

# Advanced services – performance improvement Stressometer flatness control health check

Get the competitive edge through the Stressometer flatness control health check

Measurement made easy



## Overview

Evaluate performance and identify possibilities to enhance the flatness control. Stressometer flatness control health check is a detailed and comprehensive evaluation of a Stressometer flatness control system. It is a key service for maintaining high measurement accuracy and flatness performance leading to optimal quality and yield.

Findings from the health check service are evaluated using the Quality Analysis tool and documented in a Stressometer flatness control Health Check report that can be used to enhance mill performance and yield.

## Features

- Valid for Stressometer System 7.0 and later
- Verify roll alignment and make recommendations for correction if needed
- Check dynamic effects on the measurement and make recommendations for correction and compensation if needed

- Check thickness profiles of typical strips and make recommendations for flatness control improvements
- Check cooling system performance and make recommendations for optimization
- Check flatness influence from the shape of the work rolls: make recommendations for improvements
- Check of mechanical actuators: make recommendations for optimal performance from minimum to maximum rolling speed

## Benefits

- Secure best possible long-term performance and reliability of the Stressometer control system
- Increases control system utilization and production yield
- Detect malfunctioning actuators

# Quality analysis tool

**Summary statistics**

File name(s) = QALog\_LOG\_2010.11.01\_07.31.40.csv  
QALog\_LOG\_2010.11.02\_07.46.28.csv  
QALog\_LOG\_2010.11.03\_08.01.58.csv  
QALog\_LOG\_2010.11.04\_09.47.18.csv  
QALog\_LOG\_2010.11.05\_10.03.26.csv  
QALog\_LOG\_2010.11.06\_10.11.42.csv  
QALog\_LOG\_2010.11.07\_10.20.51.csv  
QALog\_LOG\_2010.11.08\_09.58.05.csv

Total number of data files = 9  
Finish time of first coil = 2010.11.01 07:31:40  
Finish time of last coil = 2010.11.08 10:43:46  
Total number of coils in data file(s) = 142  
Total number of imported coils = 142  
Number of ignored/excluded coils = 0  
Number of coils that are valid/inside thickness-width ranges = 142  
Strip length of coils that are valid/inside thickness-width ranges = 1 158 060 m  
Number of coils that fulfill quality limit values = 138  
Strip length of coils that fulfill quality limit values = 1 157 739 m  
Number of coils that are invalid/outside thickness-width ranges = 0  
Strip length of coils that are invalid/outside thickness-width ranges = 0 m

No filters are currently active

Edges included = false  
323.62 mm <= actual width <= 351.36 mm  
0.07 mm <= actual thickness <= 0.25 mm  
3.79 I-Units <= quality value incl edge <= 73.22 I-Units  
2.85 I-Units <= quality value excl edge <= 61.58 I-Units

**Strip width (mm)**

0.0 - 1000.0			1000.0 - 1500.0			1500.0 - 2500.0			
Thickness (mm)	Actuator	In Auto (%)	Skewing	Actuator	In Auto (%)	Skewing	Actuator	In Auto (%)	
0.0 - 1.0	WRBend...	98.6	0.4	WRBend...	98.0	0.3	WRBend...	97.8	0.3
	Skewing	98.6	1.3	WRBend...	98.0	1.9	WRBend...	97.8	4.2
1.0 - 5.0	WRBend...	99.9	0.3	WRBend...	100.0	0.3	WRBend...	99.0	0.3
	Skewing	99.9	0.0	WRBend...	100.0	0.0	WRBend...	98.1	0.0
5.0 - 10.0	WRBend...	0.0	0.0	WRBend...	0.0	0.0	WRBend...	0.0	0.0
	Skewing	0.0	0.0	WRBend...	0.0	0.0	WRBend...	0.0	0.0

**Q1-Q4 classification**

Configuration limits for Q1-Q4 classification:

- Q1 <= 5.0 I-Units
- Q2 <= 10.0 I-Units
- Q3 <= 20.0 I-Units
- Q4 > 20.0 I-Units

Q1-Q4 classification result:  
(accumulated values)

- Q1 = 63.8 %
- Q2 = 29.9 %
- Q3 = 5.7 %
- Q4 = 0.6 %

Total length of included passes/coils: 1158060 m  
Total number of included passes/coils: 142

## Service duration

Stressometer flatness control health check:

- Typical 3 days on-site
- Additional time for travel, preparation, analysis and reporting is needed

## Contact us

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Service

Fig. 1: Sample screens from ABB's Quality Analysis tool