BladisNet gets to Tolerance Faster, Easier and with Less Correction

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BladisNet Blade Distribution System works in conjunction with Schenck moment weighing scales to optimize the blade distribution of bladed rotors. Proper blade distribution more efficiently reduces the unbalance of the rotor stage so the minimum amount of correction is necessary and the required tolerances can be achieved faster and easier.

In the 1980's, with the advent of more powerful desktop computers, Schenck developed the first version of Bladis. Over the years the system has been significantly improved taking advantage of the faster and more powerful computer systems as they became available.

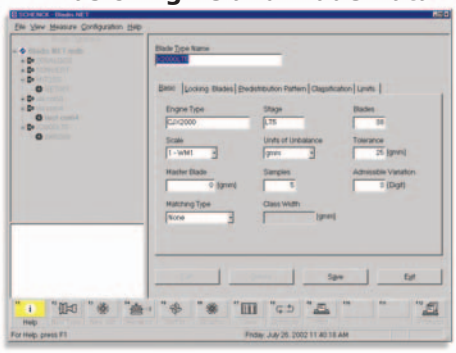
The new BladisNet system stores rotor and blade data in familiar Windows based format. Reports generated by the system can be easily stored, printed, or e-mailed. For large companies with several BladisNet systems, the systems can be networked so rotor and blade data files can be shared from one system to another. One large turbine manufacturer recently purchased many new BladisNet systems as well as upgrades for older Bladis systems for use in their gas turbine manufacturing and service facilities worldwide. Once installed, they will utilize the networking capability of BladisNet program to share blade data files and complete rotor files with all plant locations.

Since the moment weighing of blades precedes the balancing process of a single stage, Schenck further enhanced the networking ability to integrate the blade distribution data into the unbalance measurements of the unbladed disks. Blades are distributed, so that the combined disk unbalance and the residual unbalance of the blade set are minimized.

Features & Benefits of BLADIS-NET:

- Blade distribution optimized to achieve unbalance tolerance
- Windows based program
- Clear, user-friendly dialog screens
- Networkable
- Menu-based operations with function keys, providing efficient data input which are fast and easy to use
- Password protected creation, modification or deletion of data and files
- Operator alarm messages - to alert the operator about missing or erroneous data input
- Automatic compensation of initial disc unbalance when determining blade distribution
- Programmable limits for upper and lower blade moments
- Operator marking (designation of position) of fixed and locking blades
- Automatically checks the stability of measured values
- Input of blade moments automatically via keyboard
- Automatic collection of blade moment data
- Label generation for each blade
- Distribution of blades in accordance with selected distribution pattern
- Reporting function for all pertinent data plus a graphical representation of the blade distribution
- Protocol easily exportable to a MS Excel spread sheet
- On-screen Help Function

Basic Engine and Blade Data



Entering data is easy for the operator with BladisNet's user-friendly screens.

By selecting the appropriate tab, screens appear for the operator to enter the basic engine and blade data, and to select a predistribution pattern. In this section, where applicable, the operator enters the position of the locking blades, blade classification, and upper and lower allowable blade limits.

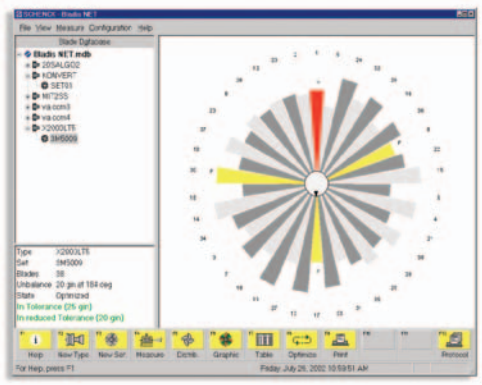
Measuring

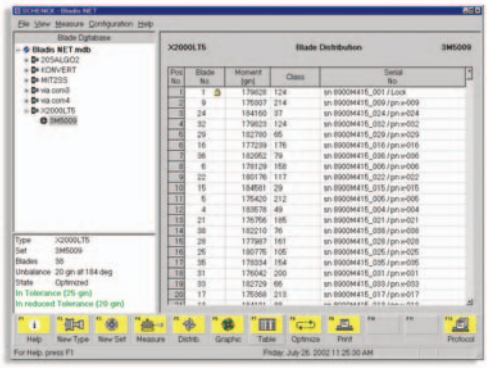
The BladisNet system receives the measured blade moment automatically from the scale. The operator enters a serial number via keyboard. BladisNet alerts

the operator if the blade moment falls outside of the limits, if a duplicate serial number is entered, or if a duplicate blade moment is measured.

Optimization of Blade Distribution
If specified in the blade type data, BladisNet will automatically form sets of two or three blades whose blade moments fall in the same class width.

BladisNet automatically distributes the blades within the selected guidelines while maintaining the location of the fixed position and locking blades. The optimization can be achieved step-by-step or by the "Best Swap" method, where a number of blades are swapped to achieve the desired tolerance. Both graphic and tabulated blade lists are available.





Benefits of using Schenck BLADIS-Net for the Manufacturer, Rebuilder and End-User
The Schenck BladisNet blade distribution and optimization system will improve rotor quality. The system will distribute the blades of a disc optionally including empty disk unbalance to achieve a tight unbalance tolerance thereby significantly reducing large balancing corrections to a fully bladed disc. The BladisNet program allows the manufacturer to choose a preprogrammed or custom blade distribution pattern.

The documentation system generates detailed protocol including information regarding the engine, disc, stage and blade set, while providing a tabulated blade distribution list and a graphical representation of the blade set distribution. The protocol can be printed, stored, or converted into PDF files and emailed. The rotor and blade data are easily recalled and updated should the rotor be returned for service in the future.

The networking capability is a great benefit to a manufacturer and their service shops. If a manufacturer and their service shops are all equipped with BladisNet systems, the rotor and blade data files can be stored on the company server. All BladisNet systems connected to the network can be accessed by authorized users in the network. The service shop will have immediate access to the data files generated for a rotor brought in for overhaul without having to enter the original rotor data into the program via keyboard. After service, the files are automatically updated to the as-built condition, thus providing accurate up-to-date rotor and blade status to all BladisNet systems connected to the company network.

BladisNet is in a user-friendly Windows® environment and all relevant data is recorded in an MS Access format which can be easily transferred to a corporate network, or on-line. The system can also be used in connection with other weighing systems for distribution of blades according to blade weight.

For questions or more information regarding the BladisNet system, contact Ron Green at green@schenck-usa.com.

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