

EDDYFI MAGNIFI® 5.4R5 RELEASE NOTES

Release date: August 15th, 2024

Cloud-based Licensing System

Magnifi® 5.4 is now activated through a cloud-based licensing system.

For clients under a valid maintenance plan, access to version 5.4 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.

New Features and Improvements

Surface Applications

- Magnifi now supports the new circumferential encoder for Spyne™ through a revised setup Wizard.
- With Sharck™-HR setups, using the SCC indication button now adds the proper SCC Depth to the report.

Tubing Applications

- Tubing data acquisitions can be performed with the Ectane® instrument without needing an active cloud license (a STD/PRO license is still required for data analysis and reporting).
- Artificial Intelligence module 4 for Eddy Current Testing inspections (see Artificial Intelligence module section).

Modifications

Generic

- The C-scan's auto-adjust dialog now adjusts both the starting position and the size of the C-scan.

Surface Applications

- The generic Wizard for surface probe setup creation can support probes having a size (Y axis) smaller than 10 mm.
- Spyne:
 - The Spyne Wizard now limits the maximum scan size.
 - Spyne setups made with Magnifi 5.3 or prior can be readback and used for data acquisition and analysis but cannot be modified using the Wizard.
 - Low-pass and high-pass filters are now applied on the channels instead of the C-scans.
 - Spyne setups with axial channels only and transverse channels only have been removed.

- Legacy Sharck-HR setups have been removed.

Tubing Applications

- Simpler editing of the amplitude in the RFA Wizard when the probe is used in Single Driver mode.

Resolved Issues

Generic

- Several bug fixes for the .html report format introduced in version 5.3:
 - Multiple formatting and display issues have been solved.
 - The empty cells of the indication table no longer show "0".
 - The Inspection Summary section of a tubing report no longer duplicates the feature rows. The total number of analyzed tubes now also includes the tubes reported as NDD and with features.
 - If the indication table profile is configured to "Saved with setup", it no longer generates a blank report.
- Magnifi reporting tools can no longer be affected by the installation of other 64-bit applications on the same computer (MVReport errors).
- Fixed the visual display issue that was creating black gaps in C-scans during acquisition with a low performance computer.
- Corrected issues that could make Magnifi freeze when starting an acquisition with very large C-scans.
- Fixed crashes happening when loading some legacy setup files.
- Resolved issues with the Import from File C-scan process.

Surface Applications

- Corrected axial positions for the axial channels of the ECA-SPYNE-C-202-250-086 probe.
- Modifying the value of the low-pass filter through the Spyne Wizard is now correctly applied to the setup.
- Performing a Null operation during a raster scan sequence no longer affects the position of the axial preset when incrementing to the next pass.
- Fixed the issue that was causing error messages when adding several indications on the same Sharck data file.
- User Material calibration now functional with the SHARCK-PEN-HR probe.

Tubing Applications

- Fixed errors caused by the RFT calibration shortcuts.
- Fixed intermittent issues causing error messages to appear when using depth sizing curves.

Known Issues, Limitations, Restrictions

Generic

- Magnifi does not support non-latin characters in the name of setup/data files and in the path of the Inspection folder.

Surface Applications

- Issues and limitations affecting Spyne setups configured with the circumferential encoder:
 - If an indication is detected around the 0-degree mark, it will be split into two separate boxes, one that extend above 0 degree and another one below.
 - Zooming manually in the C-scan view during acquisition may cause display errors.
 - Circumferential position of indications not available in degrees in the report.

Artificial Intelligence Module

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

Version: 4.0

Performance

- >98% probability of detecting significant indications^{1,2}
- >98% probability of detecting tubesheets and support plates properly²

¹Significant 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%.

²90% confidence level.

Known Issues, Limitations, 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.

Minimum System 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 System Requirements

- Processor: Core i7 (or equivalent).
- Operating systems:
 - Edition: Windows 10 (latest version)
 - System type: 64-bit operating system
 - 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:
 - Screen size: 15 in
 - Resolution: 1920 × 1080 pixels
 - External monitor: 22 in or larger, with a minimum resolution of 1920 × 1080 pixels (for extensive analysis purposes)
 - 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: 1.0R7

Ectane 2



- Version: 2.1R15

Ectane

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

