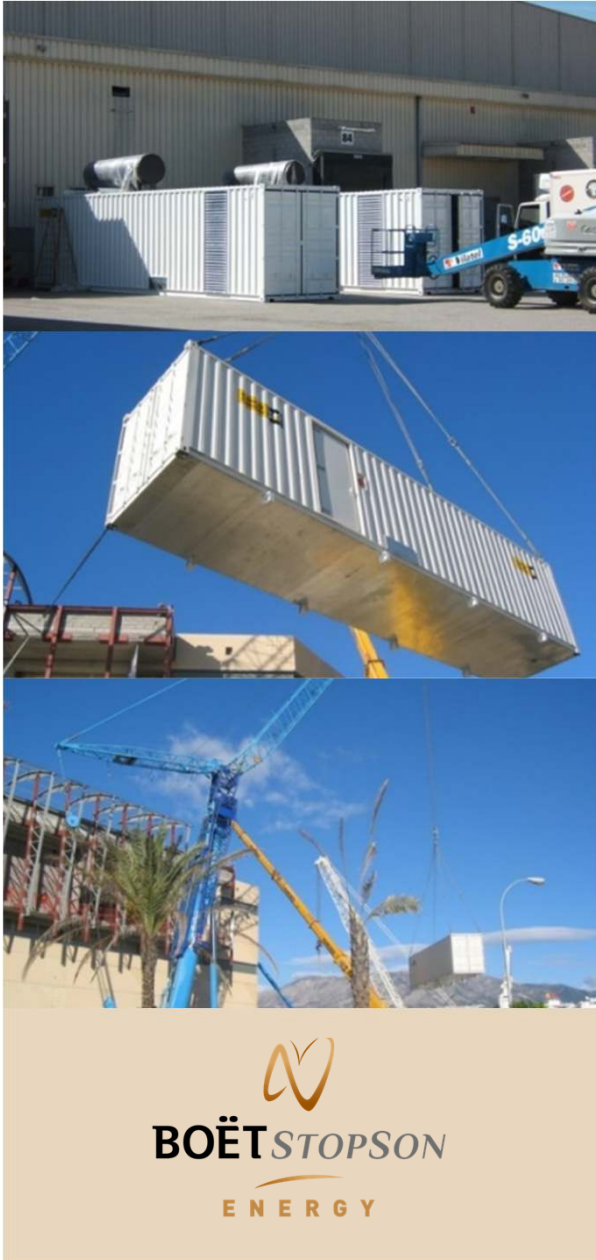
- Acoustic performance: from 20 dB(A) to 40 dB(A)
- Type: cylindrical silencer
- Options: supports, flanges, counter-flanges, gaskets, over-pressure system
- Connections according to EN, BS, DIN, ANS standards

ACOUSTIC PACKAGES

Characteristics

- Acoustic performance: from 20 dB(A) to 40 dB(A)
- Turnkey solution
- Adaptation to specific environments (offshore - nuclear)
- Integration of ventilation systems & fire protection





ACOUSTIC CONTAINERS

Characteristics

- Acoustic performance: from 15 dB(A) to 50 dB(A) attenuation
- Power: from 150 to 2,500 KVA in standard containers (40' or 20')
- Applications: compressor, co-generation module, etc.
- Ventilation silencers
- Rectangular type exhaust system for integration into container
- Turnkey solution

They trust us

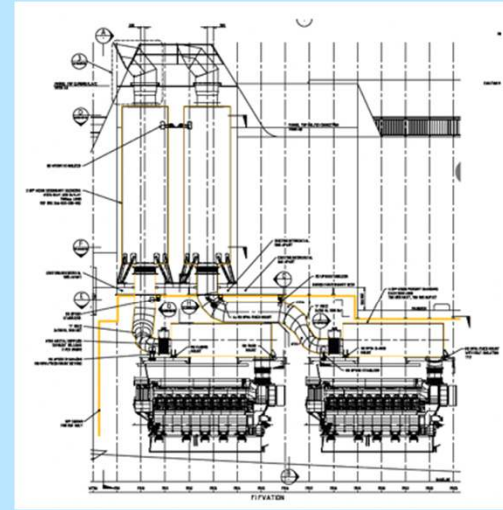


APPLICATIONS



- A range of standard silencers
- Acoustic performance: from 10 to 50 dB(A)
- Available from stock
- Options: - Special material (stainless steel or other)
 - With particle filter or catalyst
- Realization and manufacture of the equipment in our workshop according to the specification including customer inspection

APPLICATIONS



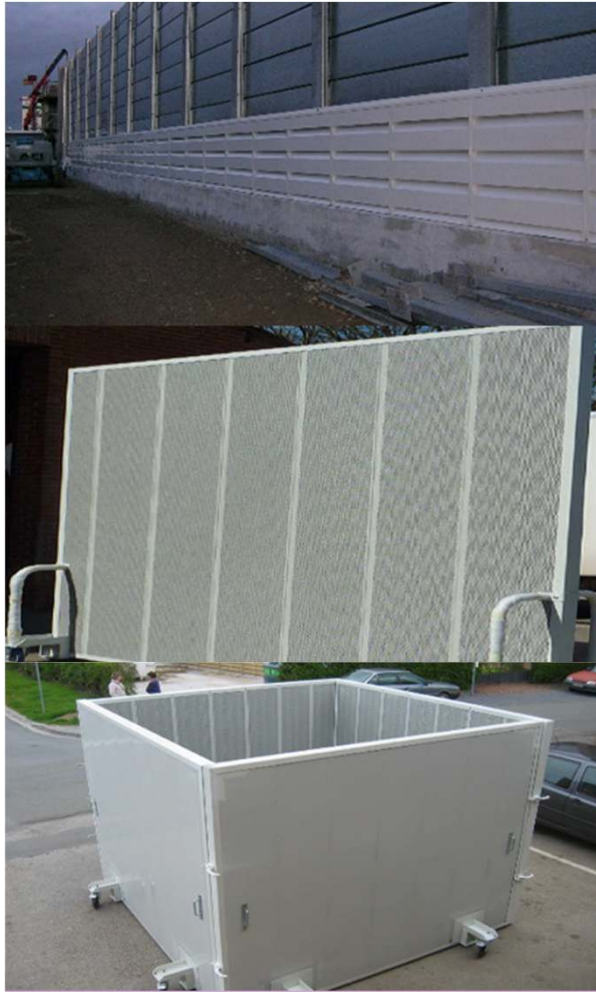
- Study and simulation, including acoustic, mechanical, vibration and aeraulic
- Pulsation analysis and definition of anti-vibration systems and associated parts
- Determination of equipment designs:
 - Engine and turbine
 - Exhaust system and silencer
 - Combustion air system and silencer




BOËT*STOPSON*

I N D U S T R Y





Our noise enclosures and acoustic screens

- Indoor - Outdoor
- Stated - Mobile
- Custom design
- Turnkey services:
 - Acoustic measurements on site
 - Sizing of the screen and provision of general drawings
 - Detailed acoustic calculation note
 - Supply of all equipment (panels / structure / junction profiles...)
 - Assembly and reception of equipment

INDUSTRIAL SOLUTIONS

Acoustic enclosures & screens



Product Range Industrial: Silencers



Air Intake Silencer



Engine Silencer



Rental Silencer



Exhaust Silencer



Vent Silencer



Ventilation Silencer




BOËT *STOPSON*

B U I L D I N G






BOËT STOPSON
BUILDING

ACOUSTIC DOORS

- Performances between $R_w = 50\text{dB}$ and $R_w = 63\text{dB}$
- Custom dimensions up to 9,000 x 10,000 mm high
- Customization of design
- Wall or corridor installation
- Robust metal solutions
- Indoor and outdoor installation
- 3mm thick flat threshold for easy access
- Ultra-resistant lacquered finish (polyester powder paint)
- Doors delivered ready to install
- Choice of additional equipment
- French manufacturing

ACOUSTIC VENTILATION LOUVRES

- Performances between 10dB & 26dB
- Robust steel construction
- Custom dimensions
- Small footprint
- Quick and easy implementation
- Wall or corridor installation
- Within facade or external
- Many options available




BOËT STOPSON
BUILDING



VENTILATION SILENCERS

- Robust galvanized steel construction
- Custom design
- Designed to prevent particle migration
- Systematic provision of a detailed calculation defining:
 - The intrinsic performance of the silencer by frequency band
 - The pressure loss
 - The air speed between the panels
 - The regenerated noise
- Many options available

ACOUSTIC SCREENS

- Indoor – Outdoor
- Fixed – Mobile
- Custom design
- Turnkey delivery:
 - Sizing of the screen and design principles
 - Detailed acoustic calculation note
 - Supply of all equipment (panels, support structure, etc.)
 - Assembly and installation





ACOUSTIC TARPAULINS

- From Rw 10 to Rw 17 dB
- Suitable for any type of support
- Easy to install
- Standard or custom sizes
- Customizable
- Weather and UV resistance
- Good fire resistance
- Easy cleaning
- High flexibility
- Flat or rolled transport
- Indoor / Outdoor
- French manufacturing

ACOUSTIC PANELS

- Absorption coefficient > 1 α_w from 300 Hz
- Suitable for all types environment
- Easy installation
- Standard dimensions or tailored
- Fire classification Bs2d0
- Easy cleaning
- CSTB certification
- Aesthetics & light
- Decorative and customizable
- No media preparation
- Low downtime of premises
- French manufacturing



They trust us

ALSTOM



CANAL+



COFELY INEO
GDF SUEZ



LIEBHERR
Aerospace





Clinic



Care home



Company infirmary



Hospital



BOËT *STOPSON*



M E D I C A L

OUR PRODUCTS



APPLICATIONS

- Hospital or clinic
- Company infirmary
- Care home

CHARACTERISTICS

- Standard audiometric booths 1000 & 1500
- Specific and custom medical booth
- Audiology room
- Specialized facilities for hearing research
- Compliance of audiology premises

They trust us



Connect with us



LinkedIn



Twitter



Website

www.boet-stopson.com

CONTACT US!

MAILING ADDRESS

26 rue du Président Paul Doumer
59650 Villeneuve d'Ascq – France

PHONE NUMBER

+33(0)3 20 05 88 40

EMAIL ADDRESS

france@boet-stopson.com

