STEEL QUALITY SOLUTION SUITE

Rapid and reliable rating of non-metallic inclusions

An improved efficiency for non-metallic inclusion rating enables you to verify the steel quality in less time in order to ensure reliable performance and long lifetime. Everstricter specifications and standards require rigorous rating of non-metallic inclusions in accordance with international, regional, and organizational standards. Non-metallic inclusions are foreign substances in steel which disrupt the homogeneity of the microstructure. They can have considerable influence on the steel's mechanical properties affecting performance and lifetime. Therefore, rating non-metallic inclusions is important for evaluating steel quality!
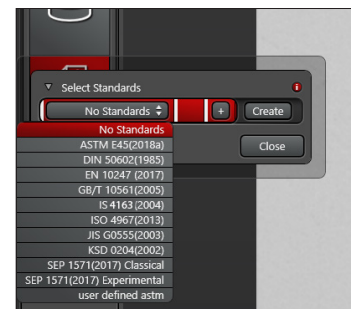
Advantages of the Steel Quality solution suite

Rate non-metallic inclusions more efficiently and adapt easily to future changes in international and regional standards or organizational specifications.

> Detect and classify non-metallic inclusions by manual and automated image analysis

> Be easily guided through data acquisition and analysis with the workflow-oriented user interface

> Review rated inclusions faster and easier with a simultaneous sample overview and detailed view of a specific region of interest with the Dual Viewer and inclusion visualization

> Adapt quickly to changes in official inclusion rating standards and organizational norms and processes
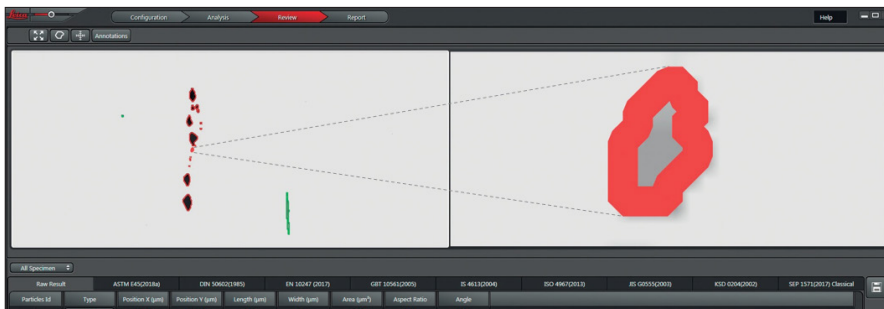
Dual Viewer: Go quickly from overview to detailed view

Analyse with steel standards whether international, regional, or organizational

Find the solution for your needs

The Steel Quality solution suite provides different complete workflow solutions to help you ensure the quality of steel.

> **Standard:** Is the perfect choice for occasional analysis of individual and small samples which favors worst field method analysis.

> **Advanced:** Enables repeatable and standardized analysis of small samples for regular usage and worst field method analysis. It can be upgraded with additional metallographic analysis.

> **Professional:** Allows automated, repeatable and standardized analysis of large samples for frequent usage and either worst field or worst inclusion method analysis. It can be upgraded with both additional metallographic and chemical analysis

DM4 M Upright Microscope - Advanced Configuration

All configurations of the Steel Quality solution suite are available with upright as well as inverted microscopes.

Use Standard Configuration for	Use Advanced Configuration for	Use Professional Configuration for
Individual analysis	Standardized analysis (repeatable and reproducible settings)	Highly standardized analysis (automated, repeatable and reproducible settings) of sample batches
Occasional usage (1-2 times/week)	Regular usage (1-2 times/day)	Heavy usage (several hours/day)
Reporting according worst field method	Reporting according worst field method (predominantly)	Reporting according worst field method and worst inclusion method
Documentation in tabular format + occasional documentation of microscope settings and raw images	Documentation in tabular format + documentation of microscope settings and raw images (full traceability)	Documentation in tabular format + documentation of microscope settings and raw images (full traceability)
Small sample (Ø < 4 cm)	Small sample (Ø < 4 cm)	Large scale sample (Ø > 4 cm)
Standard grade steel	Standard grade steel	Lower grade steel with large inclusions (requiring mosaic imaging), machine and higher grade steel with many or small inclusions
No additional metallographic analysis required in future	Upgrades for additional metallographic analysis	Upgrades for additional metallographic + chemical analyses using LIBS (only DM6 M upright microscope)

For more details, a demo or a quote, please contact:

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