

2015

# Saving Energy NNPB Lightweight Production

# About Heye International

- Inventor of NNPB Light Weight Process
- Technology leader in glass container forming
- Acting worldwide
- Independent company since 2001
- Since 2003 part of the Ardagh Group
- Sales Revenue >80 Mio €
- > 400 employees

# Headquarters in Obernkirchen



- Headquarters  
Heye International GmbH  
Lohplatz 1  
31683 Obernkirchen  
Germany



- IS-Machine Assembly  
Heye International GmbH  
Am Ziegeleiweg 3  
31683 Obernkirchen  
Germany

# Cold End in Nienburg



- Inspection-Machine Assembly  
Heye International GmbH  
Domänenweg 10  
31582 Nienburg/ Weser  
Germany



# Heye Equipment in the World



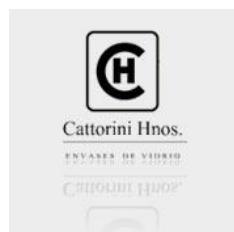
Ardagh Group



GERRESHEIMER



BA



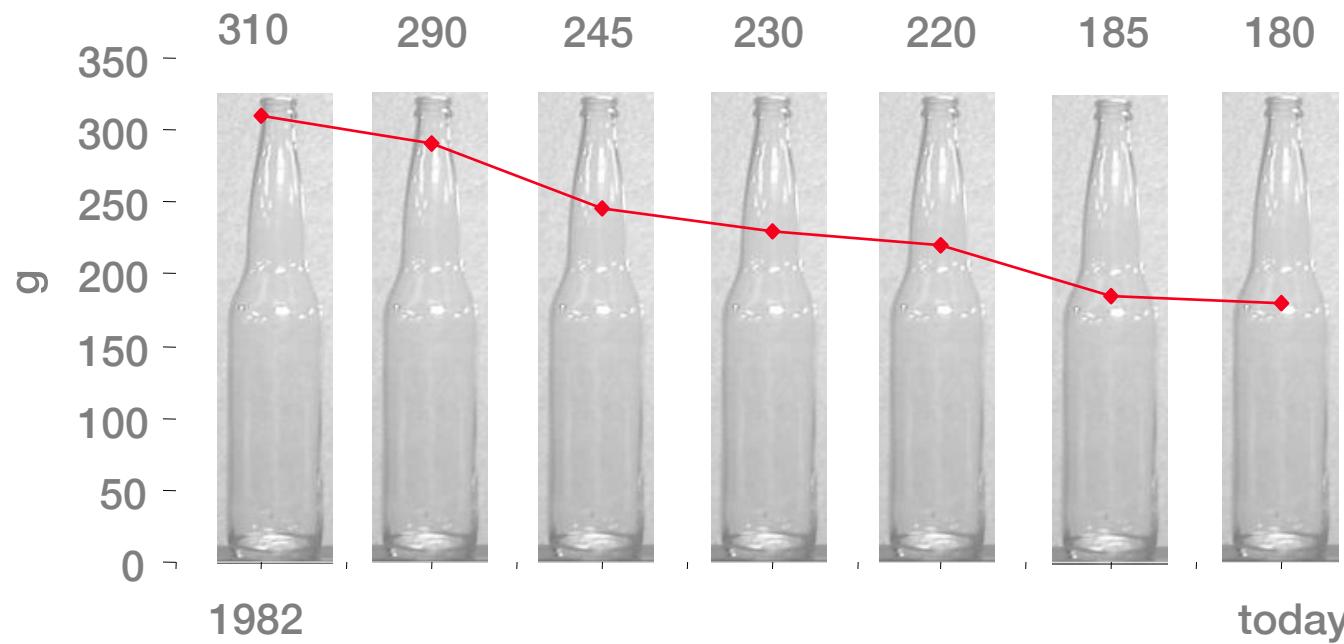
# NNPB Lightweight Technology

A close-up photograph showing a dense row of numerous clear glass bottles. The bottles are arranged in a staggered pattern, creating a sense of depth. The lighting highlights the transparency and clarity of the glass, with bright reflections on the surfaces.

Movie Longhorn

# Example of Weight Reduction

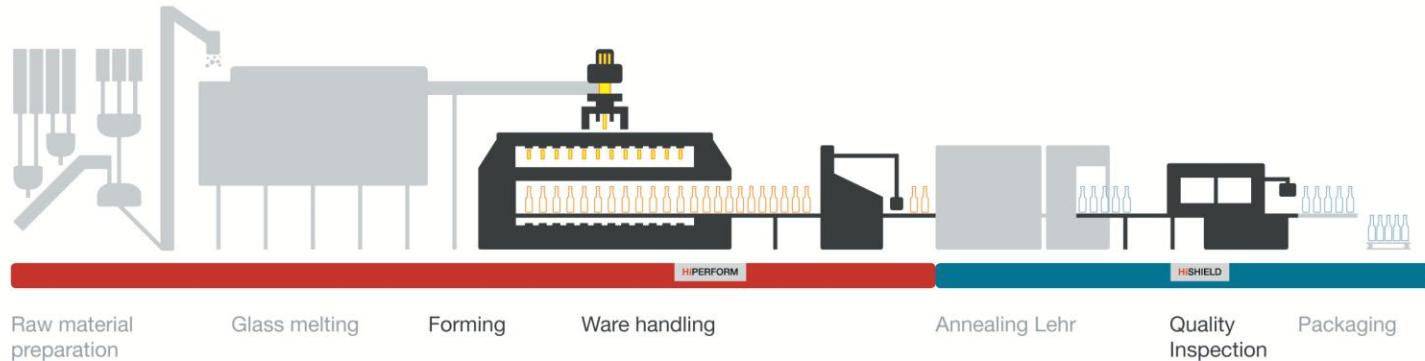
Long Neck Beer Bottle 355 ml ( Mexico )



# Heye SIVESA - 40 Years of Cooperation



# Technical Assistance



Areas of the Glass Plant	Raw material preparation (Batch Plant)	Glass melting (Furnace)	Glass conditioning (Forehearts)	Glass forming (IS-Machines with ware handling)	Container inspection and quality standards (Cold End)	Mould design, repair and maintenance workshops
<b>Heye Preconditions and Requirements</b>	Requirements to the glass quality characteristics	Requirements to the production equipment	Requirements to the quality standards and inspection equipment	Requirements to organisation and equipment of the workshops		
<b>Heye NNPB Assistance Module</b>			Coordination and management of the technical assistance modules by periodical plant audits and bench marks based on KPI's  <b>NNPB-Module:</b> Training of operators in the NNPB-Process, machine settings, gob-forming, correction of container defects			<b>NNPB-Module:</b> Training in organisation and know-how in mould design, mould workshop and maintenance of variables
<b>Heye Plant Performance Assistance Modules</b>			Coordination and management of the technical assistance modules by periodical plant audits and bench marks based on KPI's			
<b>Heye Support Modules</b>	Free access to the Heye 24/7 service hotline and free software updates for the Heye equipment					

Heye International  
Process Control

# RECOMMENDED BY WORLD'S BIGGEST BREWERS



According to Wilfried Seidensticker and Mark Ziegler, leading breweries benefit from the advantages of the Heye Process Control. This article gives us an idea of this tool, which monitors the pressing process of all plunger mechanisms of IS machines.



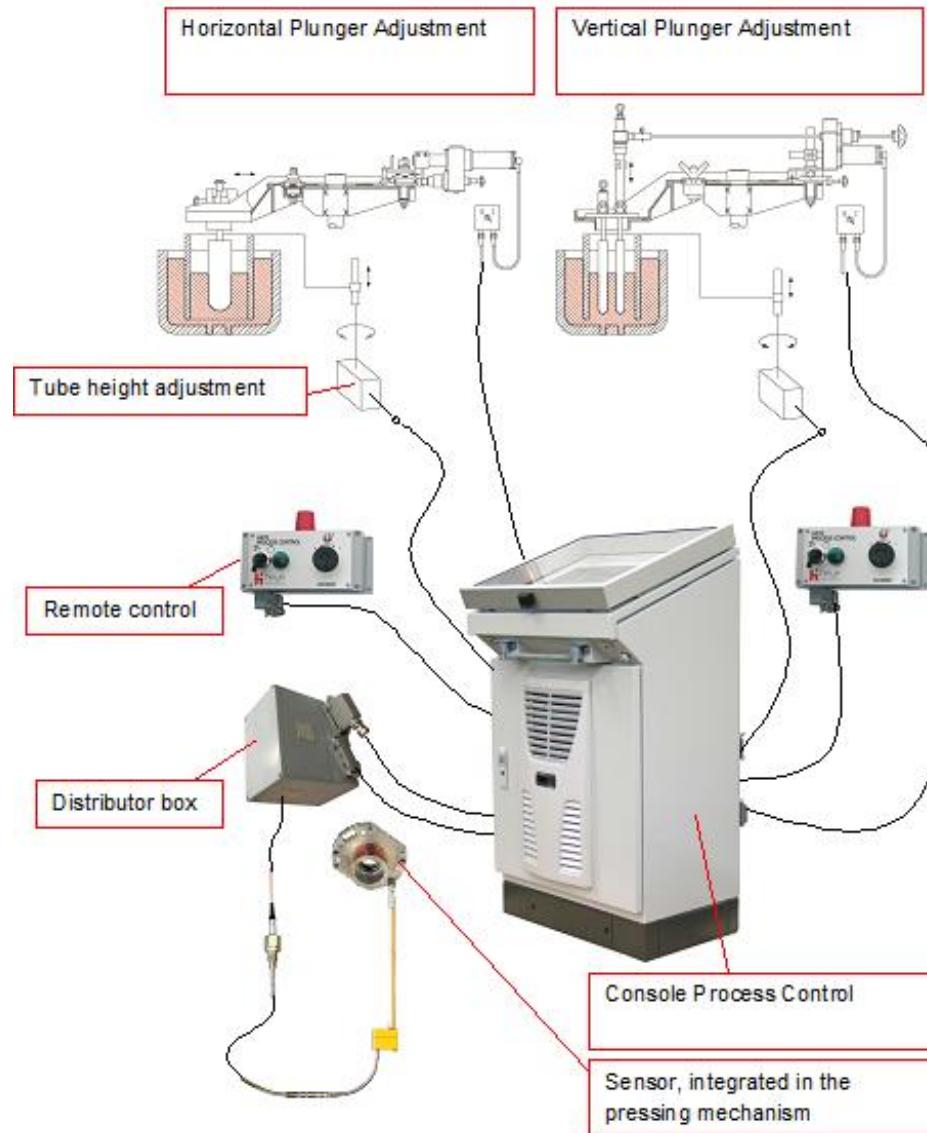
## Avoid critical errors:

- **No overpressed finish**
- **No unfilled finish**

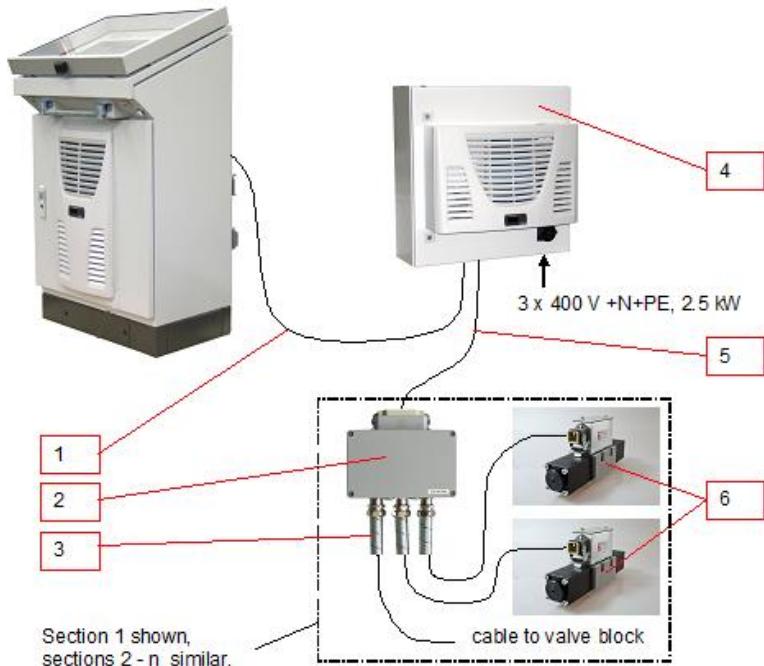
## Process improvements

- Process fine tuning to gain maximum efficiency
- Fast and efficient job changes
- No trial & error
- Preventive maintenance

# Heye Process Control



# New Option: Press Duration Control



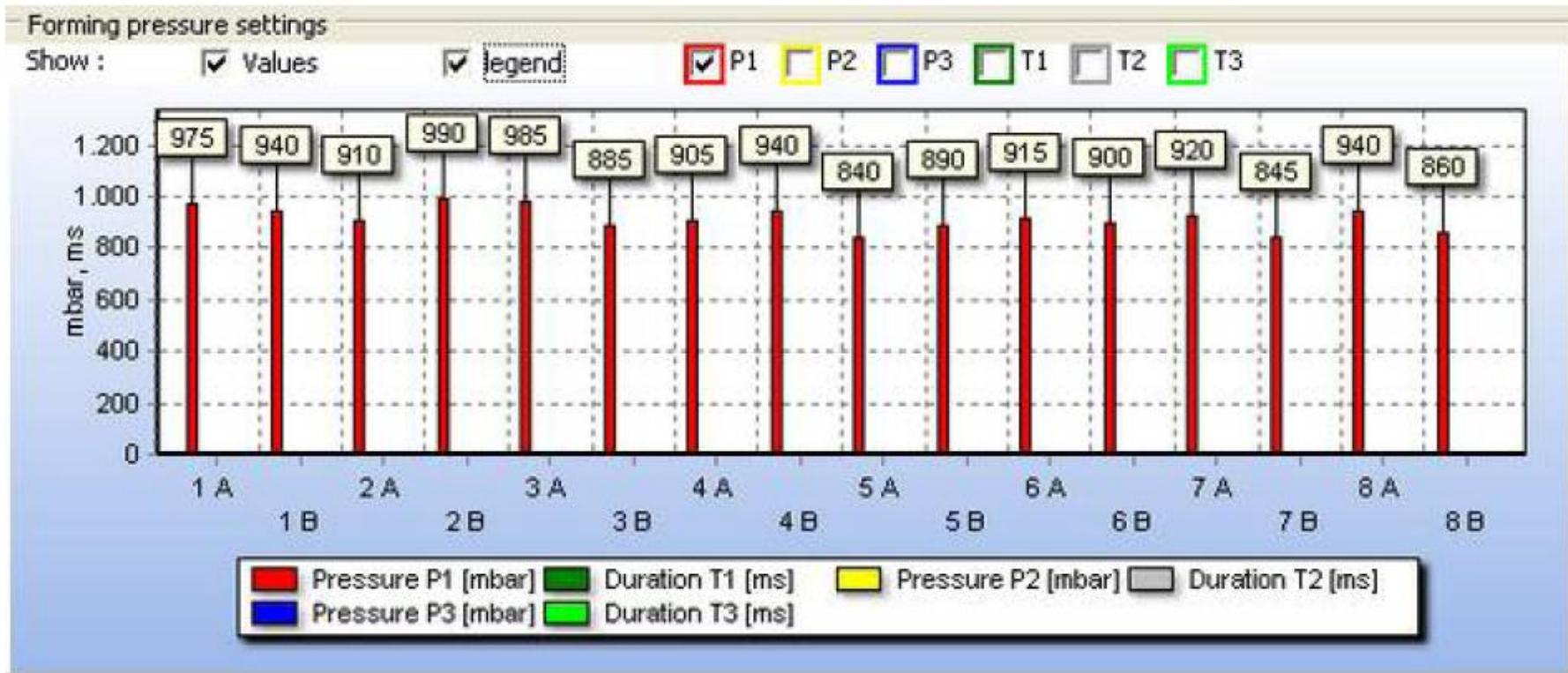
1. CAN-Network cable
2. Junction box (shown for DG)
3. Valve block cable
4. Cabinet Servo Valve Control
5. Cable valve control to junction box
6. Proportional Valve (one per cavity)

✓ Stable Wall Thickness

Movie Press  
Duration

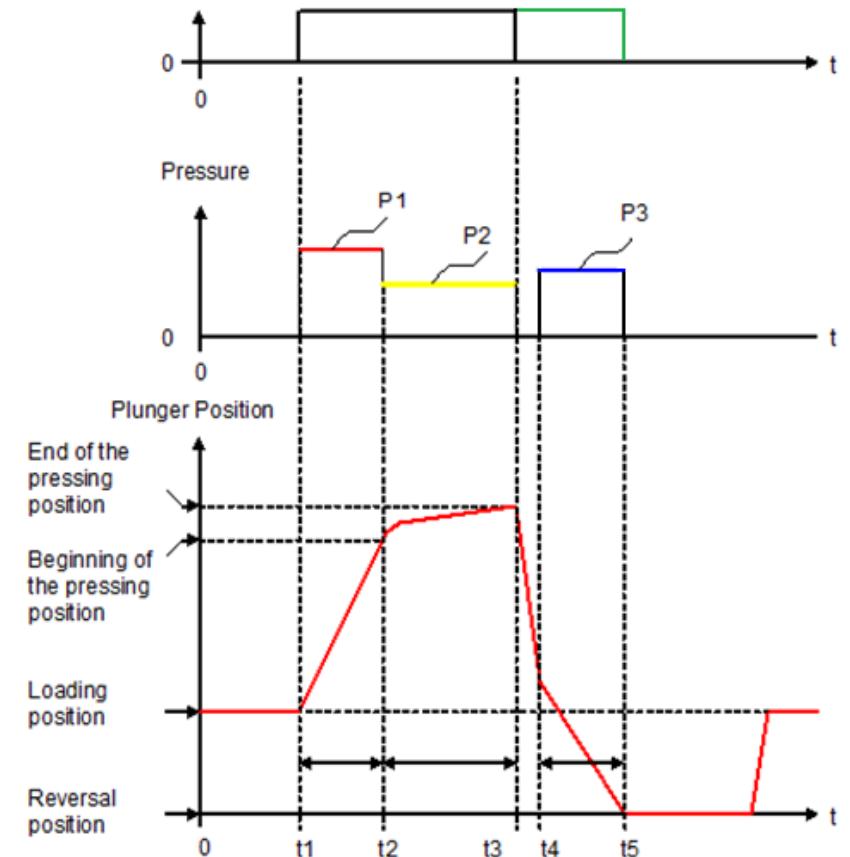
# Comparing different sections

Pressure P1 to move the plunger up into press-position



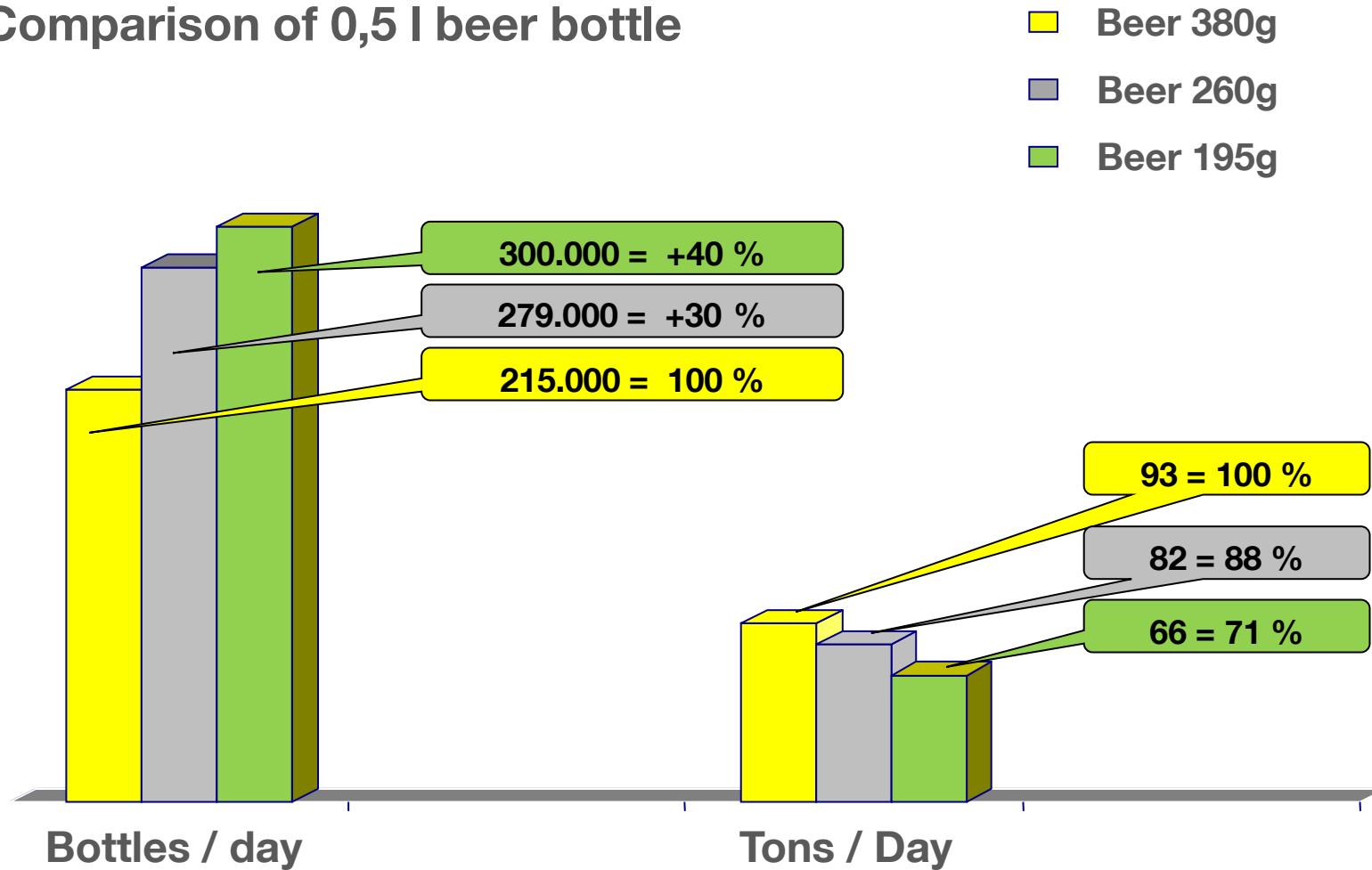
# Constant press duration

- Regulation of the pressure P1, which is necessary to move the plunger up in press-position
- Press duration  $t_1-t_2$  is always constant



# Result: Higher output – less energy

Comparison of 0,5 l beer bottle





# **THANK YOU VERY MUCH!**

