

# ***MECASON***

***Reduce your costs ...***

***Keep an ear on your  
machines***



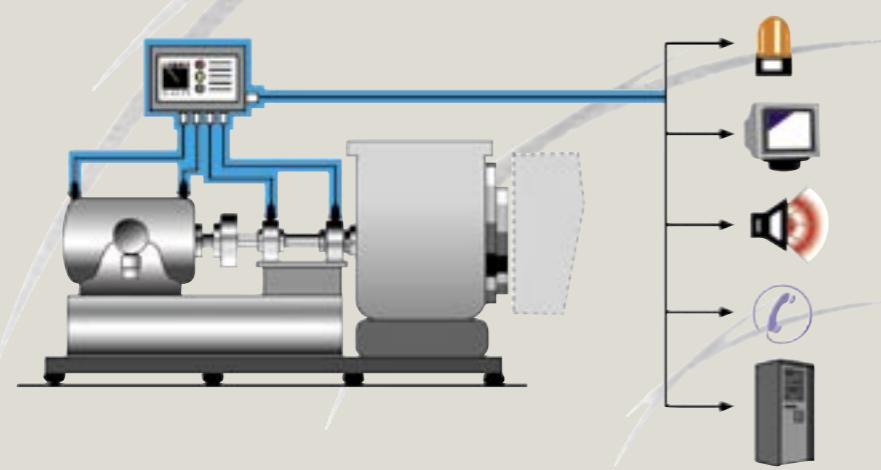
A machine in good operating condition generates a minimum noise level.

Any elevation of this level implies a possible degradation in the mechanical function.

One should leave a well functioning machine alone. Mechanical difficulties often follow machine renovations !

Best is to reduce pre-scheduled maintenance interventions to a minimum.

It far more economical to optimize the regular maintenance procedures so as to permit useful bearing lifetimes of 100 000 hours than to simply change them every 20 000 hours !...



MECASON listens non-stop to your machines, at a price that permits continuous monitoring for machines of a 100kW or even less. If alarm levels are surpassed, the system invites you to at least take a closer look and most probably take action, because the machine is not "running as usual". With the machines so closely monitored, pre-scheduled machine shut-downs are only in rare cases necessary.

A change in the mechanical behavior of the machine is signaled early enough to usually avoid even a degradation of the machine components and well before any failure.

MECASON essentially duplicates the technique of the mechanic, who uses a screwdriver in contact with the surface of the machine and the handle against his ear to listen to his machines.

With its specially designed sensors placed permanently on the surface of the machine as close as possible to the component to be monitored (bearing, gear, flapper, etc.), MECASON listens to and quantifies continuously the noises emitted by the critical mechanical components, and signals any evolution well before failure can occur. Better than simply detecting an approaching failure, the system generally permits you to begin maintenance activity early enough to avoid the failure altogether.

Experience shows that 90% of maintenance incidents concern the lubrication (oil levels, grease applications, lubricant contamination, etc.). In reacting rapidly to alarms, you ensure the proper functional environment for your mechanical components and thereby prolong their useful lifetimes dramatically.

## SYSTEM FUNCTION

No link in the measurement chain is calibrated. Only the changes in measurement levels relative to an initial adjustment level are monitored via pre-selected alarm levels. This initial adjustment level usually corresponds to the level associated with "good" machine operating conditions for each measurement point individually. The monitoring results thus obtained are remarkably reliable and permit the earliest possible warning.

To permit the monitoring of all critical points of the same machine, the MECASON CBN 30 electronics unit features 8 sensor inputs. Monitoring is conducted by cyclically scanning the inputs present. For applications requiring a single measurement point a MECASON modular system is also available. The modular units having the advantage of offering uninterrupted monitoring for process control applications.

The multi-input and modular units each offer three alarm limits for monitoring. A minimum expected level to monitor correct unit function. And two user adjustable high level limits to monitor any mechanical changes. The first high level limit being used largely to signal an insufficient lubrication. The second usually implying an emergency due to the rapidity of the signal increase (inability to respond to the first alarm before exceeding the second alarm level) and often used to immediately shut-down the machine.

According to the demands of the application at hand, the sensors can be furnished with rating IP 65 or version submersible up to 50 m.

For zone classed dangerous a certified EEx IIC ia T5 sensor is also available. Each sensor is used in conjunction with a Zener diode installed with the electronics unit outside of the intrinsic safety zone, or in a certified explosion proof housing.

Multiple input CBN30



Modular MECASON units with powersupply



Designed to reduce costs to a minimum, MECASON is simple, reliable and easy to understand ; even for beginners.

The results are:

- longer useful machine lifetimes,
- fewer pre-scheduled maintenance interventions,
- less down-time,
- overall reduction in production and maintenance costs.



CFIP Tunisie - Compresseur de gas-lift



STV Val d'Aisne - Téléhydraulique



## SOME APPLICATIONS

Continuous monitoring of centrifuge pumps, vacuum pumps, "roots" compressors, conveyor belt rollers, air cooling towers, water powered turbines, fans, turbo-blowers for large combustion engines, gears box, screw type compressors, piston compressors, etc...

The modular units can offer in some cases a solution in production process control, such as : detection of pump cavitation, passage of fluids in pipes, confirmation of valve closure, regulation of paper pulp refining machinery, etc...



Photo Site du Canal de Provence

Somme references since 1991:

AEROSPATIALE,  
ALCATEL CABLE (Belgium),  
ALUMINIUM PECHINEY,  
SOCIETE DU CANAL DE PROVENCE,  
CHARBONNAGES DE FRANCE,  
CIMENTS VICAT,  
Cie GENERALE DES EAUX,  
Cie FRANCO-TUNISIENNE DES PETROLES (Tunisia),  
DEGREMONT,  
DOPPEL-MAYR,  
ELECTRICITE DE FRANCE,  
ELF-ATOCHEM,  
FONDERIE MAGOTTEAUX (Belgium),  
LYONNAISE DES EAUX,  
POMAGALSKI,  
RHONE-POULENC,  
SNCF (microcentrales),  
SOCIETE MARITIME SHELL,  
THOMSON...,  
UNION CHIMIQUE BELGE (Belgium),  
and more than 20 ski lift station opérateurs such as  
l'Alpe d'Huez, Avoriaz, Chamonix, Courchevel, Val  
d'Isère, Val-Thorens, etc.

Transportation



Petroleum



Steel



Energy



distributed by :

