

HEALTH CHECK

Condition diagnosis for predictive maintenance strategies

The *Health Check* service is a condition diagnosis for machines and entire drive trains.

The aims of the *Health Check* are:

- vibration analysis of the machine
- verification of the machine and process parameters
- visual inspection of the general machine condition

The *Health Check* report presents the results of the diagnosis and lists, if need be, a catalogue of measures in order to assure and maintain the reliability of the machine and drive train.

Scope of services:

Power transmission

- General condition

Main engine

- Vibration analysis in accordance to DIN ISO 10816 ¹

Gear box and / or hydrodynamic coupling

- Vibration analysis in accordance to DIN ISO 10816 ¹
- Inspektion of the tooth bearing and tooth flanks ^{2, 4}
- Vibration analysis of the tooth meshing frequencies ^{1, 3}
- Verification of the fusible safety screws ^{2, 4}
- Condition and clearance of the scoop tube actuator
- Instruments
- Piping and fasteners

Work machine

- Vibration analysis in accordance to DIN ISO 10816 ¹

Roller bearings

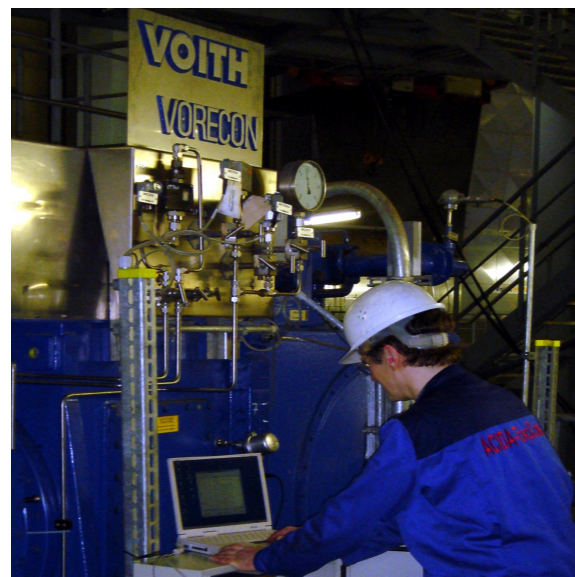
- Vibration analysis of the kin. bearing frequencies ^{1, 3}

Health Check Benefits

- Ü Risk of failures is minimised
- Ü Expertise directly from the diagnostic specialist, manufacturer independent
- Ü Low-cost vibration and resonance measurements
- Ü Low-cost visual inspection of the power transmission
- Ü Assessment of the spare part inventory
- Ü Online condition monitoring can be retrofitted optionally
- Ü Manufacturer informations and machine documentation are accessible
- Ü Competent and experienced in the diagnosis of complex machines and plants, i.e. hydrodynamic drives
- Ü Extensive application and process know-how is included in the diagnostic analysis
- Ü Service potential for serial *Health Checks* and short-term trouble-shooting

Typical applications

Feeder pumps, coal mills, wind turbines, rolling mill main drives, roller presses etc.



Options

Online *Health Check* for plants which are imperative for the production or are exposed to excessive failure risks. The online version of the *Health Check* equipment is installed permanently at the monitored machine. The vibration, machine and process signals will be monitored online and analysed periodically by ACIDA through remote access. *Health Check* reports will be presented regularly by ACIDA to the plant operator. If threshold values are exceeded, alarms will be generated and measures initiated.

In addition to the vibration measurements during machine operation, resonance measurements can be carried out. The aim is to determine the natural frequencies of the machine and the bedplates.

The spare part inventory can be accessed as an option to the *Health Check* service. The *Health Check* report will contain an appropriate spare part recommendation.

Recommendation

In order to obtain reliable condition analysis results for the machine and bedplates, ACIDA recommends to carry out *Health Checks* on a regular basis at comparable operating conditions.

ACIDA recommends:

1 *Health Check* / year



Technical remarks:

- 1 Scope of supply for the „*Health Check* during operation“ service.
- 2 Scope of supply for the „*Health Check* at shut-down“ service.
- 3 The availability of the machine data are the prerequisite for this service.
- 4 By opening the gear box inspection cover.