



GEORG **ultragrind** Roll Grinding Machine

Dirk Schmidt, Roll Seminar 2015

machine tool division



mit uns technisch überlegen

Roll Grinding Machine

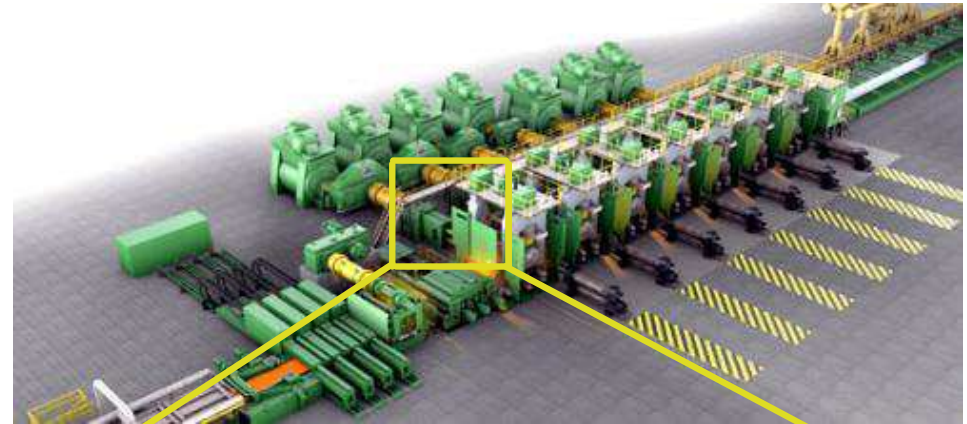
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Okt. 2015

Roll grinding machines

Customers: Rollshops in rolling mills
for flat products

Application: Steel and aluminium
Hot and cold strip mills
Work and back-up rolls
Roll Manufacturer



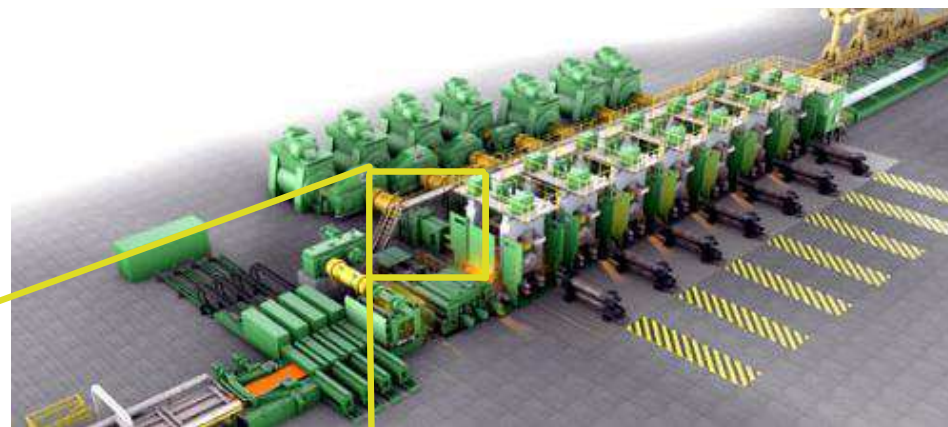
Quelle: SMS, GP



Roll grinding machines

Customers: Roll shops in rolling mills
for flat products

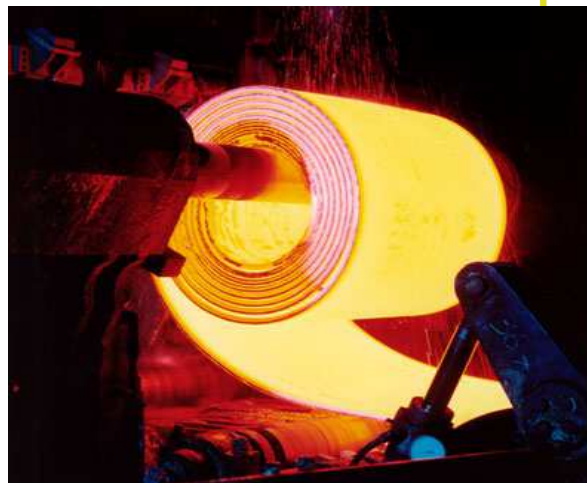
Plate & Sheet Products



[Quelle: SMS]



[Quelle: ThyssenKrupp Steel]



Roll grinding machines

Target Customers: Rolling mills for high quality flat products such as automotive sheet , white goods & others



[Quelle: Volkswagen]



Problems of conventional machine lubrication system

Competition:

Georg competition for roll grinding machines in the international market:

- Waldrich Siegen (Herkules Group), Germany
- Herkules, Germany
- Pomini (Tecnova), Italy
- Capco, (Sometimes) USA

Roll grinding machine

GEORG **ultragrind**

- Center width from 4.000 mm up to 15.000 mm
- Roll diameter from 300 mm up to 2.500 mm
- Roll weight from min. 5 tons to 300 tons



Grinding machine 4931

for ThyssenKrupp - uni grinder Hot Strip Mill

- Grinding of BUR in Chocks



Grinding Machine 4931 Thyssen Krupp

GEORG Uni grinder



mit uns technisch überlegen

Roll Grinding Machine

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Grinding machine 5085

for ThyssenKrupp – work roll grinder Hot Strip Mill



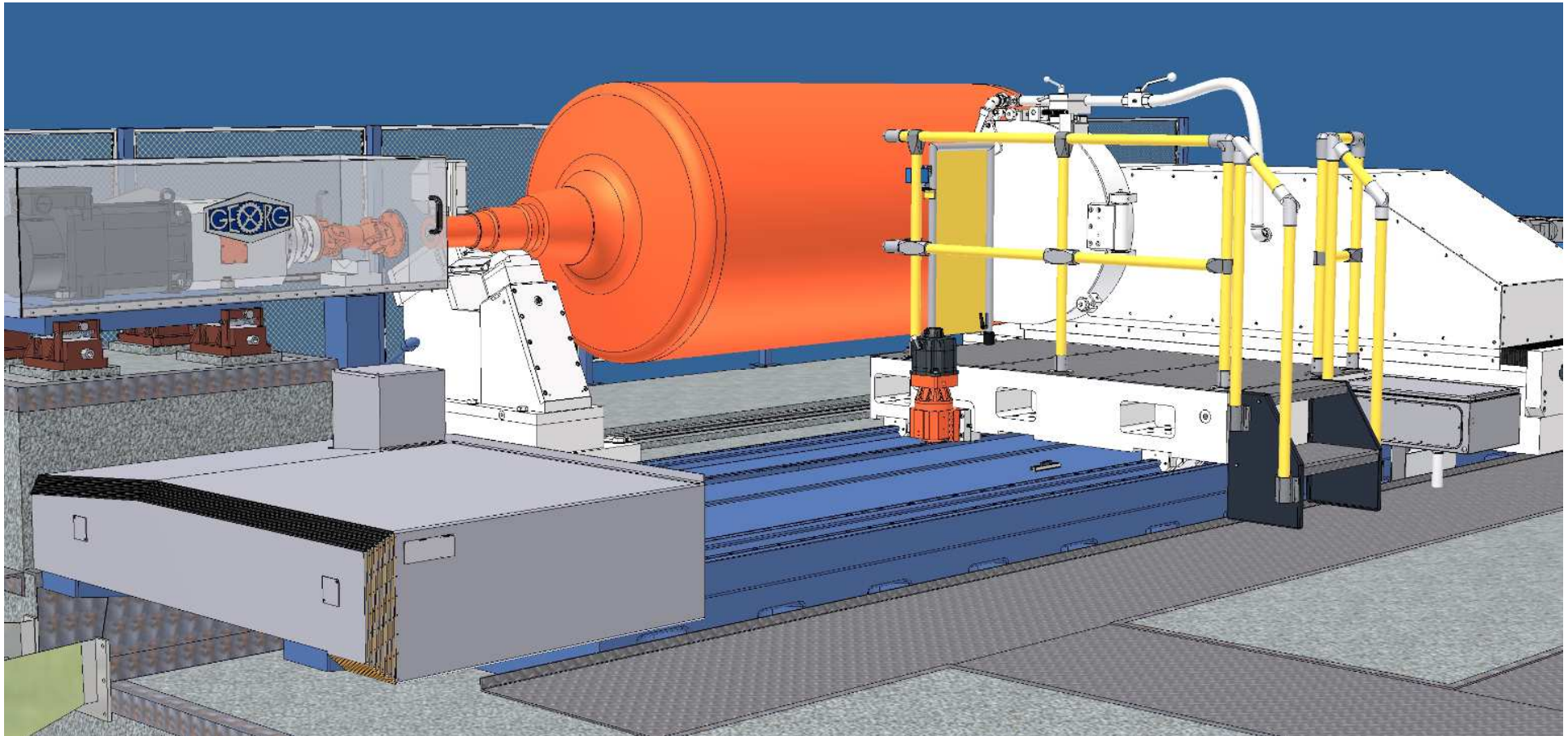
Grinding machine 5175

for Baosteel -work roll grinder Cold Strip Mill



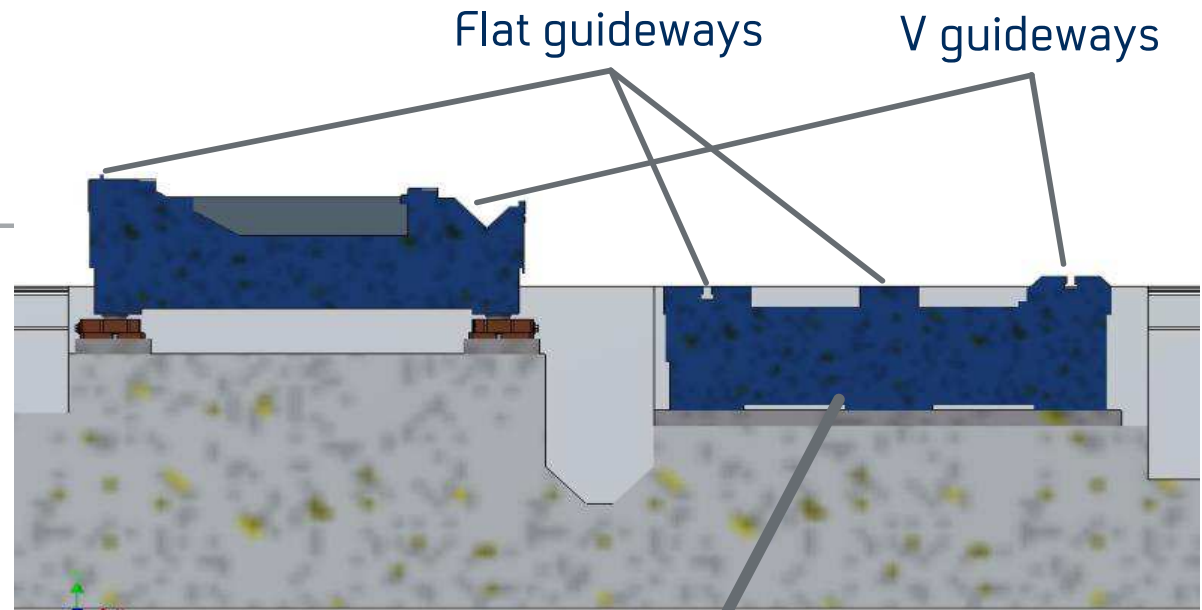
Grinding machine 5521

for SMS / Duma Bandzink caster roller grinder



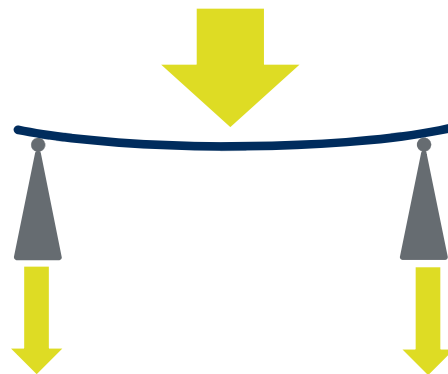
Machine beds (heavy Workpieces)

- > Up to 3 supporting areas for the workpiece bed
- > Force flux optimized for rough operating conditions
- > High rigidity also for heavy workpieces



Deflection:

Conventional design

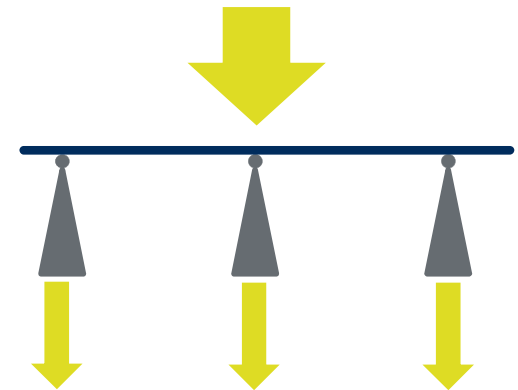


Georg design

Workpiece weight

Workpiece bed

Foundation



Guideway lubrication system

All axis & grindig spindle with hydrostatic lubrication pump per pocket system

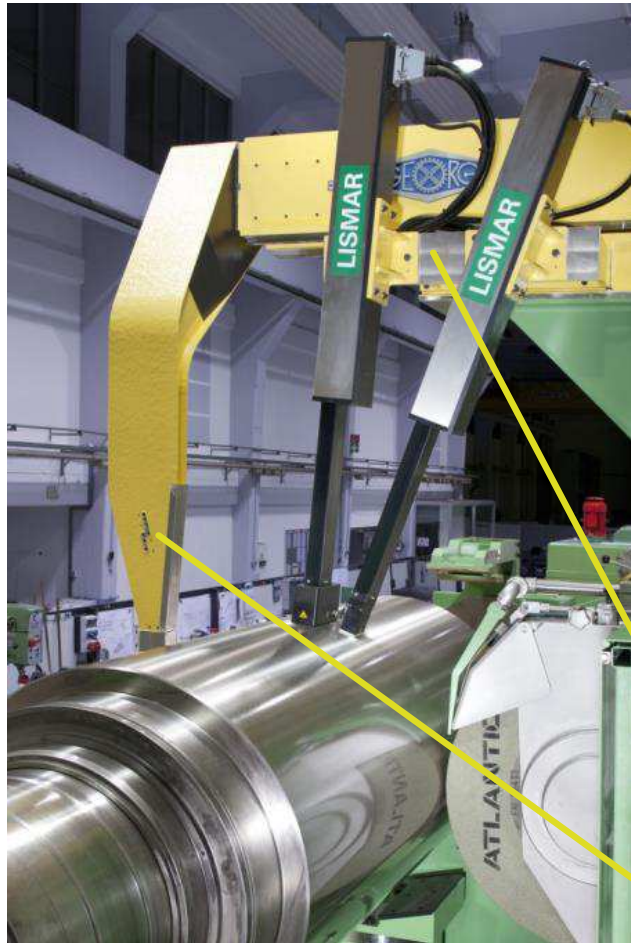


Electrical Equipment and CNC control system

- > Siemens standard Dynamics motors
- > Siemens S7 PLC control
- > CNC control Lismar LGC
- > Alternative:
 - > Siemens 840D sl
 - > IBSO ILC



Automatic Roll quality control system – online



- Measurement during the grinding operation
 - Roll shape
 - Roundness, Eccentricity, Run out
 - Options for measuring of roughness, surface and hardness
 - Options for Roll Crack detecting systems
- Mounting possibility for roll inspection systems
- Measuring arm made of carbon fiber

Automatic Roll quality control system – online

- > Options for Roll Crack detecting systems
- > For roll surface and below surface



Reference List

	Masteel 2130 CRM, P.R. China	GEORG Roll Grinding Machine Ultragrind 800R	2016
	SMS/Krakatau-Steel Indonesia	GEORG Roll Grinding Machine Ultragrind 800R	2016
	SMS/Krakatau-Steel Indonesia	GEORG Roll Grinding Machine Ultragrind 1500R	2016
	SMS/Krakatau-Steel Indonesia	Georg Roll Shop Equipment	2016
	SMS/Duma-Bandzink Germany	GEORG Roll Grinding Machine Ultragrind 1600 S	2015
	Baosteel CRM 1800 Shanghai, China	GEORG Roll Grinding Machine Ultragrind 700 R	2015
	Arcelor Mittal CRM, Bremen, Germany	Revamp Herkules Roll Grinder	2015

Reference List

	Arcelor Mittal CRM, Bremen, Germany	Waldrich Siegen WS 3 – 10 Roll Grinder	2014
	Logan Aluminium Russellville, KY, USA	Waldrich Siegen WS 3 H Hydrostatic Steady Rests	2014
	ThyssenKrupp Steel Kreuztal Eichen, Germany	Revamp of Roll Grinding Machine Naxos WT 140	2014
	ThyssenKrupp Steel Duisburg, Germany	GEORG Roll Grinding Machine Ultragrind 1000 R	2014
	ThyssenKrupp Steel Duisburg, Germany	Modernisation Waldrich Siegen Roll Grinder WS 3	2012
	ThyssenKrupp Steel Duisburg, Germany	GEORG Roll Grinding Machine Ultragrind 1400 R	2012
	Arcelor Mittal CRM, Bremen, Germany	Headstock Revamp Herkules Roll Grinder	2010

Reference List

	ThyssenKrupp Steel Bochum, Germany	Modernisation Waldrich Siegen Roll Grinder WS 3 C10	2008
	ThyssenKrupp Steel Duisburg, Germany	Modernisation Herkules Roll Grinder WS 850	2008
	Walzen Irle Siegen, Germany	Georg Rough Grinding Machine	2007
	ThyssenKrupp Steel Bochum, Germany	Modernisation Herkules Roll Grinder WS 850	2007
	DEW Krefeld, Germany	Georg Rough Grinding Machine	2007

Thank you for your attention

Dirk Schmidt

Head of roll machining

Heinrich Georg GmbH

Maschinenfabrik

Langenauer Straße 12

57223 Kreuztal

Germany

georg.com

Telefon 02732 – 7779 - 117

Email dirk.schmidt@georg.com