Data sheet

FASIT

New expert system for DDS 2007

System tools are implemented to the DDS 2007 software. Their name is "FASIT" (Fault Source Identification Tools). These tools serves user as wizards for both phase of diagnostic control, for detection phase and for identification phase. FASIT tools are expert system for data evaluating.

FASIT tools

- Report and control system for machines condition change monitoring.
- ASTAT method - prognosis of machine condition development.
- Statistic functions system - setting and tuning diagnostic system.
- SAB (Spectral Alarms Bands) - spectra processing for determining the cause of the faults and these severities.
- MBFA (Multiple Bearings Faults Analysis) - extended bearing faults analysis.
- ACMT method - special method for rolling bearing and gearboxes diagnostics.

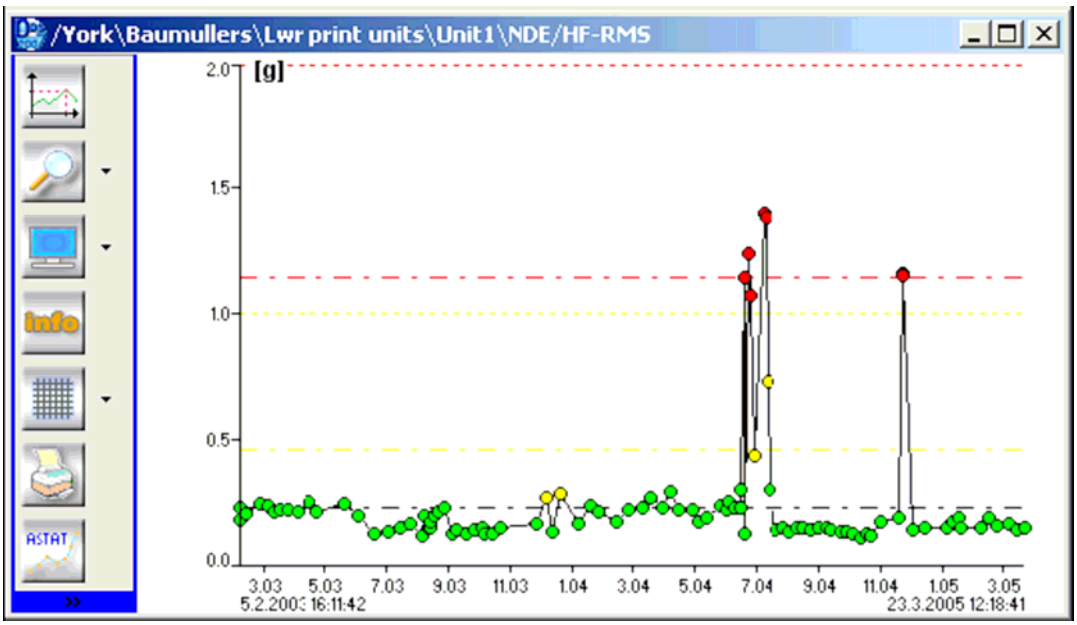
Report and control system

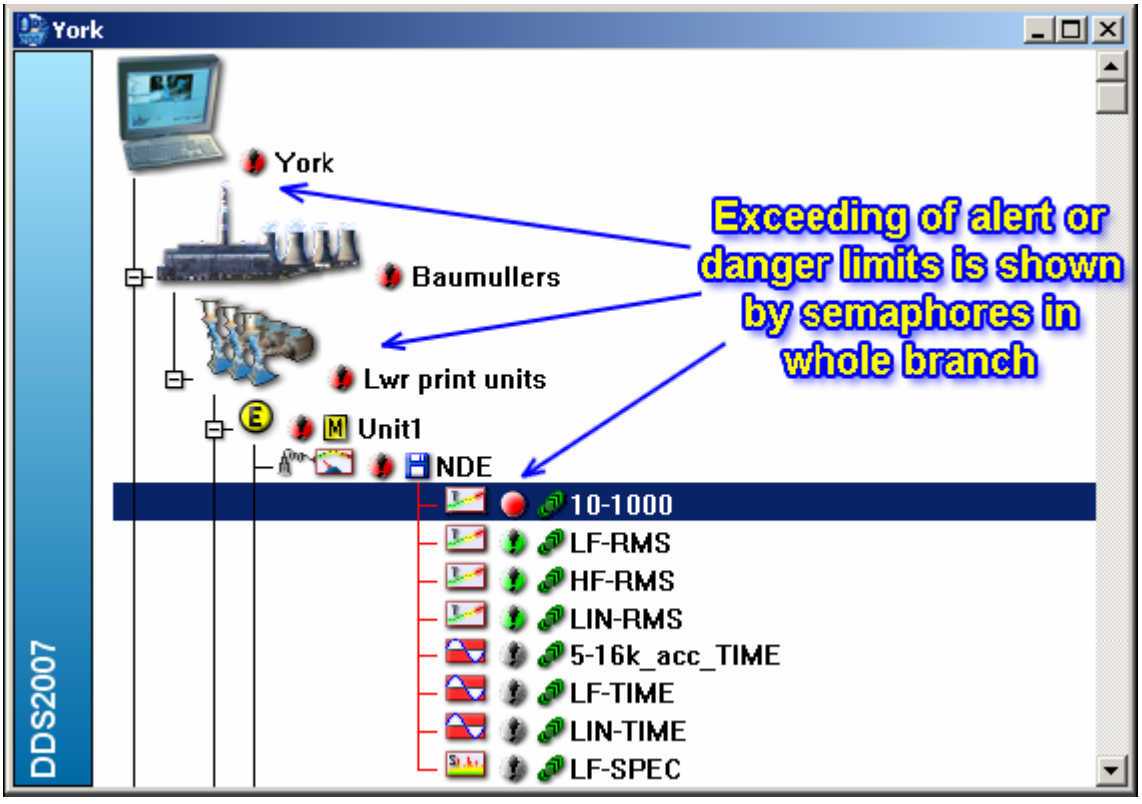
It is based on the controls of absolute and relative (and both) changes of measured vibration values. For automatic evaluation of vibrations level alert and danger levels must be defined. Software DDS 2007 evaluate measurement state (exceeding alert and danger levels) and after exceeding, the program will inform user. This information is shown by changing semaphore color to yellow (exceeding alert level) or red (exceeding danger level).

- - no level was exceeded
- - alert level was exceeded
- - danger level was exceeded

ADASH Ltd., Czech republic, tel.: +420 596 232 670, fax: +420 596 232 671 email: info@adash.cz
For next technical and contact information visit www.adash.net, www.adsh.cz

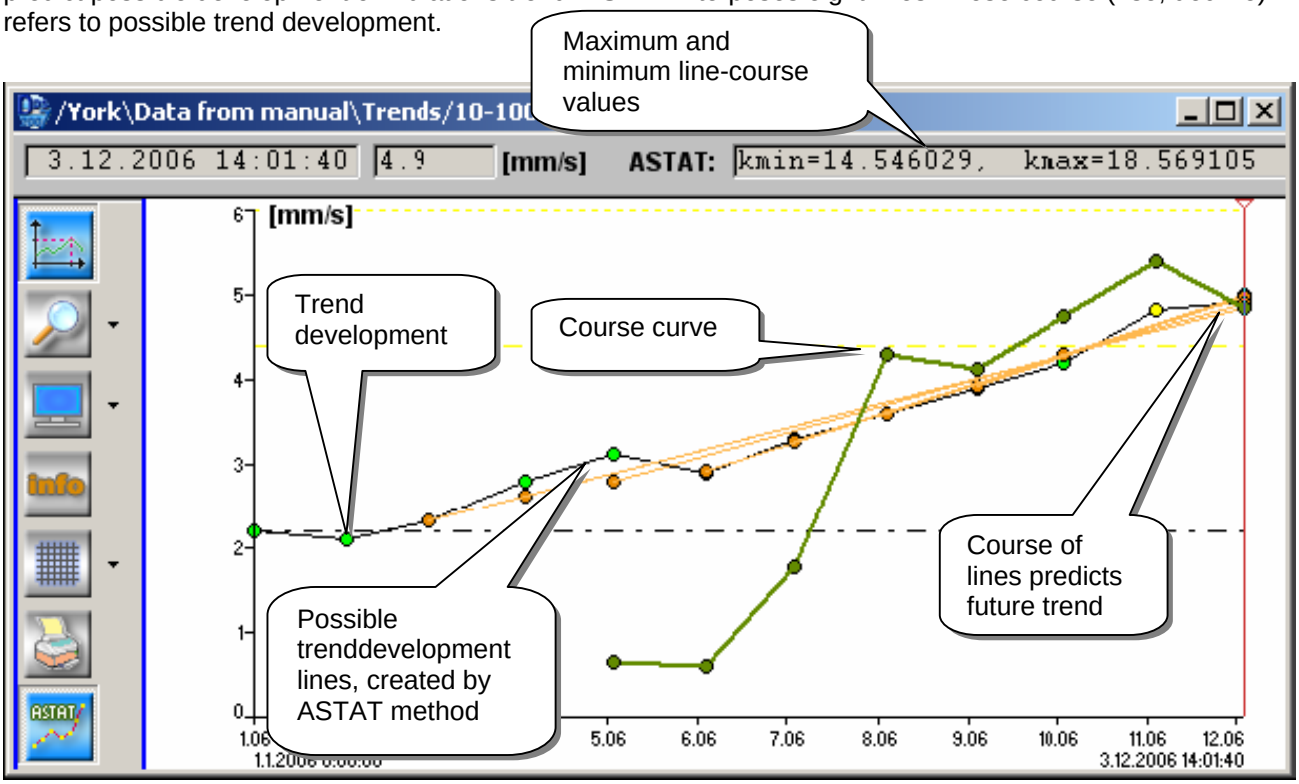
A limit levels are shown by yellow and red lines. A exceeding of these limits is shown by yellow and red circle. See picture bellow.





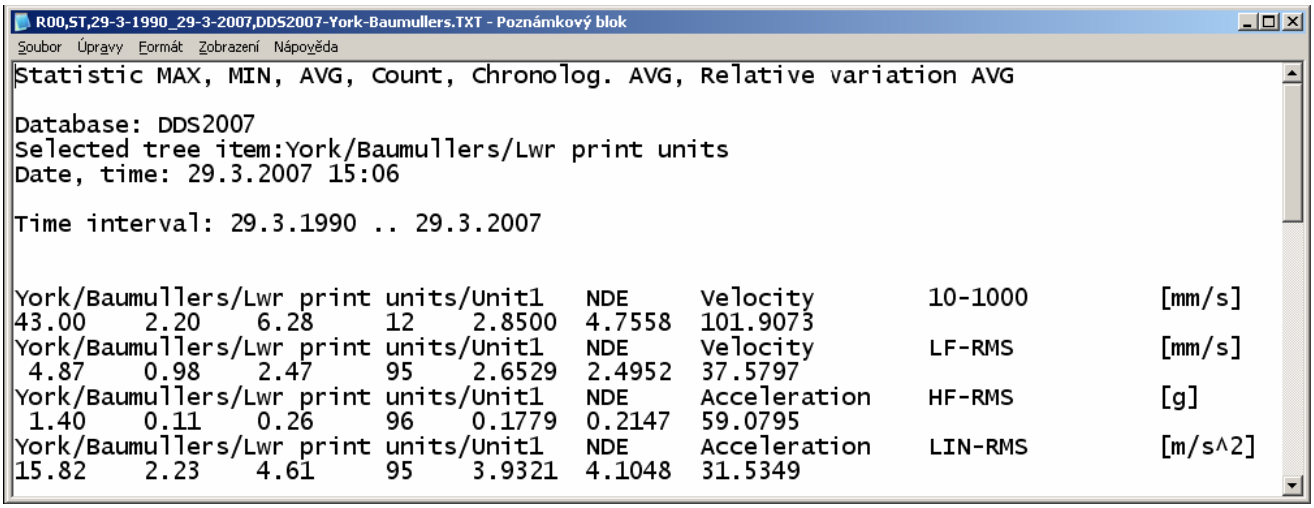
ASTAT prognosis of machine condition development

ASTAT is a statistic method, which can detect current trend development (even from uncertain data) and predict possible development of vibrations trend. ASTAT interposes eight lines whose course (rise, decline) refers to possible trend development.



Statistic functions system

It serves to setting and tuning diagnostic system. System performs statistic calculations of all chosen trends and create list of statistic parameters of all chosen data cells. Base on this list (and computed value) is possible to set and tuning a diagnostic system.



R00,ST,29-3-1990_29-3-2007,DDS2007-York-Baumullers.TXT - Poznámkový blok

Soubor Úpravy Formát Zobrazení Nápověda

```
Statistic MAX, MIN, AVG, Count, Chronolog. AVG, Relative variation AVG

Database: DDS2007
Selected tree item:York/Baumullers/Lwr print units
Date, time: 29.3.2007 15:06

Time interval: 29.3.1990 .. 29.3.2007


York/Baumullers/Lwr print units/Unit1   NDE     Velocity        10-1000         [mm/s]
43.00    2.20    6.28     12    2.8500  4.7558  101.9073
York/Baumullers/Lwr print units/Unit1   NDE     Velocity        LF-RMS          [mm/s]
 4.87    0.98    2.47     95    2.6529  2.4952  37.5797
York/Baumullers/Lwr print units/Unit1   NDE     Acceleration    HF-RMS          [g]
 1.40    0.11    0.26     96    0.1779  0.2147  59.0795
York/Baumullers/Lwr print units/Unit1   NDE     Acceleration    LIN-RMS         [m/s^2]
15.82    2.23    4.61     95    3.9321  4.1048  31.5349
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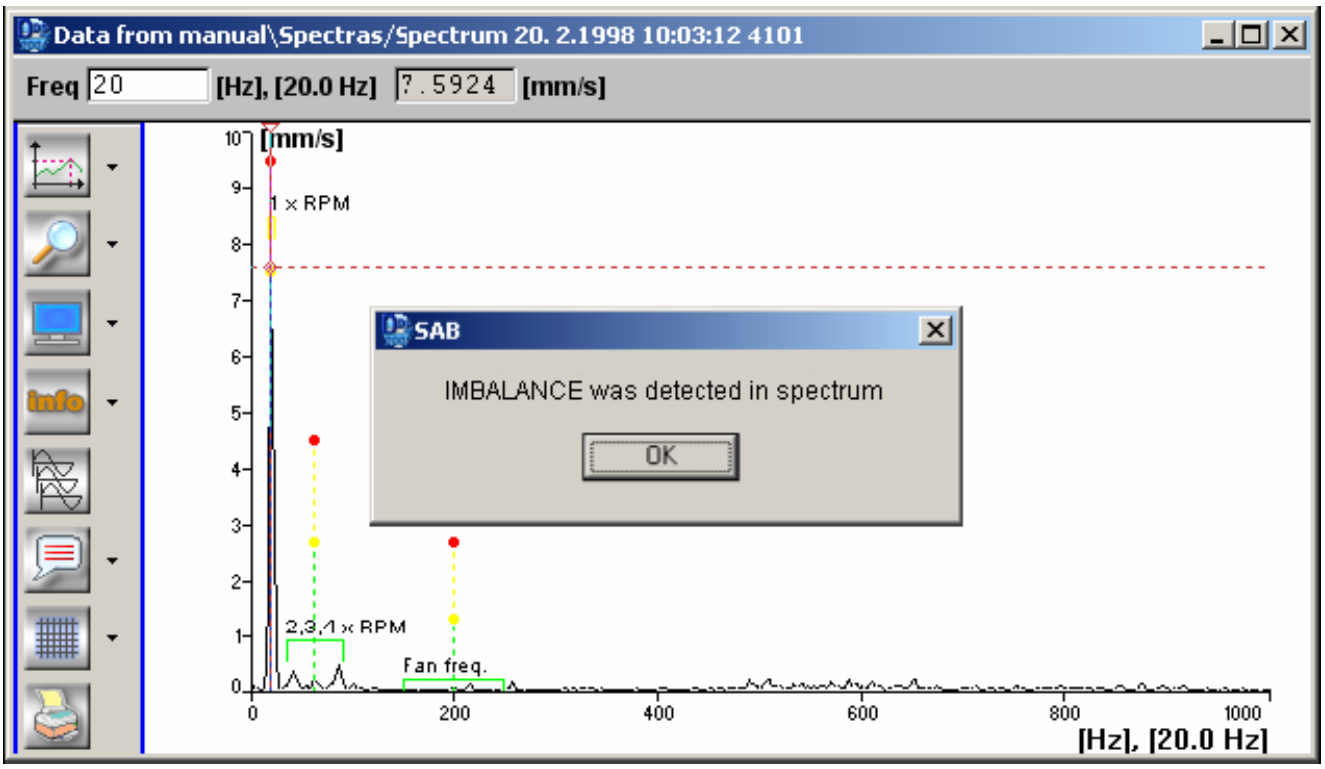
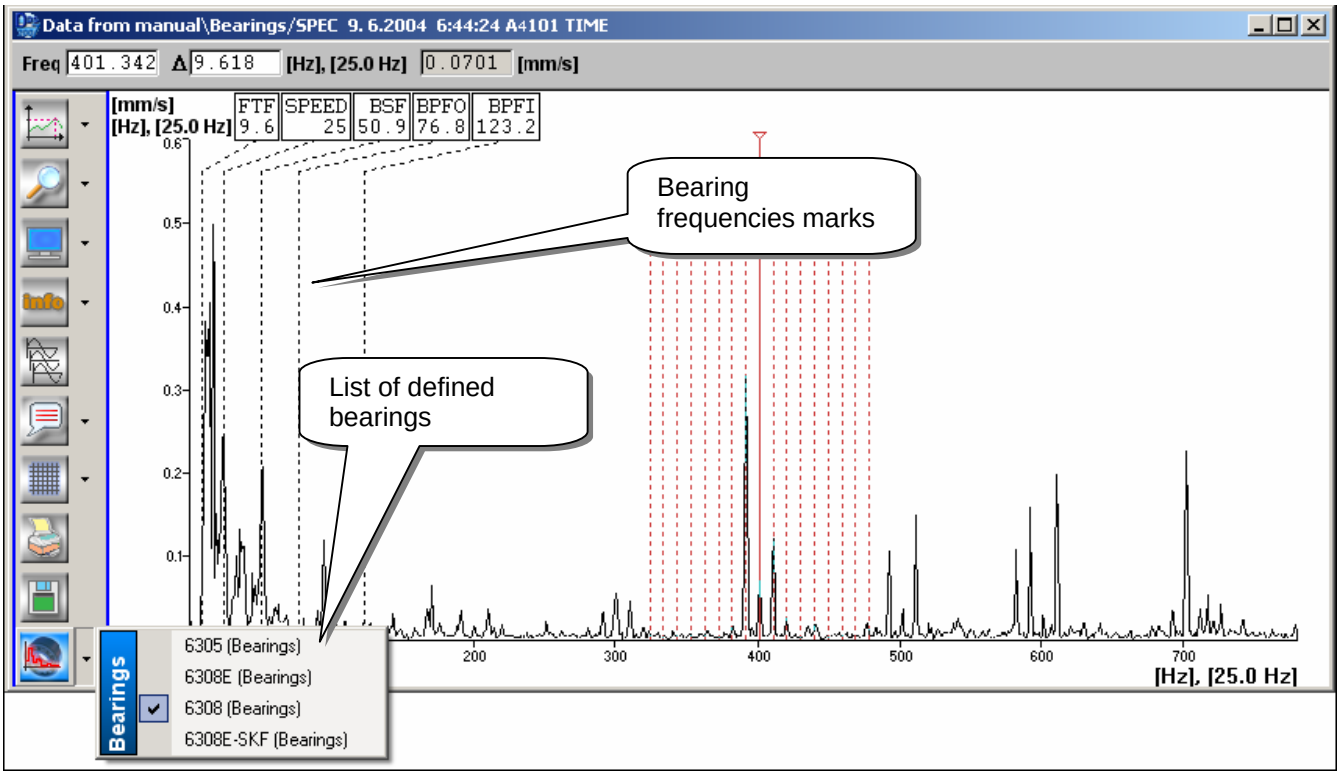
SAB - Spectral Alarms Bands

SAB (Spectral Alarms Bands) is new Adash analytic system for spectra processing. SAB determines the cause and severities of the faults from spectra (misalignment, imbalance, and mechanical looseness). It generates a standard txt file. This file contains spectral data cells names, detected causes and its severities.



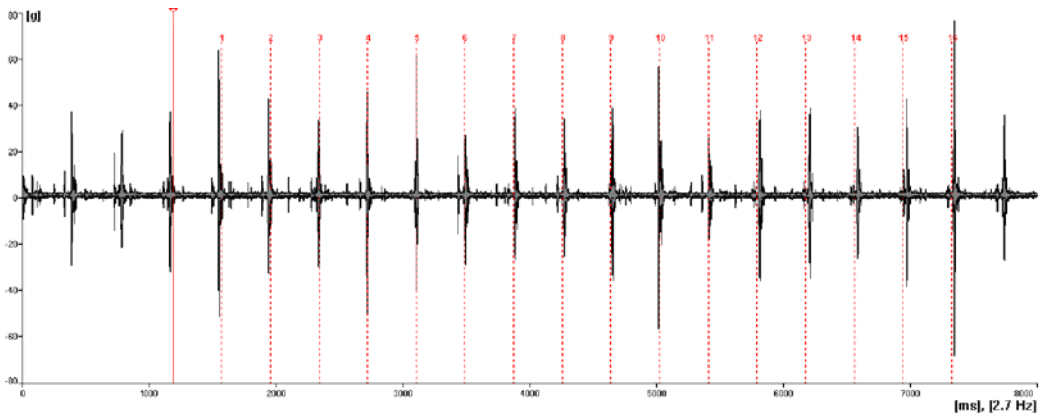
MBFA - Multiple Bearings Faults Analysis

MBFA (Multiple Bearings Faults Analysis) is news for rolling bearing analysis. It allows detection of bearing frequencies of measured bearing and additional four neighboring bearings. It is useful for measurement on places where is vibration signal mixed from several bearings. Spectrum below is measured on the bearing (type 6308) but vibration signal is mixed with other signals from other bearings. You can switch between bearings using graph-toolbar. There are bearing frequencies marks of selected bearing shown in the spectra. Defect on the ball is indicated on the frequency 50,9Hz (BSF). Defect on the cage is indicated on the side frequencies, which are modulated on other frequencies.



ACMT

ACMT (ADASH Compressed Time) is new Adash hi-technology. It is based on the special compress method of time signal. ACMT is able to detect fault causes which other methods cannot detect. It is useful for measurement of rolling bearings, gearboxes and low-speed machinery (paper machine, rolling mill, transport mechanism). It detects very short pulses in very long time waveform.



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