

## IN SHORT

The CADNO 2000 software package provides both roll profile analysis and roll profile quality assurance facilities for users of the CADNO Roll Inspection and Management System. High quality, flexible charts provide visual proof of the quality of grinding performance measured against user defined target cambers and tolerances. The integral database allows the easy recall of grinding data and enables comparison of historical performance. Easy export of data to other packages facilitates further analysis and modelling.

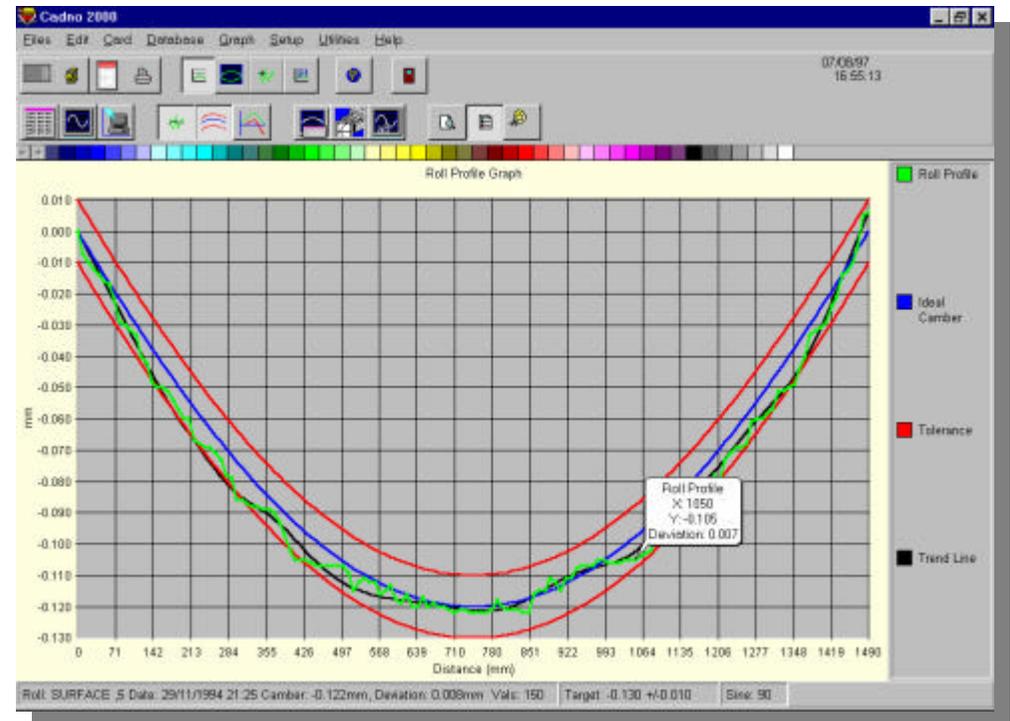
*An associated leaflet describing the CADNO Electronic Calliper is available on request.*



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## METROLOGY SYSTEMS WALES CADNO 2000: ROLL PROFILE ANALYSIS AND QUALITY ASSURANCE SOFTWARE

### Accurate Roll Measurement



Simply the Best Roll Measurement!

# CADNO 2000

CADNO 2000 is a Microsoft Windows based software package designed for both Production and R&D users of the **MSW Cadno Roll Measurement and Inspection System**. Cadno 2000 enhances any roll shop information system by providing sophisticated quality assurance and roll profile analysis capabilities, assisting you to meet the ever-increasing quality demands of the market. The package has been developed over a period of six years in close co-operation with our customers at *British Steel, Alcan UK, Krupp Hoesch, SOLLAC* and *Siemens* and is undergoing continual improvement as we strive to incorporate and refine the best working practices across the rolling industries.

## Benefits

The Cadno 2000 software brings many benefits to your roll grinding operations:

### **SOPHISTICATED CHARTING OF PROFILE DATA**

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At the core of the package is an advanced set of graphing facilities:

- Roll profile data may be displayed as a scatter graph with ideal cambers, tolerance bands and graph limits pre-set as required. A smoothed version of the data may also be superimposed over the raw roll profile data, as illustrated on the front cover.
- Roll profile data from multiple traces may be charted on a single graph enabling the display, for example, of the roll profile before and after grinding.
- Data from both top and bottom rolls of a pair may be charted to display the 'roll gap'.
- The effects of the decay of thermal camber may be illustrated by displaying multiple profile traces in 3D with user definable angles of rotation and colour banding.

### **DETAILED INSPECTION OF ROLL PROFILES**

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Advanced features assist in the detailed inspection of profile data:

- The effect of any taper present may be artificially removed to facilitate visual assessment of the symmetry of the camber.
- Detailed information relating to any point on the measured trace can be easily accessed simply by clicking the mouse on this point as demonstrated on the front cover
- The roll profile data underlying the Chart may also be viewed in a familiar spreadsheet format highlighting deviations from target camber and tolerance limits.

- Any area of the chart may be 'zoomed' (magnified) for closer inspection.
- The background graticule may be tailored to assist in the location of features on the roll surface.
- An Auto-scaling option may be used for 'best fit' of roll profile data, allowing the profile data to be viewed at maximum resolution.

### **USER DEFINABLE TOLERANCES AND PERFORMANCE TARGETS**

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Cadno 2000 allows profile tolerances and performance targets to be dictated by management ensuring the quality you require:

- Sets of target cambers and tolerance limits may be pre-defined by management.
- Similarly, in the case of Continuously Variable Camber(CVC) non-symmetrical rolls - the ideal curve may be entered as a polynomial expression or as a set of data point constants

### **COMPLETE ROLL PROFILE HISTORIES**

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- Cadno 2000 incorporates and automatically manages a roll record database where the measured profiles of a particular roll are stored in reverse chronological order. Any stored profile can be retrieved within a few seconds.
- It is possible to specify the items to be recorded in the roll record (e.g. hardness, surface roughness etc). We are pleased to co-operate with users to tailor the database to their exact requirements.

### **EASY COMMUNICATION WITH OTHER WINDOWS APPLICATIONS**

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- Chart data and graphics may be copied to the Windows Clipboard for pasting into other applications e.g. Microsoft Word, Microsoft Excel. A great aid for preparing management reports.
- Charts may be exported in Windows Bitmap (.BMP) or Windows Metafile (.WMF) format for import to other packages.