

# Rangecam Grind Analyst

Software for

## Rail Grind Planning and Quality Assurance

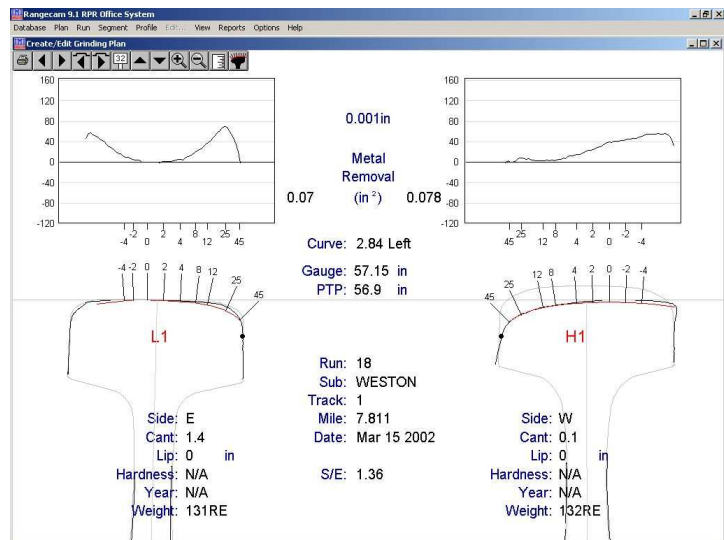


### Rail Grind Planning

Grind Analyst eliminates the guesswork and provides complete control of rail grind planning. Grinding templates can be custom-designed for your property and fleet. Required metal removal is clearly shown in graph form, guiding your selection of patterns and speeds. The grinding plan is saved to the database, where it can be used to generate a report containing instructions for the rail grinder. Post-grind profiles can be overlaid on the pre-grind plan as a QA check to show how close you are grinding to the target profile.

Features include:

- Different templates can be automatically assigned to curves of different degrees.
- Templates are automatically superimposed on measured profiles, with manual override.
- User-settable minimum and maximum metal removal.
- Grinding patterns and speeds can be entered for any number of passes.
- Reference function allows comparison to another plan.



		Grinding Survey: EASTERN 2008			Sept. 7, 2008			
		2008 Grinding Survey			Page 1			
		Sub: 5 - EASTERN Track: 1						
Segment	Location (miles)	Deg	Dir	Rad (ft.)	Length (ft.)	Left	Right	Speed
C#363	363.457-363.812	0	L	842	4246	9 (L) 9 (L) 12 (L)	9 (H) 9 (H) 12 (H)	3.0 3.0 5.0
	363.459	EXPANSION JOINT						
	363.562	SWITCH						
	363.563	LUBRICATOR						

*Excerpt from Pre-grind Survey Report.*

## Used in Field or Office

When used with the Rangecam Field System, Grind Analyst works with “live” profiles acquired by an optical rail measurement system mounted on a hi-rail vehicle or rail grinder. Grind Analyst can be used in a pre-grind survey, or it can be used following the grinder to monitor grind quality.

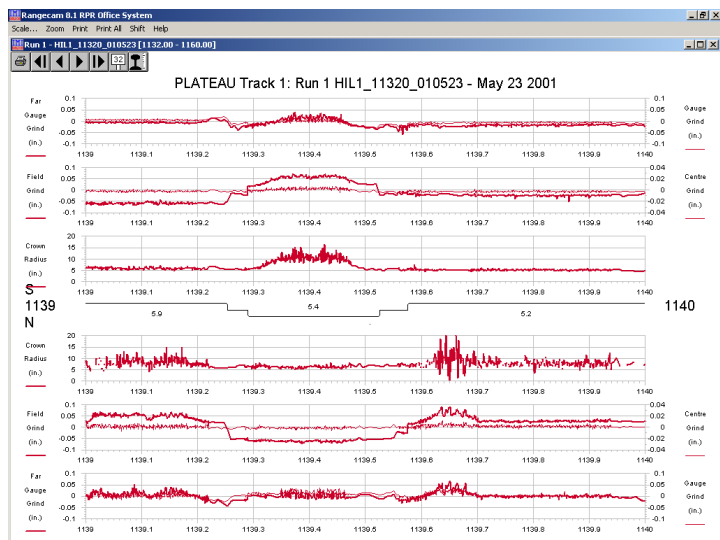
Grind Analyst also works in the office, in combination with Rangecam Office System, Track Analyst, or Track View. Pre-grind rail measurement data can be used for grind planning, and post-grind data can be used for grind quality assurance.

## Grind Quality Assurance in the Field

The field system Review mode monitors the quality of grinding operations. While following the grinder, profiles from a previously created grinding plan are retrieved and displayed with templates superimposed. At grinding checkpoints, or on demand, additional profiles are captured “live” and overlaid on the display, providing a before and after picture of how closely the actual grinding results match the plan.

## Grind Quality Assurance in the Office

Using optical rail measurement data collected after the grind, Grind Analyst can calculate a grind-quality index on each of four user-defined zones across the rail head. This index is a function of the deviations between the measured rail profiles and the ideal profile shape, as represented by the grinding template. The deviation in each zone can be plotted as a strip chart, highlighting problem areas. The software also produces a Grind Quality Report that provides a statistical summary of the grinding quality for each curve.



Run date: May 21, 2008		GRIND QUALITY REPORT				Jun 29, 2008	
From: 1363.35		Sub: 36 - NORTHERN		Track: 2		Page 1	
To: 1370.36		Run: 9 - NOR2_13633_010521					
Side	Template	Zone Difference (in.)				Crown Radius (in.)	
		Extreme	Gauge	Gauge	Centre	Field	
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1363.34 - 1363.46		Tangent T					
S	TT	-0.015	-0.018	0.000	-0.013	8.27	
N	TT	-0.024	-0.011	0.000	0.002	8.59	
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1363.46 - 1363.54		Curve 1363 0.4 deg L					
S(L)	TT	-0.003	0.003	0.002	-0.016	8.29	
N(H)	H1	-0.005	-0.002	0.004	0.004	8.68	
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## Works With Other IMI Products

Grind Analyst is an add-on software component used with other IM Rangecam products: Rangecam Field System, Office System, Track Analyst, or Track View.

