MAC®

Magnetic Analysis Corp.

Quality Grading Software

For Customized Grading of Wire, Rod or Bar

	Coil ID	Len. ft	Grade	SD	MD	LD	SF	MF	LF
Report	14339	2853276	E	0	0	1	0	2	2
Config	14338	41104.00	+	3	0	0	0	0	0
Browse	14337	24662.6	+	0	0	0	0	0	0
	14336	24666.6	E	0	1	4	0	0	0
Cancel Coil	14335	24666.6	+	1	0	0	0	0	0
Coil ID	14334	24537.33	+	0	0	0	0	0	0
Print	14333	24366.6	+	0	0	0	0	0	0
	14332	24150.6	+	1	0	0	0	0	0
	14331	24026.6	B	2	1	2	0	0	0
	14330	24838.6	E	15	8	2	0	0	0
	14329	578425.3	+	0	0	0	0	0	0
	14328	578425.3	E	53	70	97	1	0	0
	14329	2056.000	+	0	0	0	0	0	0
	14328	144760.0	+	0	0	0	0	0	0

A typical screen shows color code grading of continuous cast copper rod,
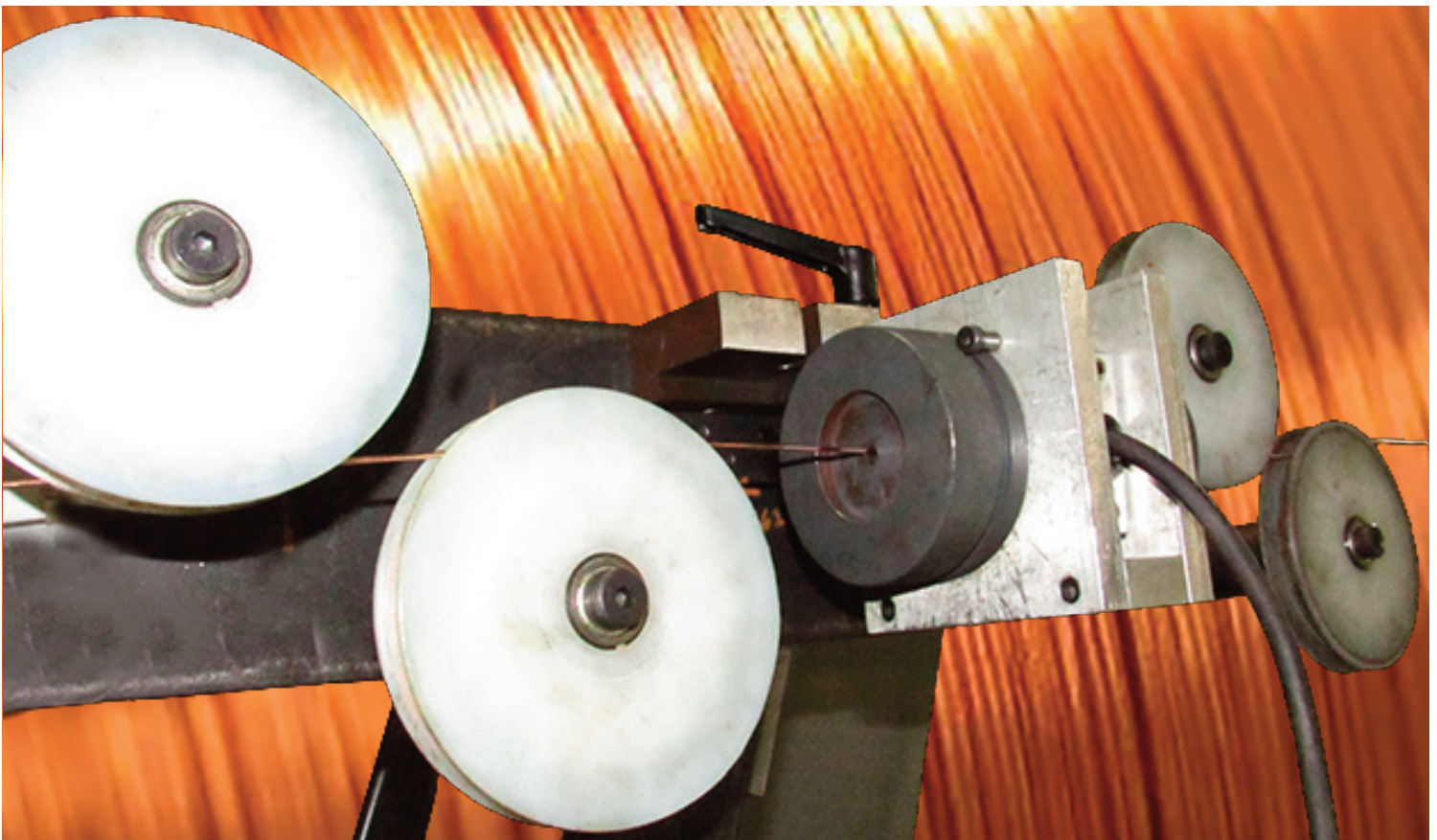*using a MultiMac® eddy current instrument.*

User Configured Grading of Rod & Wire

Detecting Defects and Inclusions Automatically

The Product Quality Grading Software add-on provides a convenient, efficient means of categorizing and automatically reporting the quality level of entire coils or individual segments of metal wire, rod and bar during production.

Using MAC's MultiMac® II or Minimac® II eddy current instrument, each coil produced can be graded according to a customer-specified grading policy. Customers can customize the defect types, each based on a specific threshold gate, specify the maximum number of defects for each grade level, and configure reports.
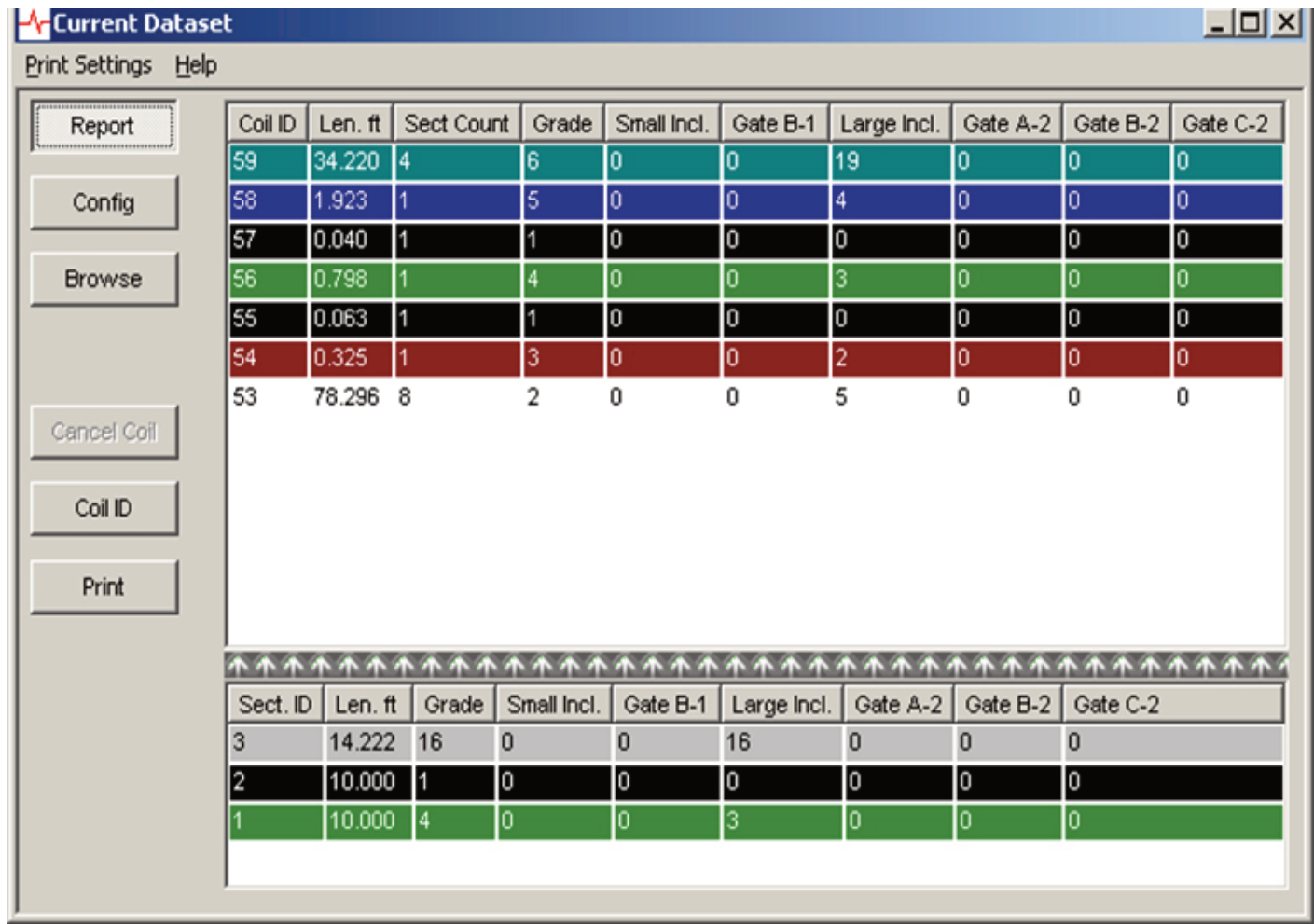
Surface defects as well as undesired metal inclusions can be detected and categorized.

Testing specialty drawn copper alloy wire with MultiMac® electronics prior to being fed to a drum.

Coils or Segments During Production

Customizing Quality Grading
with MAC's Software

Current Dataset

Print Settings Help

Report | Config | Browse | Cancel Coil | Coil ID | Print

Coil ID	Len. ft	Sect Count	Grade	Small Incl.	Gate B-1	Large Incl.	Gate A-2	Gate B-2	Gate C-2
59	34.220	4	6	0	0	19	0	0	0
58	1.923	1	5	0	0	4	0	0	0
57	0.040	1	1	0	0	0	0	0	0
56	0.798	1	4	0	0	3	0	0	0
55	0.063	1	1	0	0	0	0	0	0
54	0.325	1	3	0	0	2	0	0	0
53	78.296	8	2	0	0	5	0	0	0

Sect. ID	Len. ft	Grade	Small Incl.	Gate B-1	Large Incl.	Gate A-2	Gate B-2	Gate C-2
3	14.222	16	0	0	16	0	0	0
2	10.000	1	0	0	0	0	0	0
1	10.000	4	0	0	3	0	0	0

Typical screen display during testing

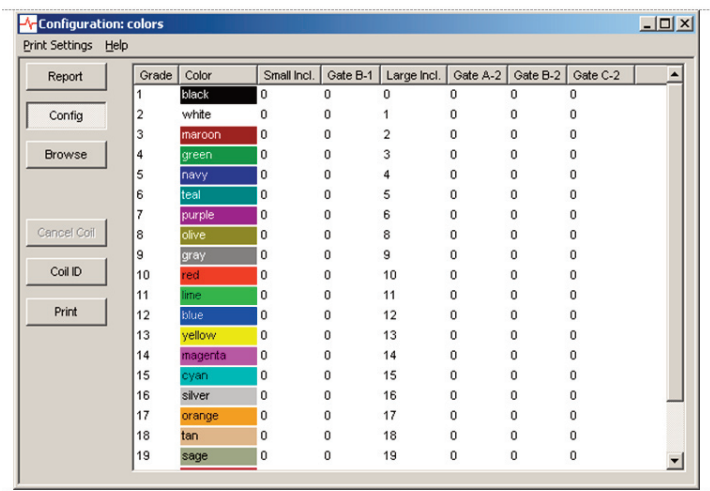Customers can easily select the specific characteristics they need to identify. The customer defines the grade by setting the maximum allowable number of defects for each type of condition they have specified. Typical types could be conditions such as small or large surface defects, welds, and ferrous inclusions in copper wire. Each type of defect is detected on a separate test gate by the eddy current instrument and is counted in a separate counter, up to 24.

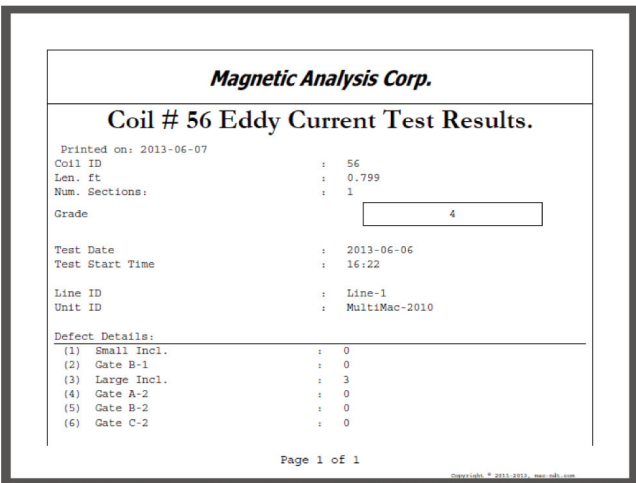On the screen display, shown above, a color code, selected by the customer, indicates the grade level of the coil or section. Each row shows the coil or section ID, length (in metric or english mode), the grade, based on the number of defects found, and the number of each type of defect or inclusion detected by each gate.
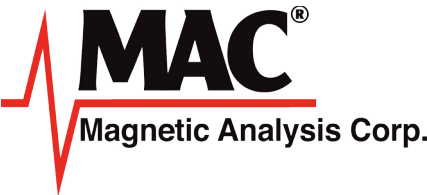
Reporting and Using Grading Data

Available Grade Colors

Sample of a Coil Report Label

At user defined intervals, the grading module can report or update a report with customized statistics for every coil or section tested. The coil ID, grade, date, time, production line, test instrument, configuration, and total defect count for each designated type are created in a CSV file for easy integration with customer data bases. Multilingual support is available.

Other options include automatically printing a simple Coil Report Label after completion of each coil test, or manually printing customer selected configurations, such as coils tested during the current shift. Additionally, each coil can be tagged with a unique coil ID and grade label.

For More Information:

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