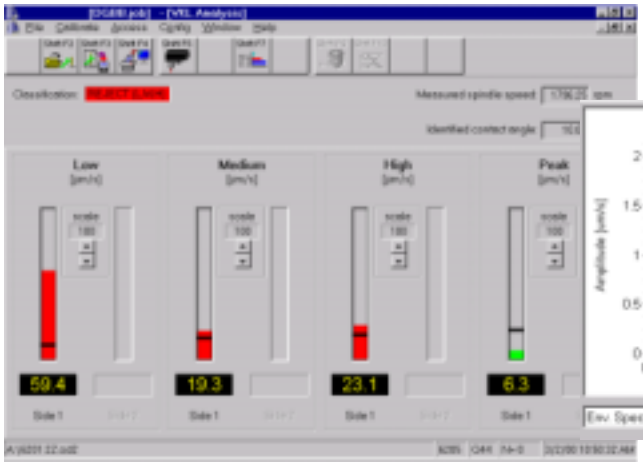
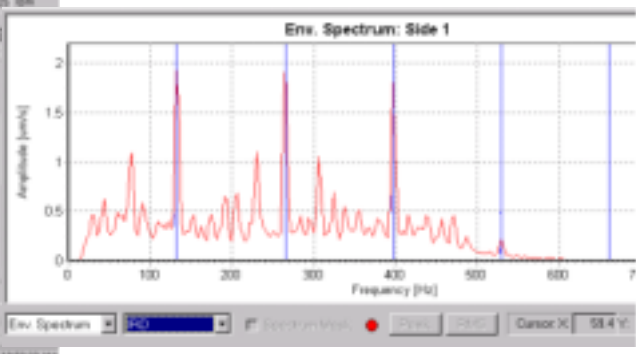
FPM

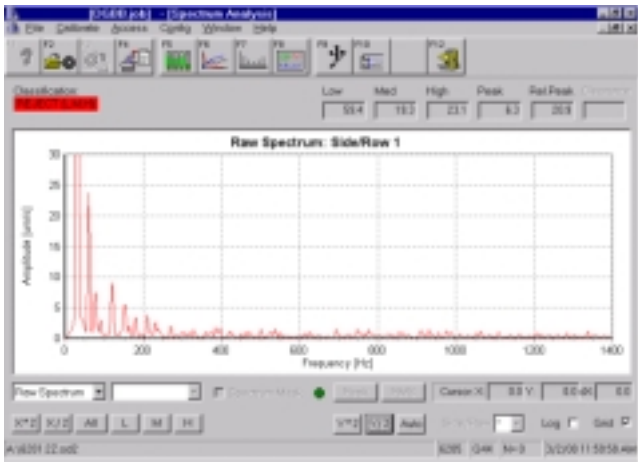
Finger-Print-Method Software



L-M-H-band and Peak display



Example of an inner ring defect



Frequency spectrum display

General Description

The FPM Finger Print Method is a analysing software for bearing noise and noise sources of rolling bearings. The FPM software runs on the Windows 9x, 2000, XP and NT4.0 platforms and is designed according to Windows standards. The software identifies the characteristic Low- (L), Medium- (M) and High-band (H) values according to the AFBMA Standard.

The result can be shown in µm/s and Anderons. Together with a fourth parameter, the Peak (P) Value, the FPM software classifies the bearing according to customer definable noise classes. The Peak parameter is used for the detection of the existence of local defects and dirt. Further, a spectrum mask can be set and the calculated contact angle is displayed.

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FPM SOFTWARE

Advanced users have the possibility to look to the time signal, the enveloped time signal and the amplitude spectrum of the raw signal or enveloped signal. Setting cursors which indicate local defects is just one of the numerous features for a detailed analysis of the noise signals.

The software synchronises its defect analysis to the internal rolling speeds of the bearing, which makes the assessment of the causes of vibration very accurate.

The enveloped signal is filtered and an FFT is carried out to calculate an enveloped spectrum. From the enveloped spectrum the RMS levels in narrow bands around the defect frequencies are then calculated for each component.

For double row bearings a number of special features are dedicated. Alternatively worst or best side statistics can be selected, axial clearance can be measured, different geometries and limits for each row can be specified, etc, etc.

Reports can be freely configured and printed. Pure time data can be saved to files, as well as results can be saved to ASCII files.

HARDWARE REQUIREMENTS

The FPM software is installed on the MEB 95 electronics. The MEB 95 consists of an industrial PC-based analyser which reads the data from a VK pick-up with a built-in amplifier.

The MEB 95 hardware consists of a Pentium processor.

For machine control, the SKF-MTC unit or a standard SIEMENS PLC can be connected to the MEB 95 electronics.

FREQUENCY BANDS

1800 rpm		**700 rpm**	
Band L:	50 .....300 Hz	Band L:	20 .....120 Hz
Band M:	300 .....800 Hz	Band M:	120 .....700 Hz
Band H:	1800 .....10000 Hz	Band H:	700 .....4000 Hz

SIGNAL EVALUATION CRITERIA

L-, M-, H-band values, Quality-classification, frequency spectrum mask, dirt, inner ring/outer ring and rolling elements defects

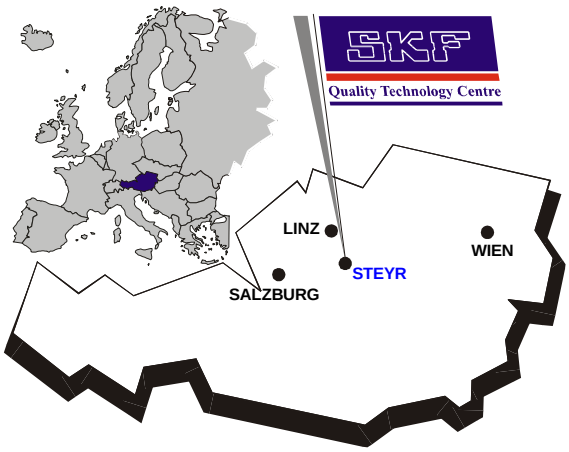
For more information on your specific application, please contact our engineers at QTC.

QTC, the "Quality Technology Centre" in Steyr, develops, manufactures and markets systems, which are used to ensure the quality in these special fields:

- Roundness and Form Analysis
- Noise and Vibration Control
- Optical Inspection
- Nondestructive Material Testing
- Dimensional Measurement
- Washing
- Laser Marking
- Grease Testing
- Demagnetization
- Cleanliness
- Assembly
- Packaging

QTC supplies the latest technology and highly innovative equipment to customers worldwide and is also the Competence Centre for measuring and quality-related equipment for the SKF Group on a global scale.

QTC, Quality Technology Centre, is located in Steyr - Austria.
You are always welcome to visit us.
The best way to reach us is a flight to Linz via Vienna, Frankfurt or Zurich.
We will, of course, arrange the pick up at the airport.



Technical specifications subject to change without notice.

A/02