

16th Day of Slovene Paper Industry 21. – 22.11.2012

Modern press section concepts

Dr. Jürgen Bihler

Gebr. Bellmer GmbH Maschinenfabrik

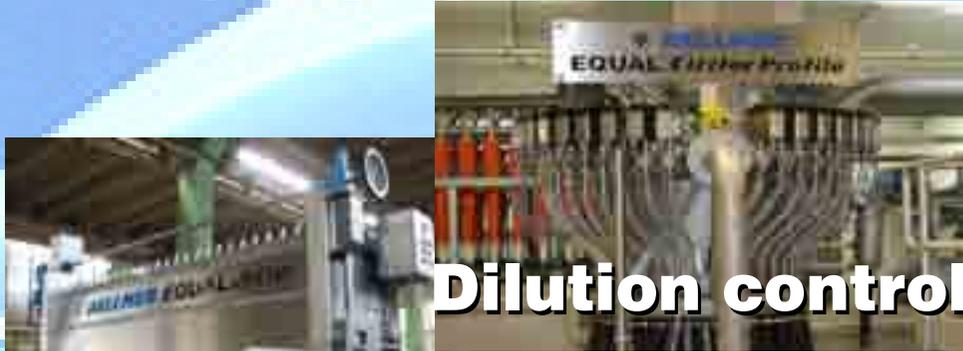
www.Bellmer.de



BELLMER

PAPER TECHNOLOGY

TURBO-series, proprietary equipment from headbox to reeler



Dilution control



Head box



Former



Reeler



Shoe press



Sizer



dryer



BELLMER

PAPER TECHNOLOGY

BELLMER – for 6 generations family owned



... just personal!



Erich Kollmar

Martin Kollmar

Philipp Kollmar



BELLMER

PAPER TECHNOLOGY

Your advantage: combined Know-how of 7 Paper machine specialists in the



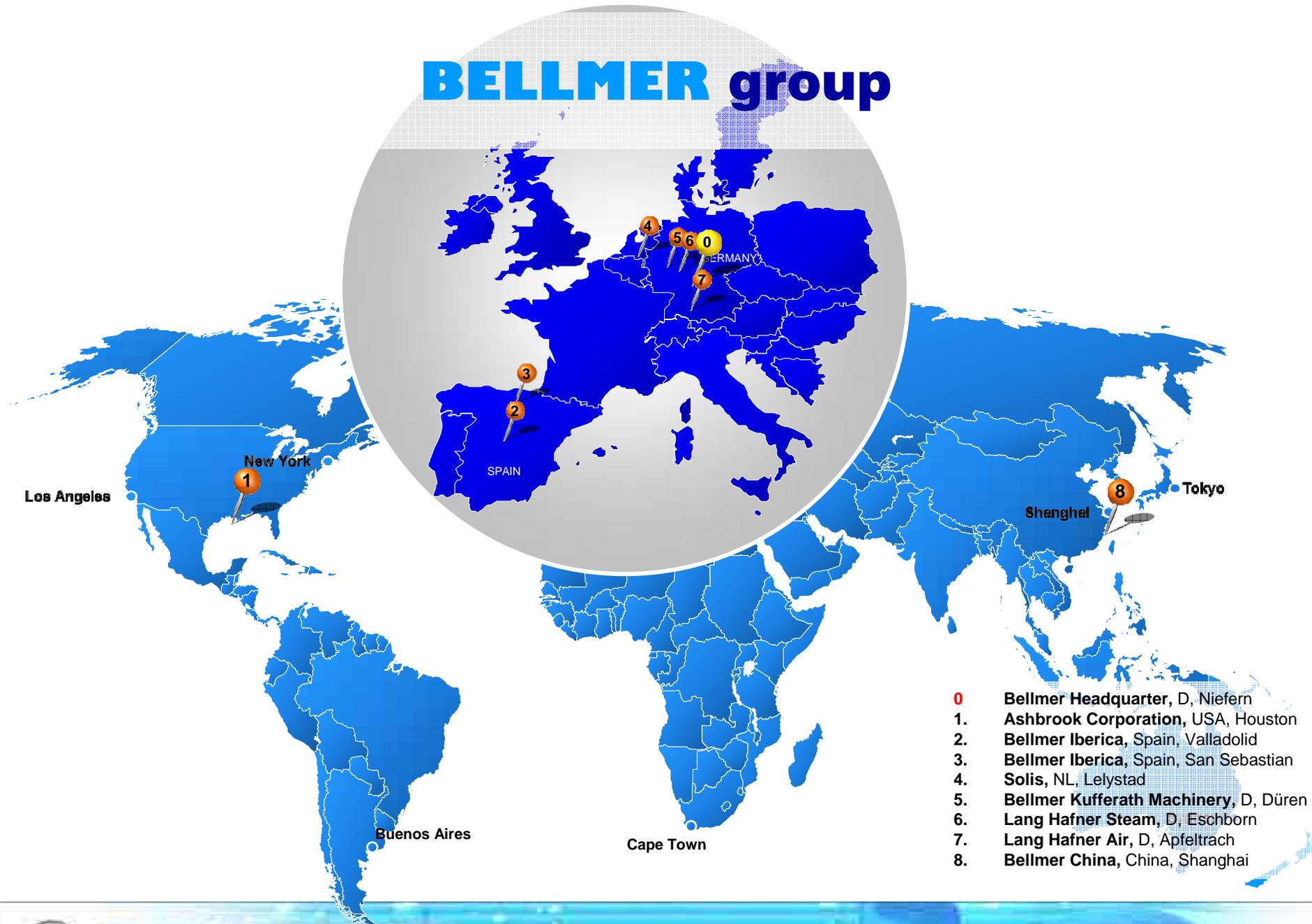
BELLMER Group



BELLMER

PAPER TECHNOLOGY

BELLMER group



- 0 Bellmer Headquarter, D, Niefern
- 1 Ashbrook Corporation, USA, Houston
- 2 Bellmer Iberica, Spain, Valladolid
- 3 Bellmer Iberica, Spain, San Sebastian
- 4 Solis, NL, Lelystad
- 5 Bellmer Kufferath Machinery, D, Düren
- 6 Lang Hafner Steam, D, Eschborn
- 7 Lang Hafner Air, D, Apfeltrach
- 8 Bellmer China, China, Shanghai



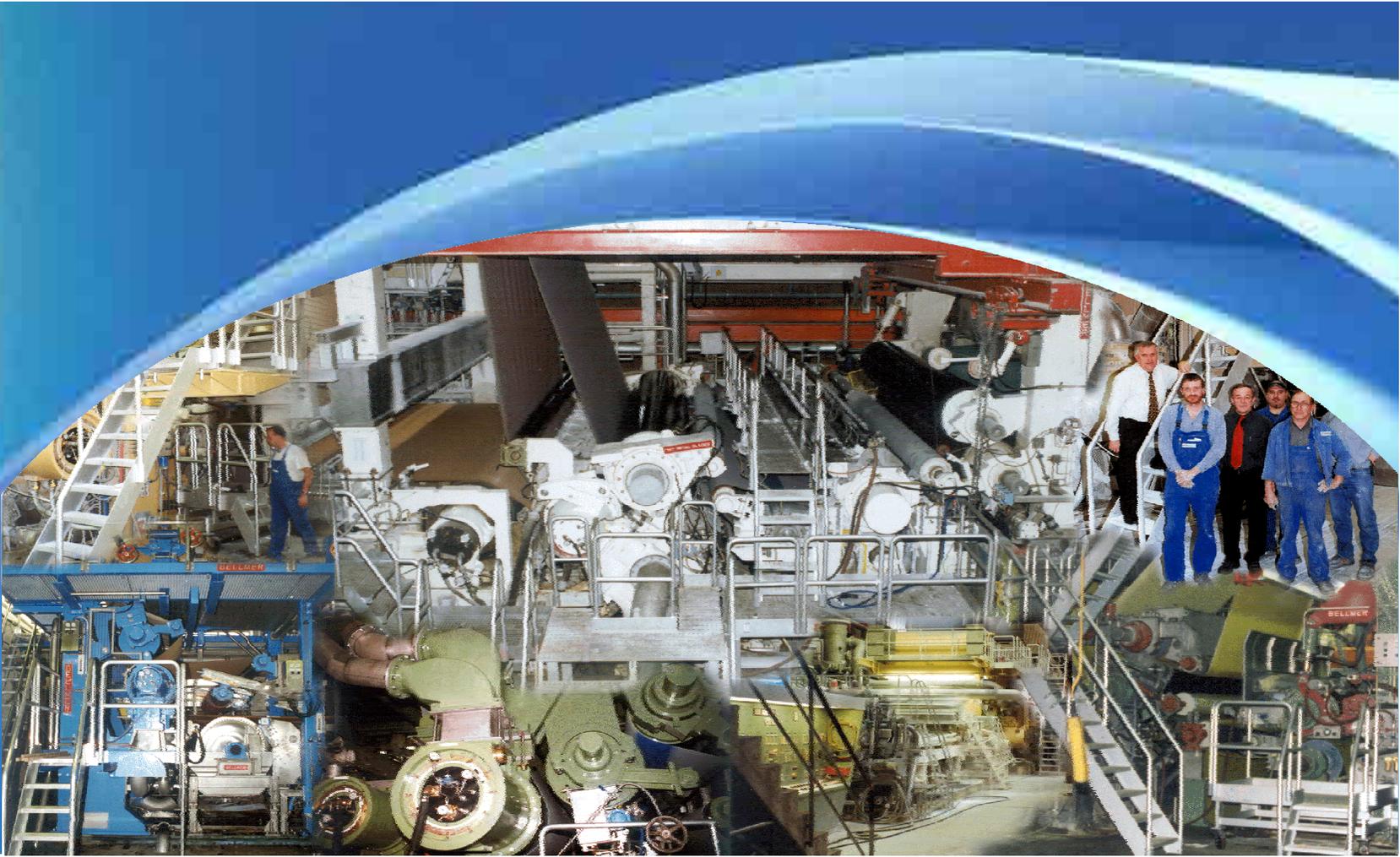
BELLMER

PAPER TECHNOLOGY

BELLMER Customers



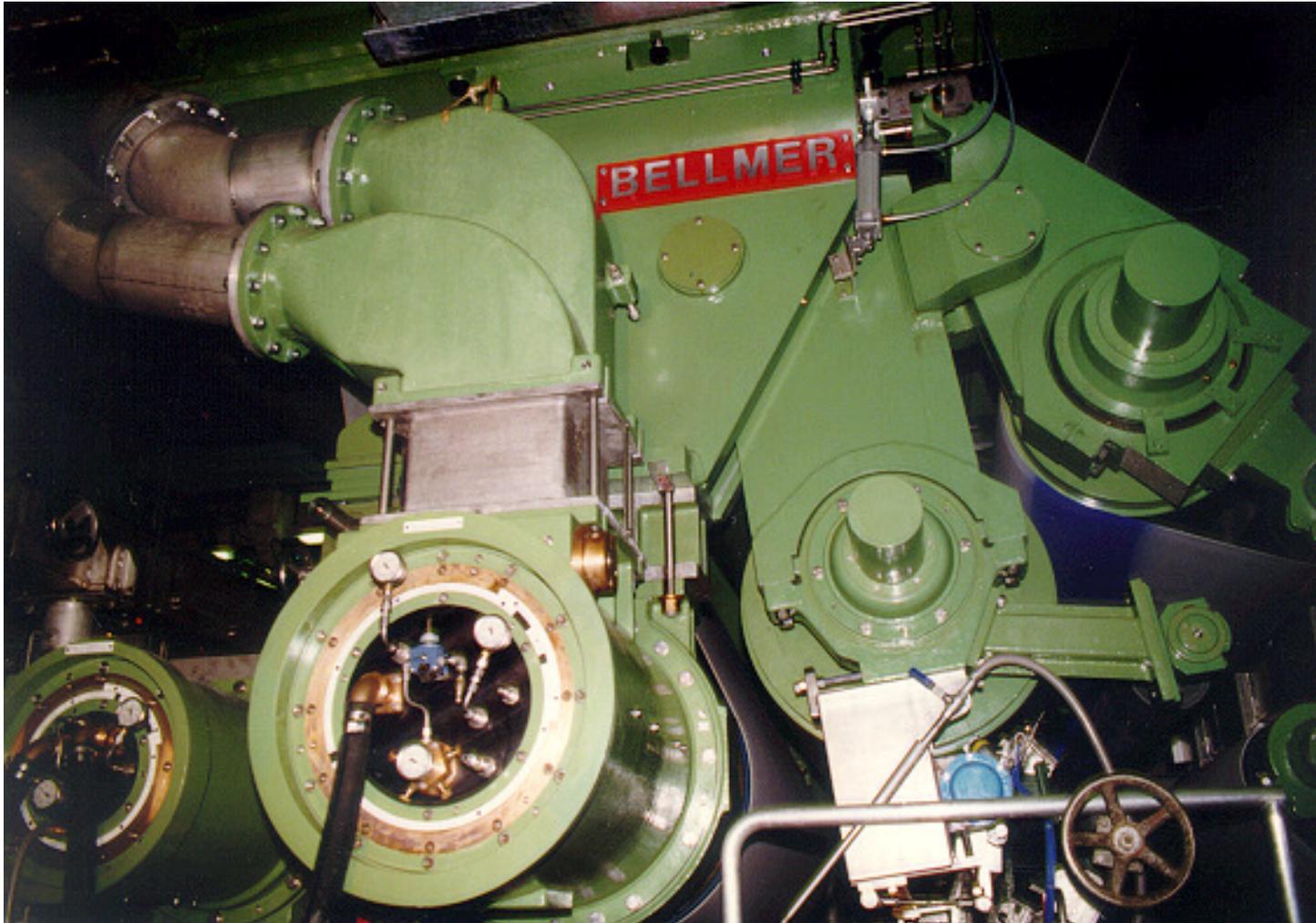
Experienced in more than 400 Press sections...



BELLMER

PAPER TECHNOLOGY

Compact double pick-up press for board



BELLMER

PAPER TECHNOLOGY

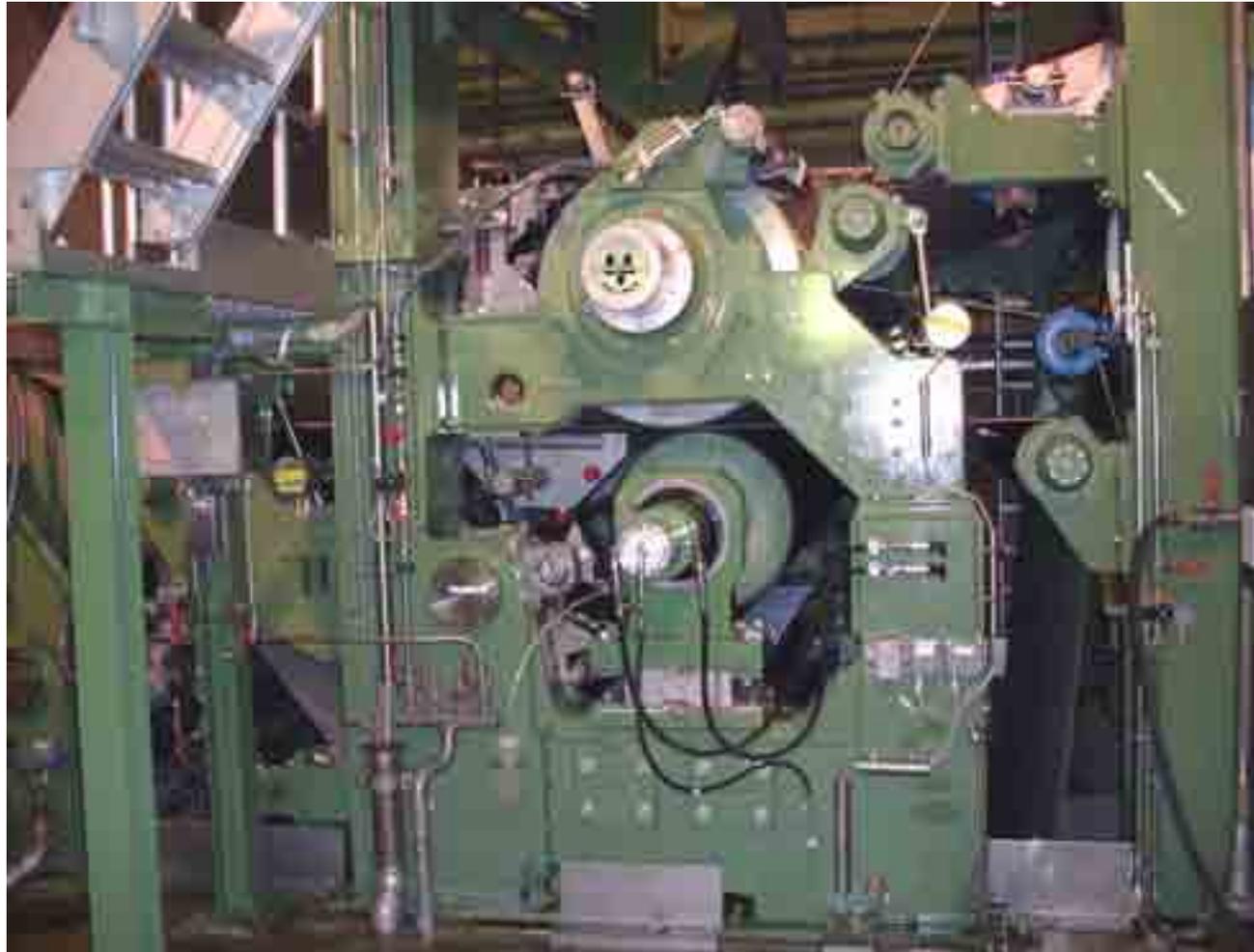
Double pick-up Press for Speciality grades



1324 **BELLMER**

PAPER TECHNOLOGY

Press section for high volume fine papers



1324

BELLMER

PAPER TECHNOLOGY

Press section for volume papers



BELLMER

PAPER TECHNOLOGY

Installation example TurboPress™

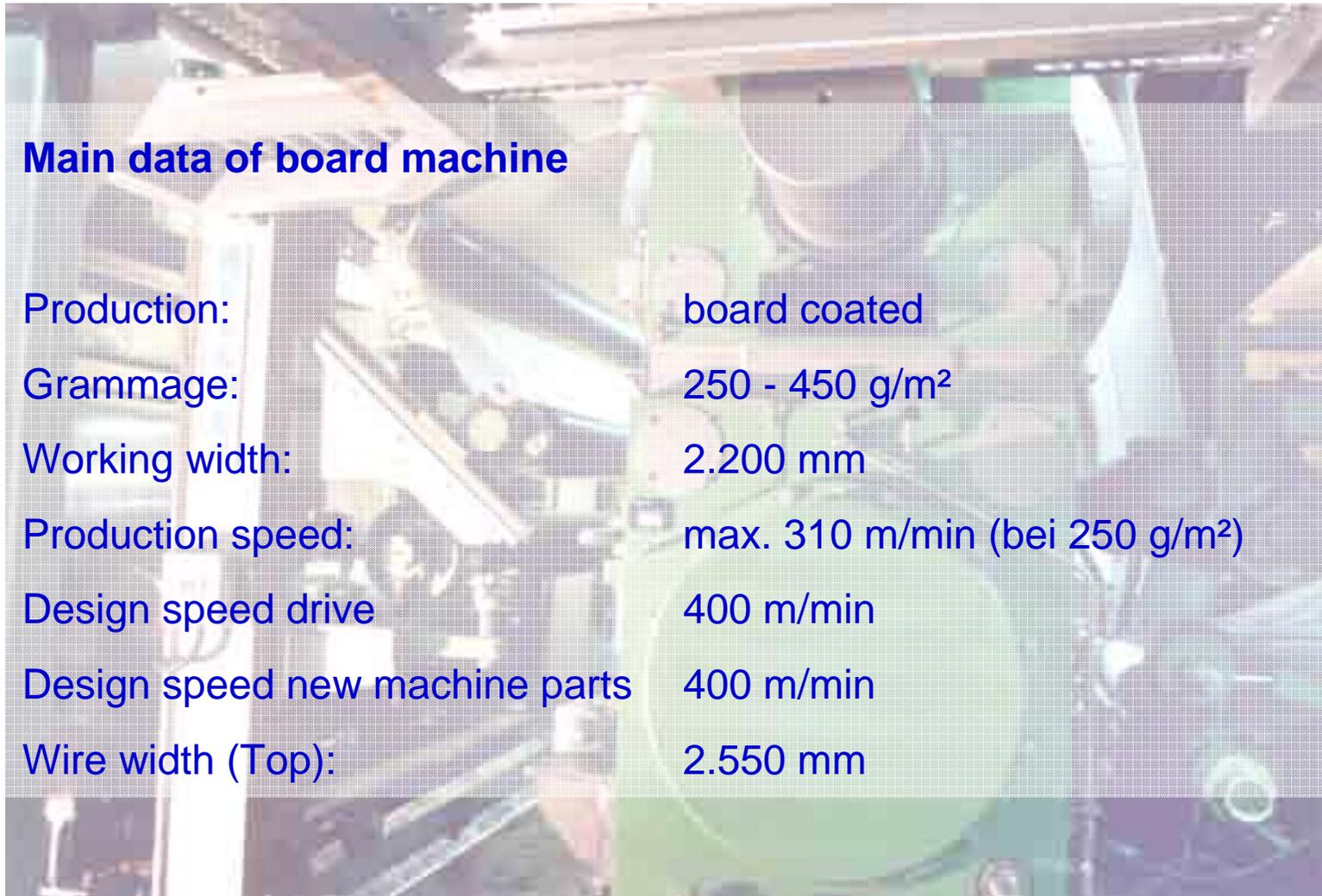


BELLMER

PAPER TECHNOLOGY

Seit 1942

Production data



Main data of board machine

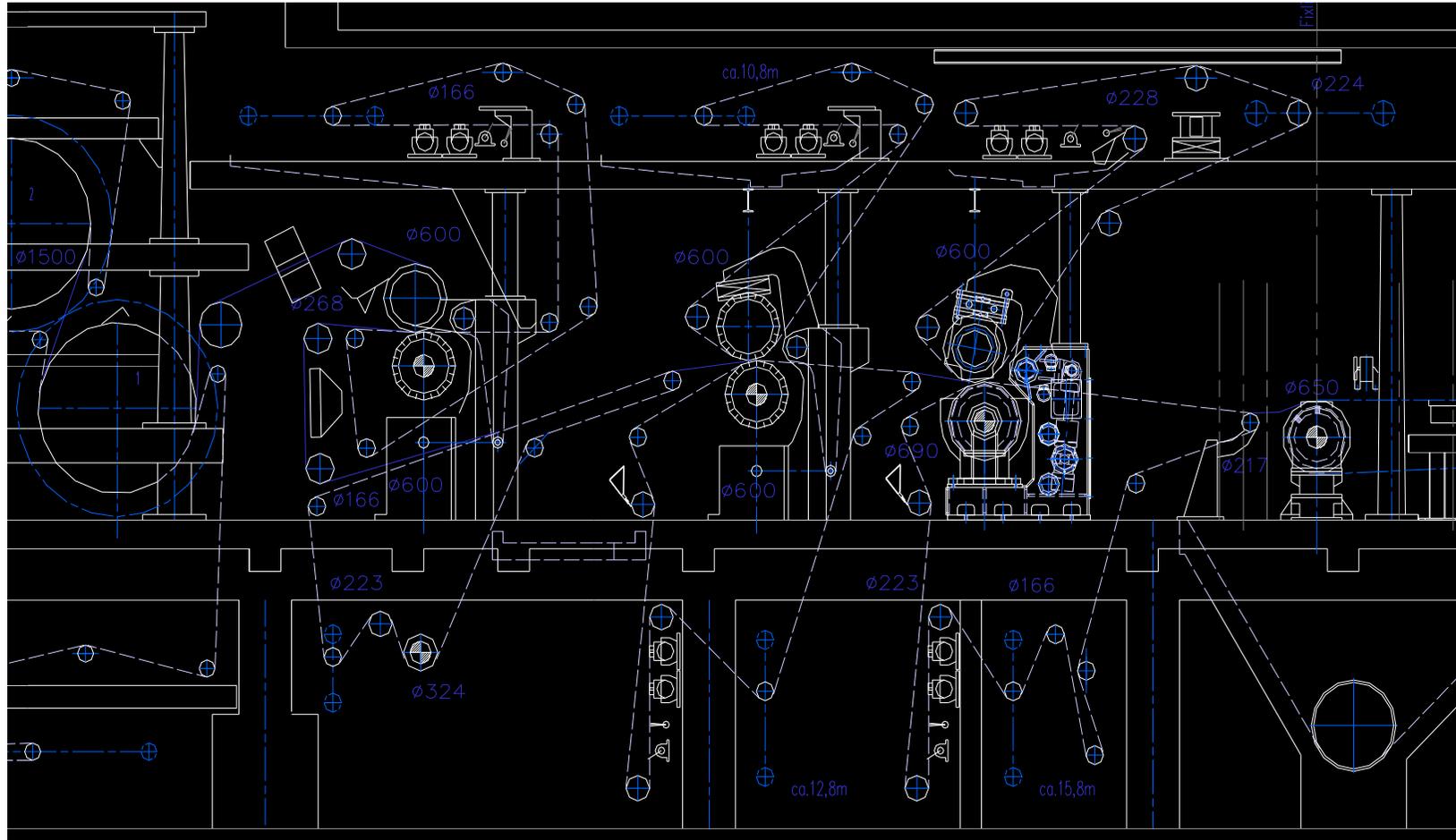
Production:	board coated
Grammage:	250 - 450 g/m ²
Working width:	2.200 mm
Production speed:	max. 310 m/min (bei 250 g/m ²)
Design speed drive	400 m/min
Design speed new machine parts	400 m/min
Wire width (Top):	2.550 mm



BELLMER

PAPER TECHNOLOGY

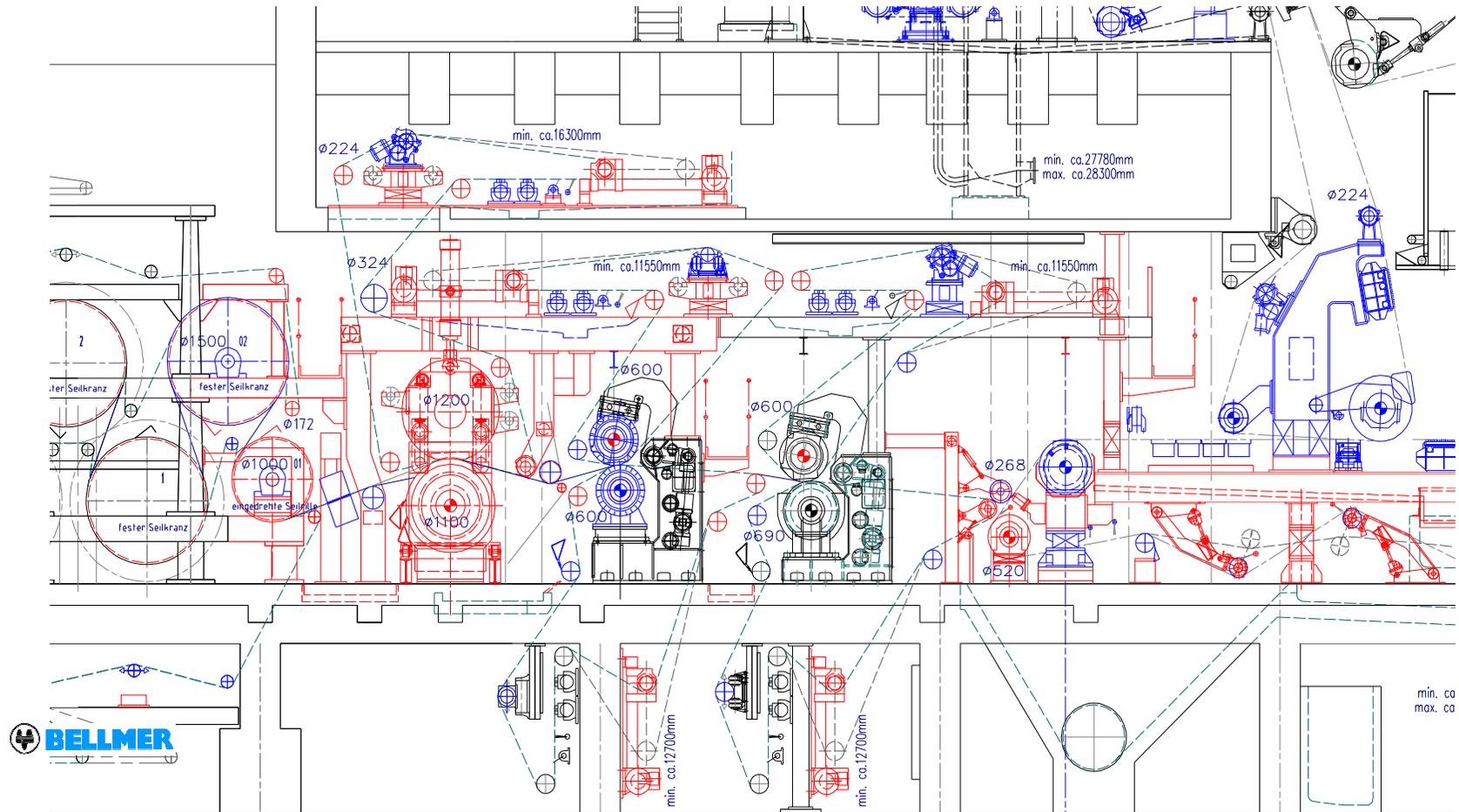
Press section before rebuild



BELLMER

PAPER TECHNOLOGY

Final press section concept



BELLMER

PAPER TECHNOLOGY

gegr. 1942

TurboPress™

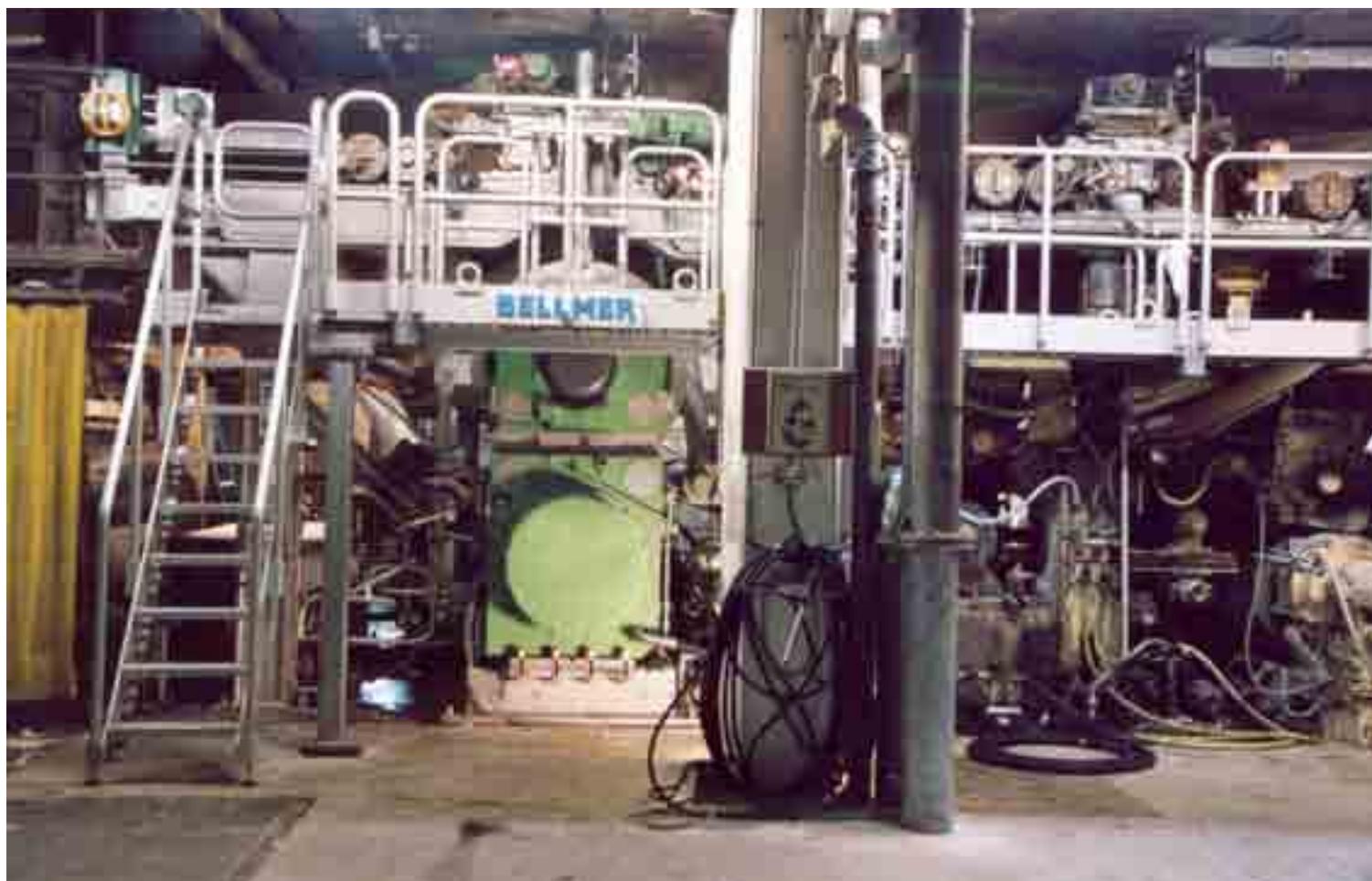


Gepr. 1942

BELLMER

PAPER TECHNOLOGY

TurboPress™

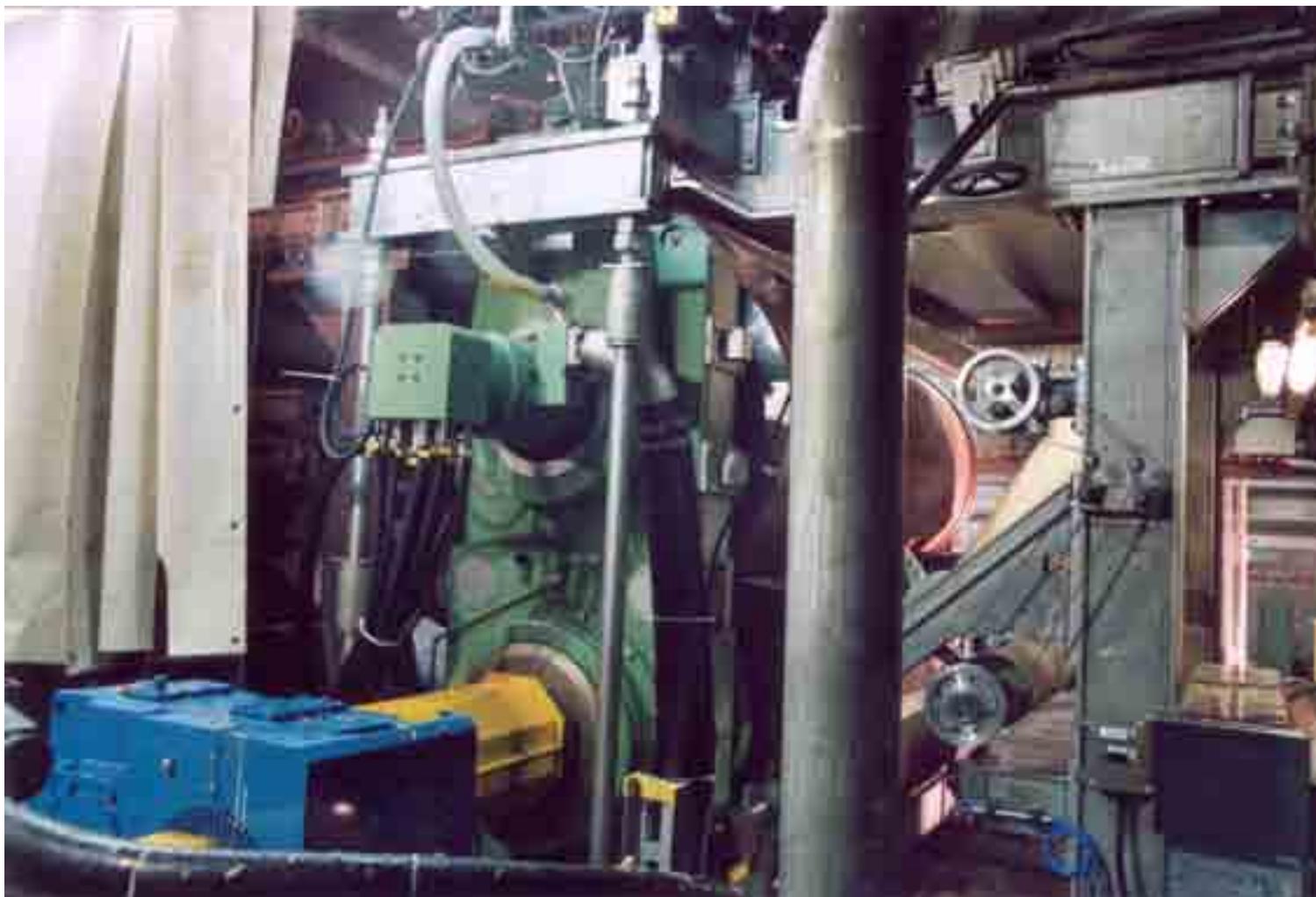


Gepr. 1942

BELLMER

PAPER TECHNOLOGY

TurboPress™



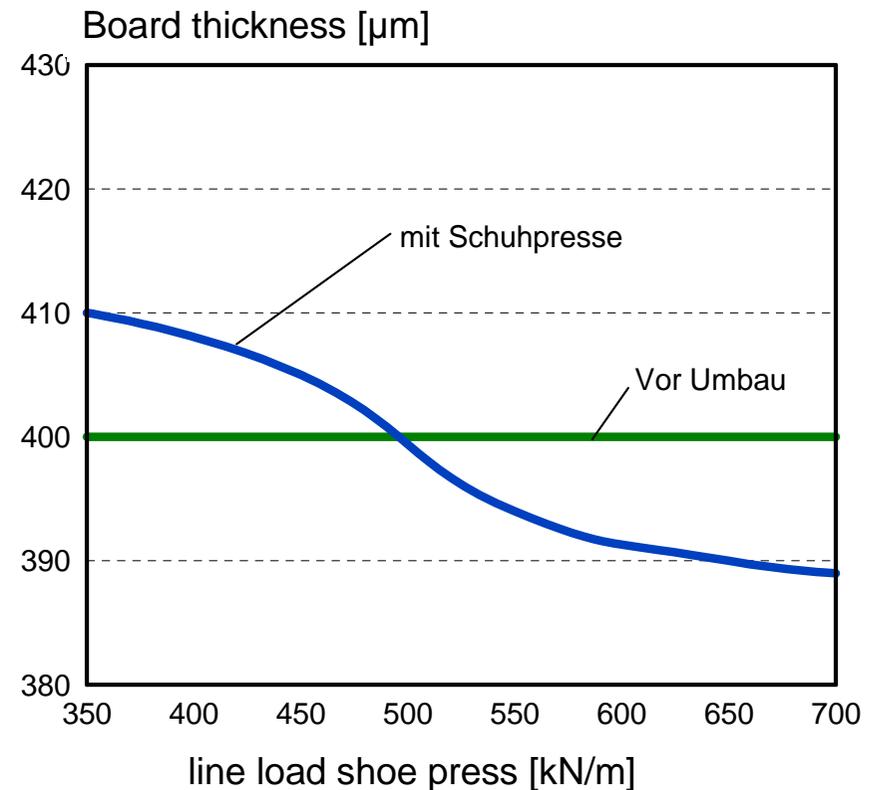
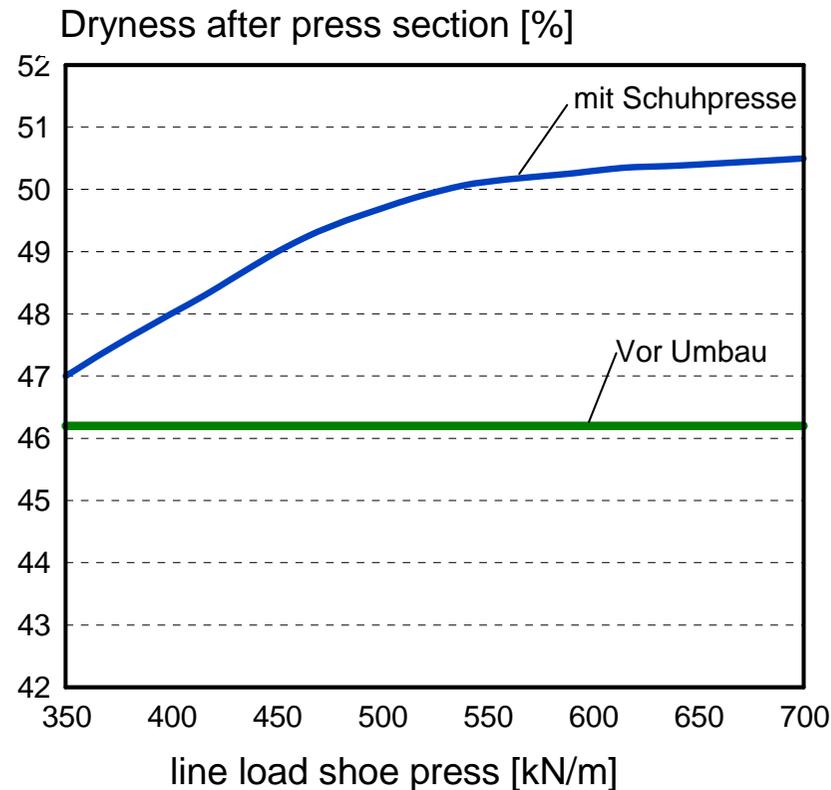
Seit 1942

BELLMER

PAPER TECHNOLOGY

Results after rebuild of press section

Press-Pressure-Influence at 250 g/m² Variation per each 50 kN/m

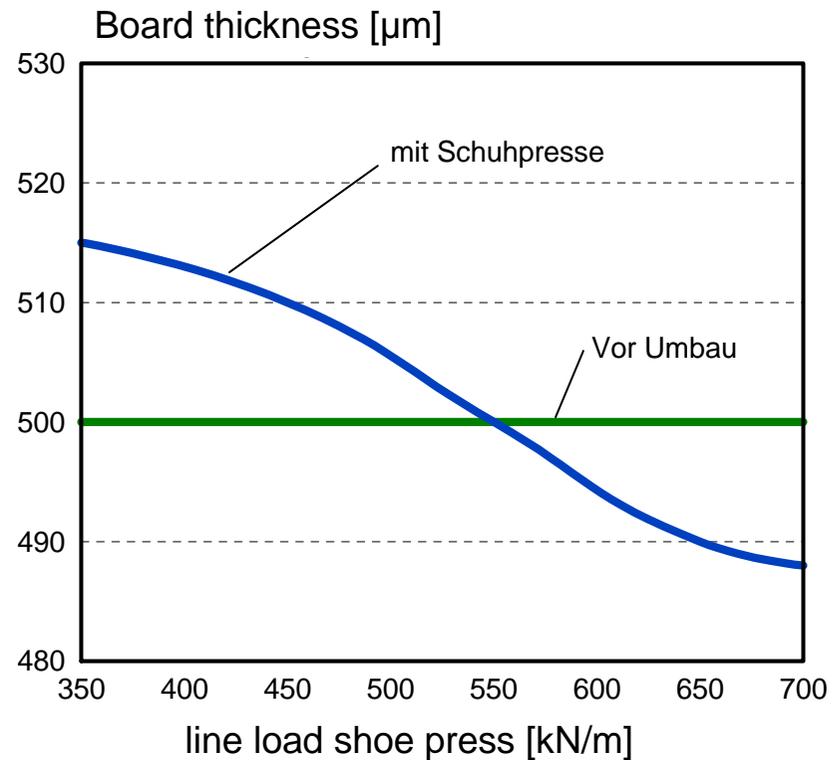
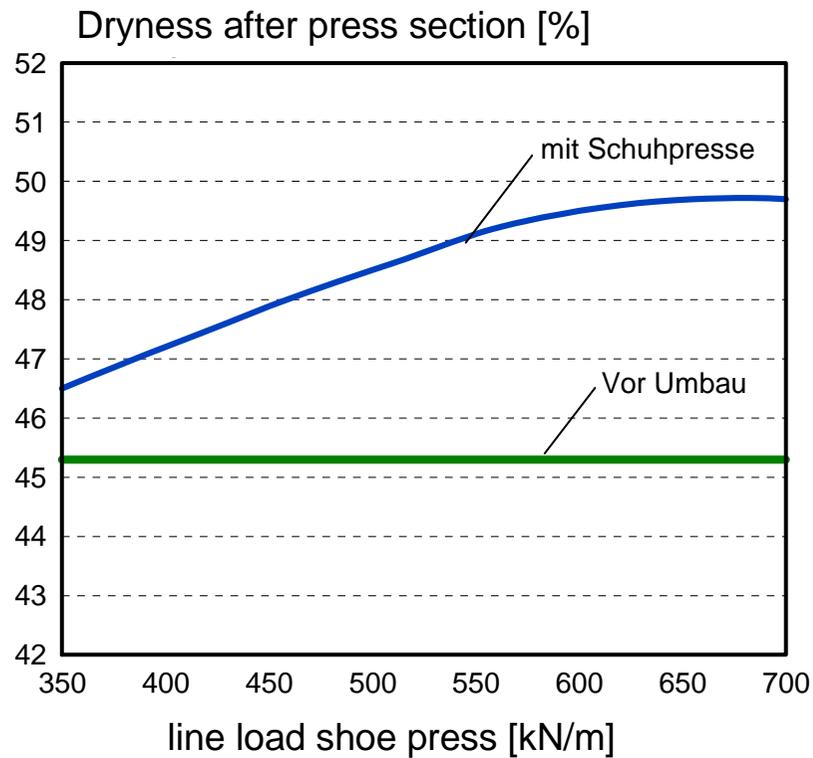


BELLMER

PAPER TECHNOLOGY

Press-Pressure-Influence at 300 g/m²

Variation per each 50 kN/m

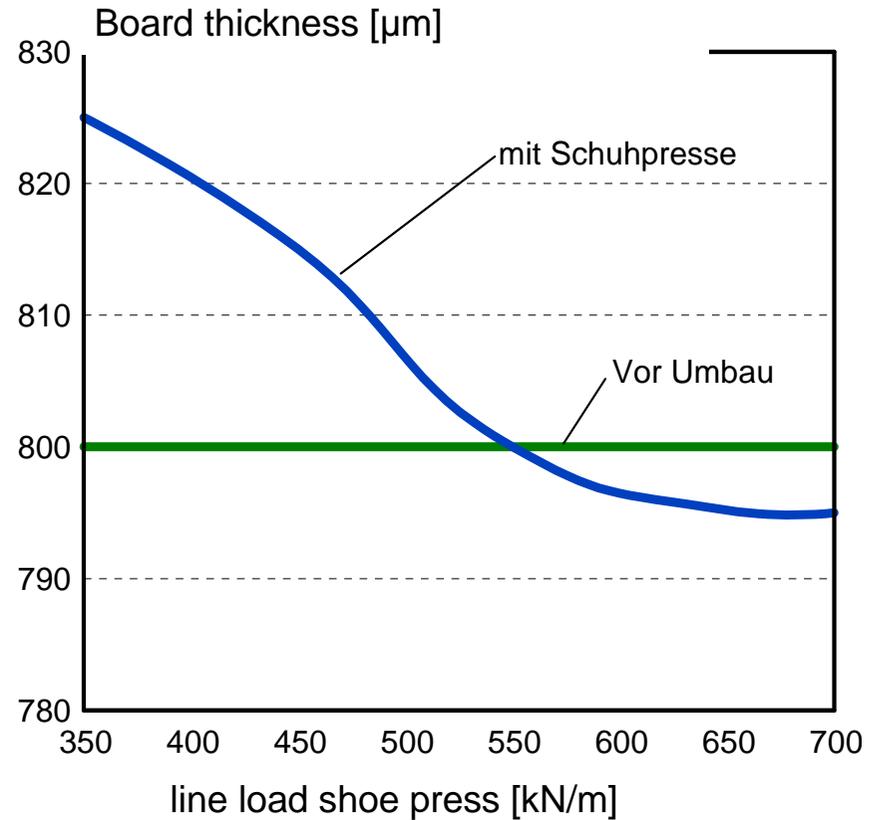
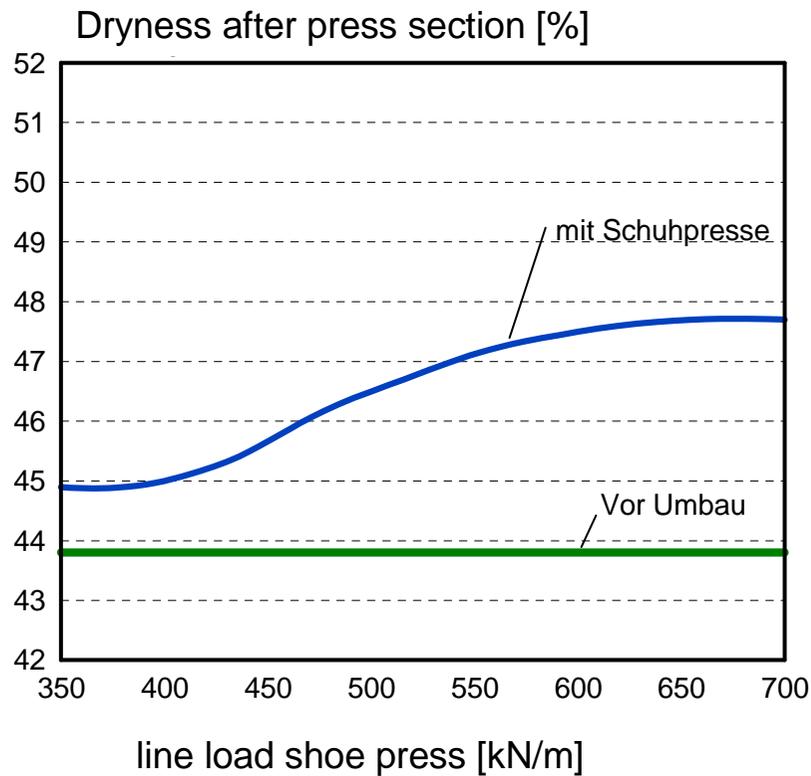


BELLMER

PAPER TECHNOLOGY

Press-Pressure-Influence at 450 g/m²

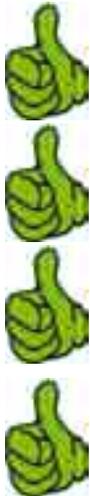
Variation per each 50 kN/m



BELLMER

PAPER TECHNOLOGY

Targets of rebuild ?



- Dryness increase after press section ≥ 3 %
- Technological parameters save
- Improvement of surface properties (smoothness)
- Short down-time



BELLMER

PAPER TECHNOLOGY

Installation example compact press



Seit 1942

BELLMER

PAPER TECHNOLOGY

Production data

Main data of PM

Paper grades:	newsprint
Raw material:	deinked waste paper
Basis weight:	40 – 48,8 g/m ² (max. 60 g/m ²)
Cross-Production:	200 t/24 h at v = 800 m/min, 45 g/m ² and 3.950 mm paper width
Wire width:	4.350 mm
Operation width at reeler:	3.950 mm
Operation speed:	850 m/min
Design and balance speed:	1.000 m/min
Center distance foundation rails (presumed):	4.695 mm



BELLMER

PAPER TECHNOLOGY

Targets of rebuild

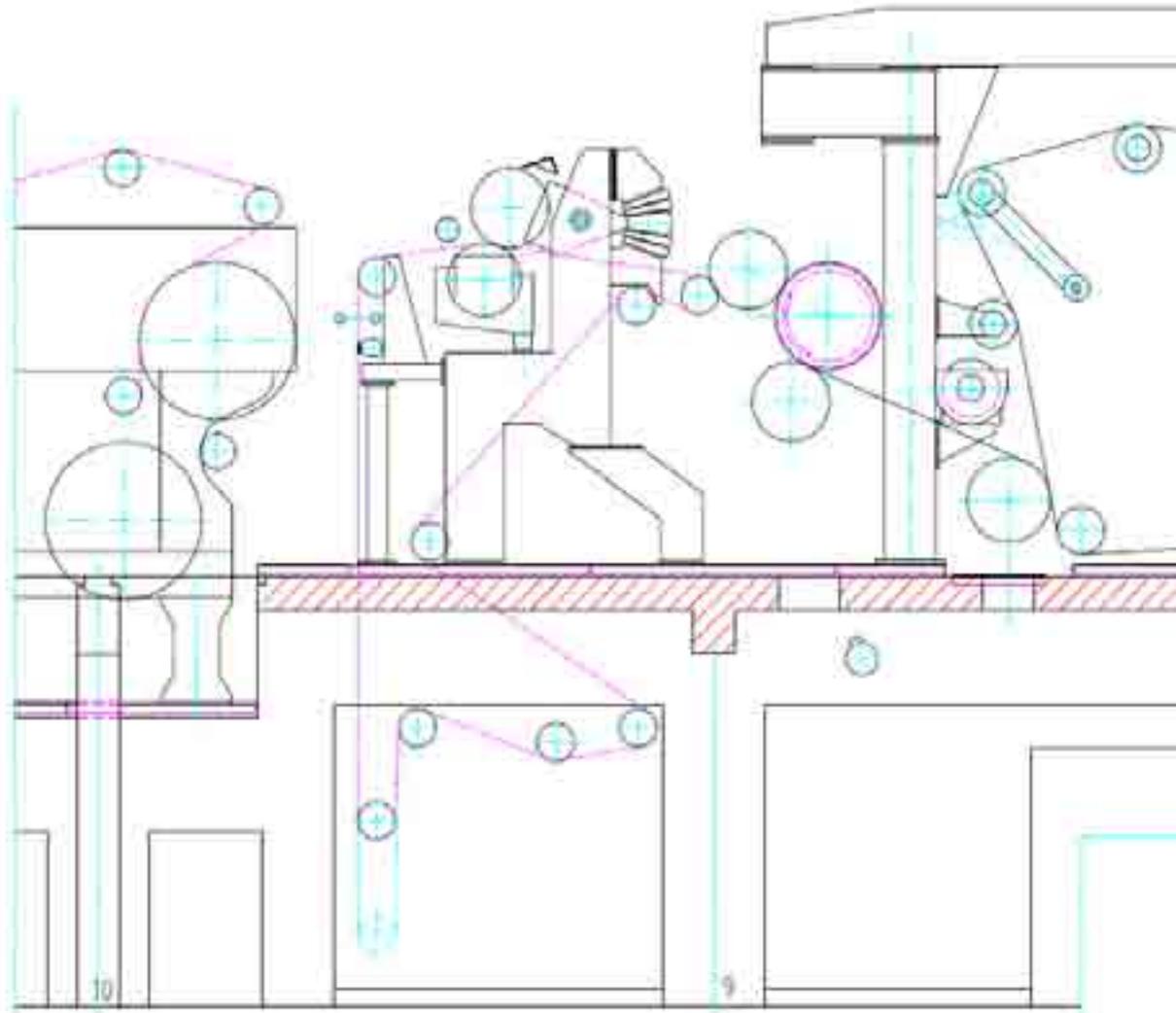
- Dryness increase to a minimum 44 % after press section
- IGT increase to a minimum of 40 cm/s
- Equal humidity profile after press section
- Two-Sideness improvement



BELLMER

PAPER TECHNOLOGY

Press section before rebuild

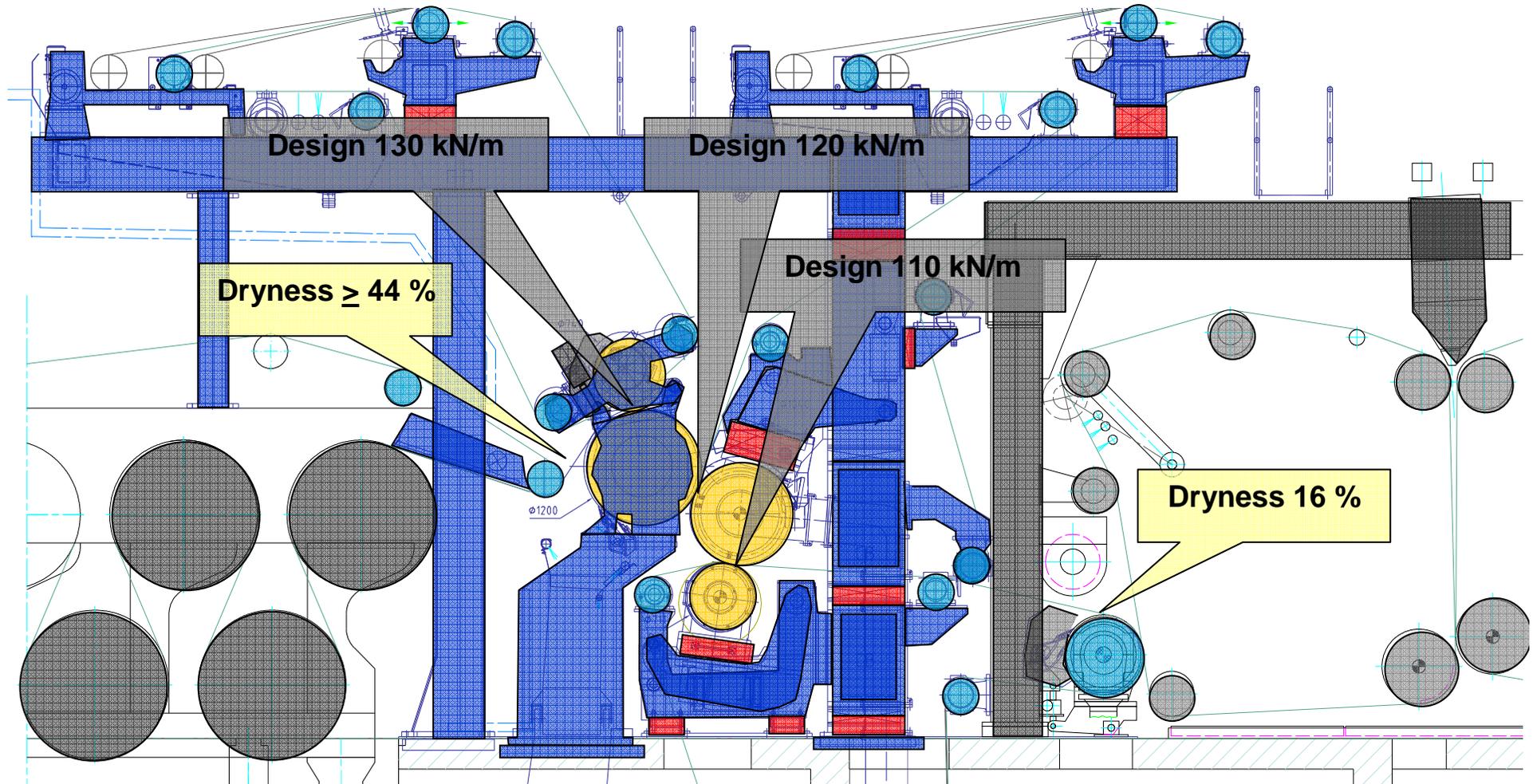


BELLMER

PAPER TECHNOLOGY

Gepr. 1942

Press section after rebuild



BELLMER

PAPER TECHNOLOGY

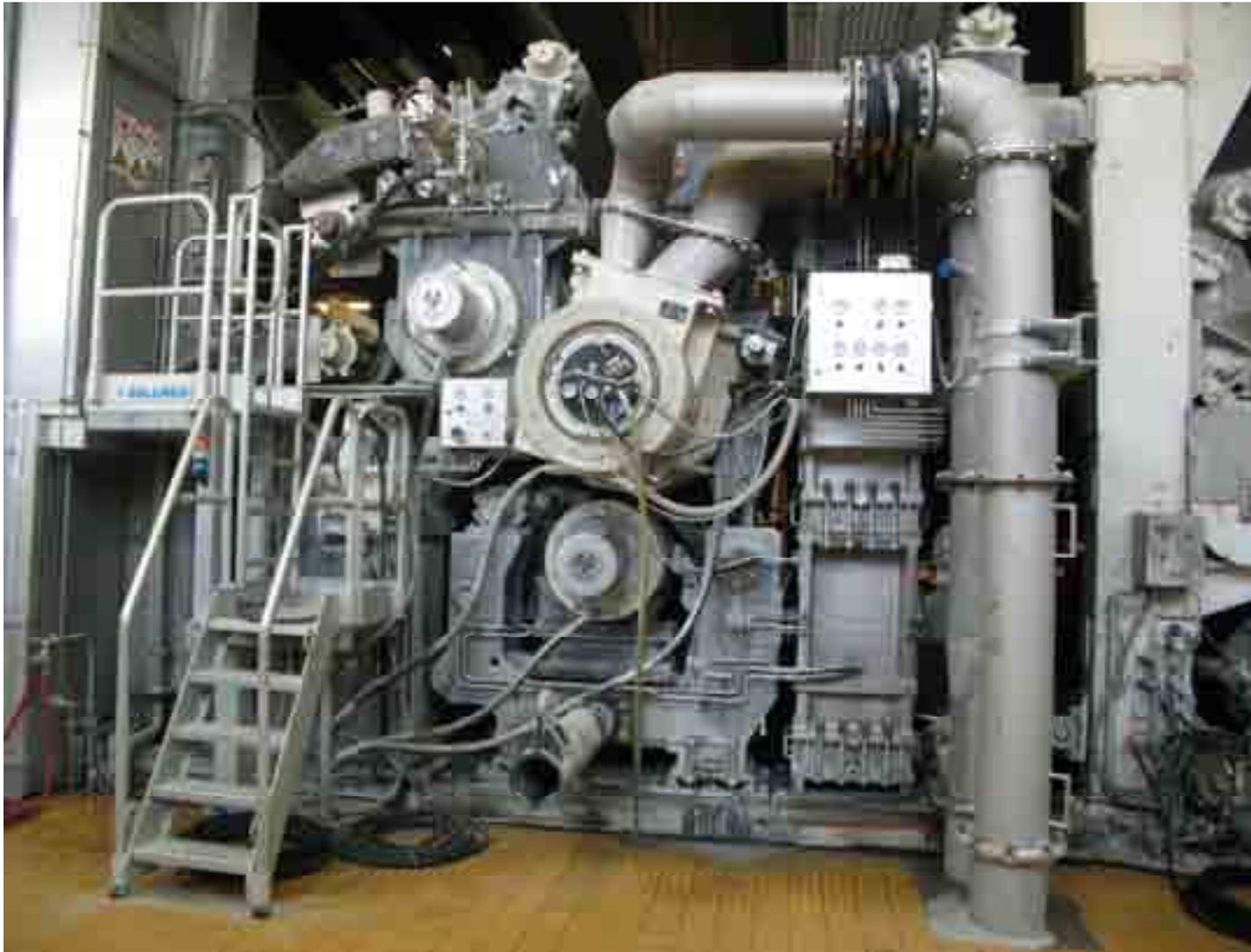
Press section after rebuild



BELLMER

PAPER TECHNOLOGY

Press section after rebuild



Seit 1942

BELLMER

PAPER TECHNOLOGY

Targets of rebuild ?



➤ Shut-down time 20 days



➤ Dryness increase to a minimum 44 % after press section



➤ IGT increase to a minimum of 40 cm/s



➤ Equal humidity profile after press section



➤ Two-Sideness improvement



Since 1942

BELLMER

PAPER TECHNOLOGY

The End



Since 1942

BELLMER

PAPER TECHNOLOGY