Eddyfi Magnifi® 5.3R3 Release Notes

Release date: January 17th, 2024

<u>*Cloud-based licensing system***</u>**

Magnifi 5.x is now activated through a cloud-based licensing system.

For clients under a valid maintenance plan, access to version 5.3 is included. Simply type your current Magnifi key code in the *Manage License-> License code* field.

If you are not under a valid maintenance plan, please contact your Eddyfi Technologies sales representative.

Magnifi

New Features and Improvements

Surface Applications

- Software performance optimizations for Sharck and Sharck HR probes, reducing calculation time needed for Air-Aluminum and User Material calibrations.

Tubing Applications

- New option to hide unclassified indications detected when the AI-ECT engine is activated via the Indications Grouping menu (SMART Setup ribbon).

Modifications

Generic

- Windows 8 is no longer supported.
- Generating a report now produces a .html file. Any web browser can be used to visualize the content of the report.
- Contact information for support and requests related to Magnifi has been uniformized (support@eddyfi.com).

Surface Applications

- Various modifications related to the Sharck and Sharck HR setups:
  - The C-scan processes and infofields they contain have been updated to allow for improved processing speed.

- o Infofields in Sharck HR setups now show 3 values and their order has changed: SCC Depth, Liftoff, Compensated Depth.
    - o Sharck HR array probes setups now use the Sharck Array report format by default instead of Generic Array.
    - o SHARCK-HR-1048-071 and SHARCK-HR-WPIPE setups have been removed from the default master list.
    - o Demo data files have been removed.
    - o The legacy Sharck Material Compensation C-scan process has been removed.
- Modifications to the ECA-PFLEX-D-056-HF-032 setup:
    - o Central frequency and default frequency now 500 kHz instead of 1000 kHz.
    - o Minimum frequency now 250 kHz instead of 500 kHz.

Tubing Applications

- Arrows representing the vertical and horizontal components of the signal are now displayed in the mini-strip charts under the Lissajous.

Resolved Issues

Generic

- The Magnifi 4.x software license can now be detected when used in transition mode.
- TC7700 or MS5800 data files can now be read back.
- Fixed memory leaks and other performance issues.
- Better management of windows when using an external monitor or disconnecting one.
- Fixed display issues of the C-scans when completely zoomed out on vary large scans.
- Modifying values in the Y column of the Build from Channels C-scan process no longer causes Magnifi to crash.
- Duplicating a C-scan no longer indicates that the C-scan has a problem.
- Corrected errors caused by the presence of invalid characters in the Inspection sub-folder path.
- User is now warned when trying to work from a read-only directory.

Surface Applications

- Fixed a problem causing the X position not to reset to the preset value when clicking the Next Pass button during a raster scan if the encoder had been calibrated.
- Fixed issues that would make Magnifi freeze occasionally when doing scans with Sharck probes.
- The last channel of the Sharpened C-scan in a SHARCK-HR-10PLUS data is no longer flat.
- Fixed a display issue making the font larger in the SCC Depth infofield of Sharck HR setups.

Tubing Applications

- The New Setup button is no longer disabled when using a STD license.
- Fixed issues occasionally preventing the start of IRIS acquisitions.
- In a RFA setup, issues when rotating the Lissajous, if the link between the channels and the C-scans is disabled, were removed.
- For RFA data, modifications to the C-scan low-pass filter are now applied correctly.
- Resolved a potential crash when switching the Inspection folder after using the subtraction cursor.
- Batch screening of files for indication detection with AI now shows a warning icon in the data list when the engine was not able to process properly.
- Groups are now displayed in the correct order in the Indications panel.

Known Issues and Limitations

Generic

- It is no longer possible to generate a Word, Excel or PDF report file directly from Magnifi. Elements from the .html report can be copy-pasted to Word or Excel documents using the dedicated Copy buttons. A PDF can be generated from the .html report.

Surface Applications

- Sharck and Sharck HR setup and data files produced in Magnifi 5.2 (or prior) are not compatible with Magnifi 5.3 (or more recent).

Artificial Intelligence module

Technology: Eddy current testing (ECT) for tubing bobbin data

Version: 3.0

Performance

- 97% probability of detecting significant indications[1,2]
- 98% probability of detecting tubesheets and support plates properly[2]

[1]*Significant indications in the test database correspond to a vertical signal amplitude at 50% of the calibration hole signal or a vertical signal amplitude between 25% and 49% of the calibration hole signal combined with a depth of 40%.*
[2]*90% confidence level.*

Limitations and Restrictions

- Cannot detect more than 1,000 indications per tube
- No detection under tubesheets
- ECT-BBFS saturation, ECT-BBST flexible, DefHi, and ECT-BBAC air conditioning probes are not supported
- Tubes with external fins, ID and/ OD mechanically enhanced tubes
- Indications with lengths greater than 1,000 samples are not detected. For a typical sampling rate of 2 samples/mm, this represents a length of approximately 50 cm (19.7 in).
- Any signals on the AA-DIF_F2 channel that are shorter than 5 samples and have a vertical size (amplitude) less than 0.09 Volt won't be analyzed by the detection engine. The AA-DIF_F2 channel is set up for artificial intelligence detection and is calibrated at 1V and 40° for a 100% through-wall hole using peak-to-peak phase measurement.

System Requirements

Minimum Requirements

- Processor: Core i5 (or equivalent).
- Operating systems:
  - Edition: Windows 10 version 1607 (Anniversary Update) or Windows 11
  - System type: 64-bit operating system
  - Note: The software is tested and optimized for most major language packs available on the Windows suite.
- Memory: 8 GB.
- Graphics card: GPU with DirectX 11 support.
- Disk space: 20 GB.
- Network: Built-in network card.
- Display:
  - Screen size: 13 in
  - Resolution: 1366 × 768 pixels
  - Display scale: 100% (Windows preferences setting).
- Administrator rights: User must have local administrator permissions on the computer to install and use Magnifi.

Recommended Requirements

- Processor: Core i7 (or equivalent).
- Operating systems:
  - Edition: Windows 10 (latest version)

- o System type: 64-bit operating system
- o Note: The software is tested and optimized for most major language packs available on the Windows suite.
- Memory: 16 GB.
- Graphics card: Dedicated GPU with DirectX 11 support.
- Disk space: 100 GB.
- Network: Built-in network card.
- Display:
  - o Screen size: 15 in
  - o Resolution: 1920 x 1080 pixels
  - o External monitor: 22 in or larger, with a minimum resolution of 1920 × 1080 pixels (for extensive analysis purposes)
  - o Display scale: 100% (Windows preferences setting).
- Administrator rights: User must have Administrator permissions on the computer to install and use Magnifi.

Firmware

Included in this release of Magnifi are the following packages:

Ectane 3

- Version: 1.0R6

Ectane 2

- Version: 2.1R14

Ectane

- Version: 1.8R5.1 (same version as for Magnifi 3.5R15).