

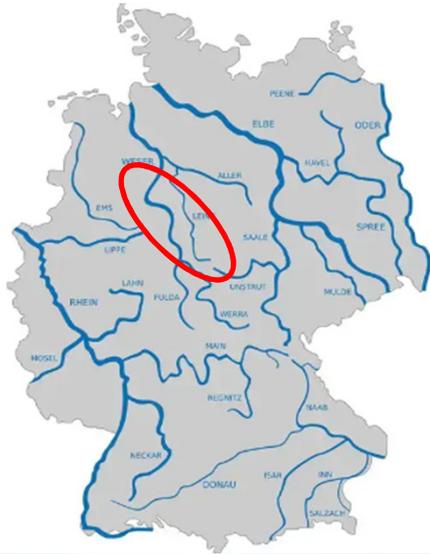
September, 2025 Mumbai, India

# Glasspex India Show 2025

## Driving Efficiency in the Smart Plant – Heye International



# Facts about Heye International



- Founded in 1799 in the river Weser glass region
- Now supplier of high performance equipment, production technology and know-how
- Independent within Ardagh Group since 2003
- 100% EU-based production
- Inventor of NNPB Technology



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# Solution Portfolio



## Gob Forming

- Servo feeder, dual motor shears
- Multi-weight production

## IS-Machines

- High performance
- Long lifetime
- High flexibility

## Ware Handling

- From SG to QG
- High speed equipment

## Smart Plant Solution

- Heye Process Control
- Heye GobMaster
- Heye Temperature Image System or BlankMaster
- Heye Swabbing Robot
- SmartLink for Big Data

## Inspection Machines

- Complete inspection portfolio WENSPECT
- SmartLine inspection machine



# Current Industry Challenges & Solutions

- High energy consumption
  - Rising raw material & energy costs
  - Environmental regulations & decarbonisation
  - Market pressure from alternative packaging
  - Workforce availability
- 
- Energy saving
  - Raw materials saving
  - CO2 emission reduction
  - Efficiency increase
  - Automation & Digitalization

# Possible Solutions

## Energy Saving and CO2 Reduction

through

### **Weight reduction**

- Less raw materials
- Less glass to melt
- Less energy consumption
- Less CO2 emission
- More money saving

## Efficiency Increase

through

### **SmartPlant**

- Less defects
- Less waste
- Higher quality
- Higher pack to melt
- Higher safety

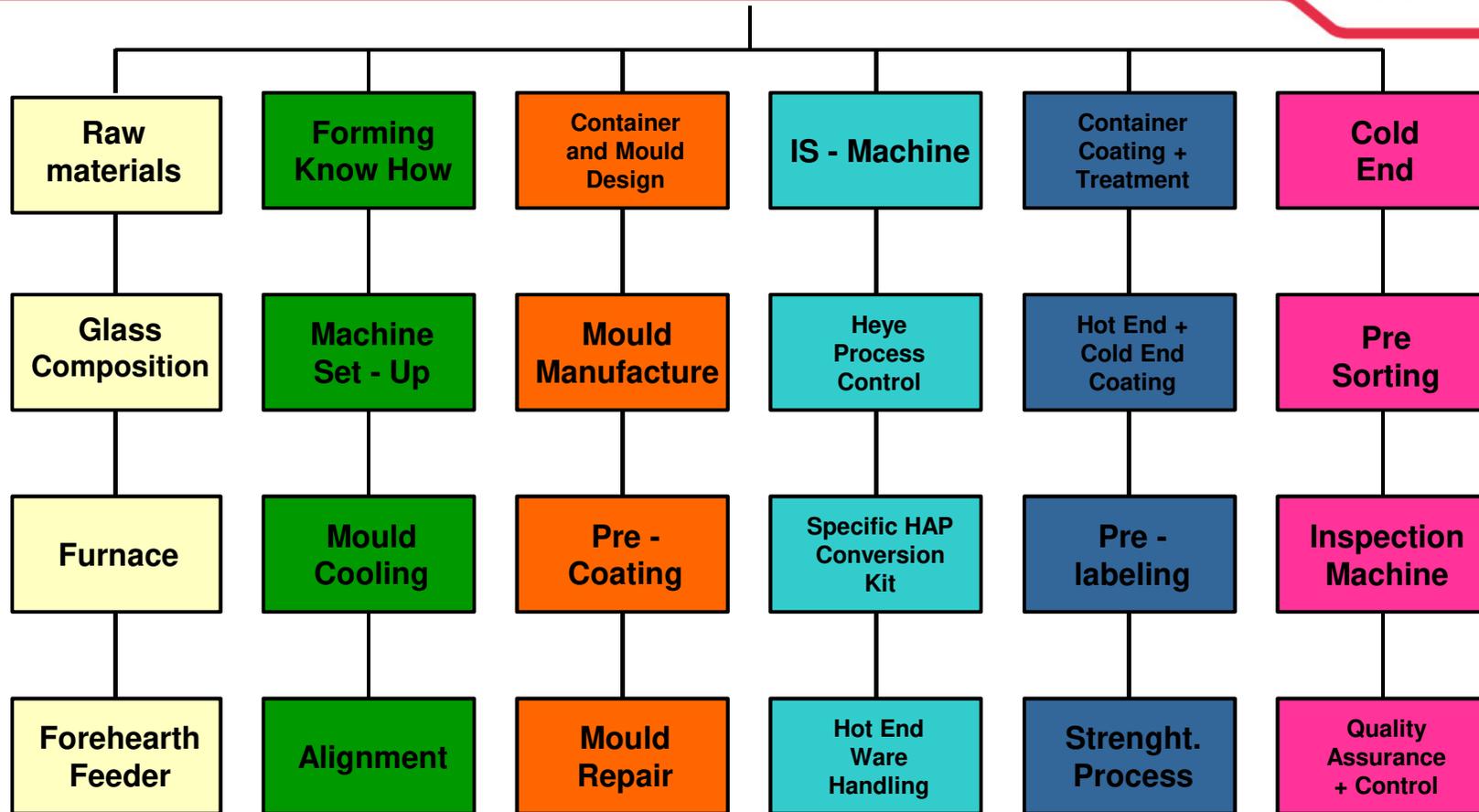
# Lightweight and NNPB Process



Lightweight/NNPB developed by Heye in 1960s to compete against other packaging by:

- **reducing glass weight**
- **increasing productivity**
- **increasing strength**
- **more sustainability**

# NNPB Lightweight in Glass Production Processes



# Summary of the Advantages

<b>1. Energy</b>	↓	+
<b>2. Raw Material</b>	↓	+
<b>3. Production Speed</b> as a function of the bottle weight	↑	+
<b>4. Strength values</b>		=
<b>5. Productivity</b>	↑	+
<b>6. Personnel costs</b>		=
<b>7. Costs per bottle</b>	↓	+
<b>8. Number of bottles / pallet</b>	↑	+
<b>9. Handling of pallets</b> glass plant - filler	↓	+
<b>10. Packaging costs</b> cartons - pallets	↓	+
<b>11. Freight costs</b> glass plant - filler + filler - glass plant	↓	+
<b>12. Storage space</b> plant - filler - supermarket	↓	+

# Crown Sivesa Mexico - 50 Years of Partnership



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# Sivesa, Mexico: Heye Lightweight Beer Bottle



Beer Bottle 12 OZ (355 ml)

# Orora in Australia – 25 Years of Partnership



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# 1000 ml Classic Wine Bottle



550 g.  
1984

520 g.  
1988

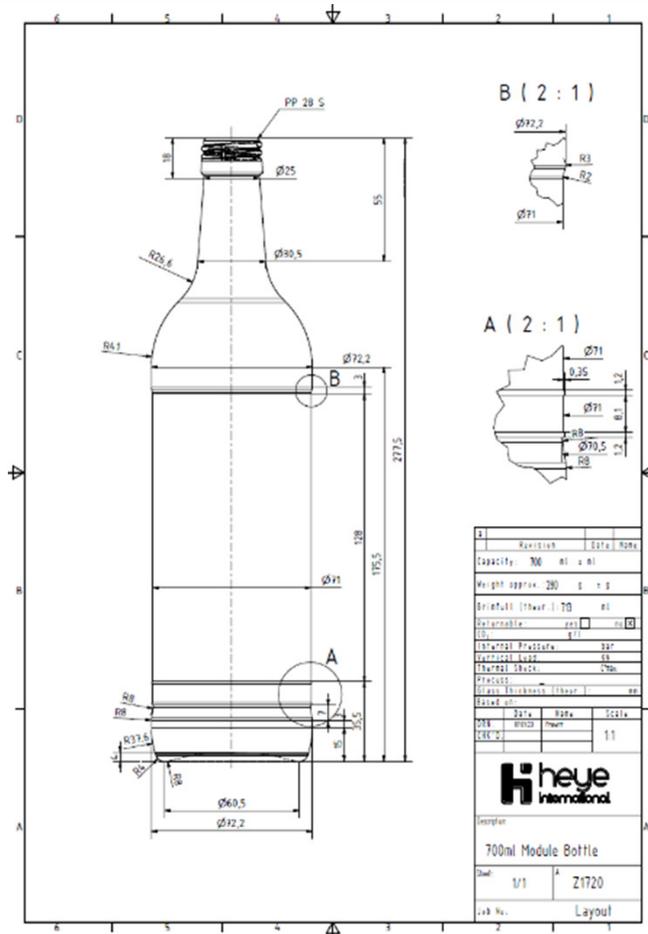
480 g.  
1994

440 g.  
2000

350 g.  
2007

330 g.  
2017

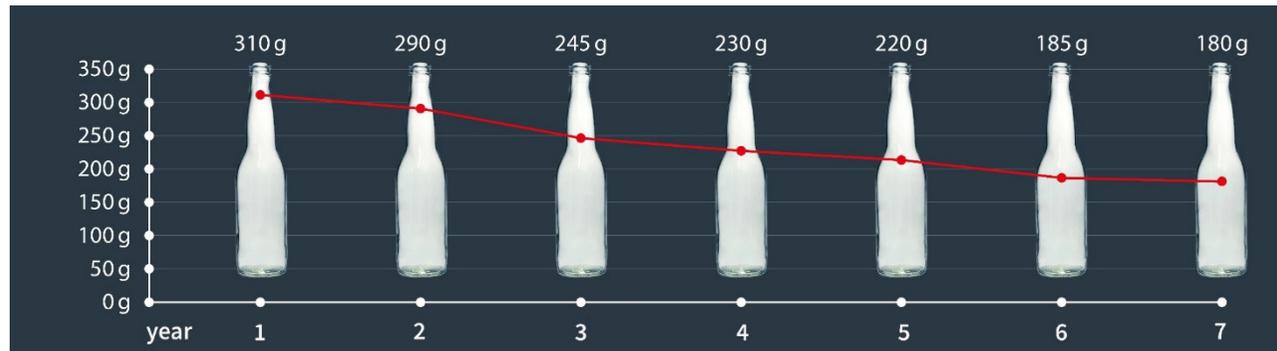
# Lightweight in Spirits Segment



Content: 0,7l

Weight: 300g

# Lightweight



- Lightweight from the beginning whenever it is possible
- Converting the existing projects to NNPB Lightweight
- Heye International is a reliable partner in conversion
  - IS - Machines with 6,8,10,12,16,18,20 sec. converted
  - IS - Machines from other suppliers converted
  - CD: 4 1/4"TG; 4 1/4"DG; 5"DG; 5 1/2"; 6"; 6 1/4" converted

# SmartPlant Solutions: Overview

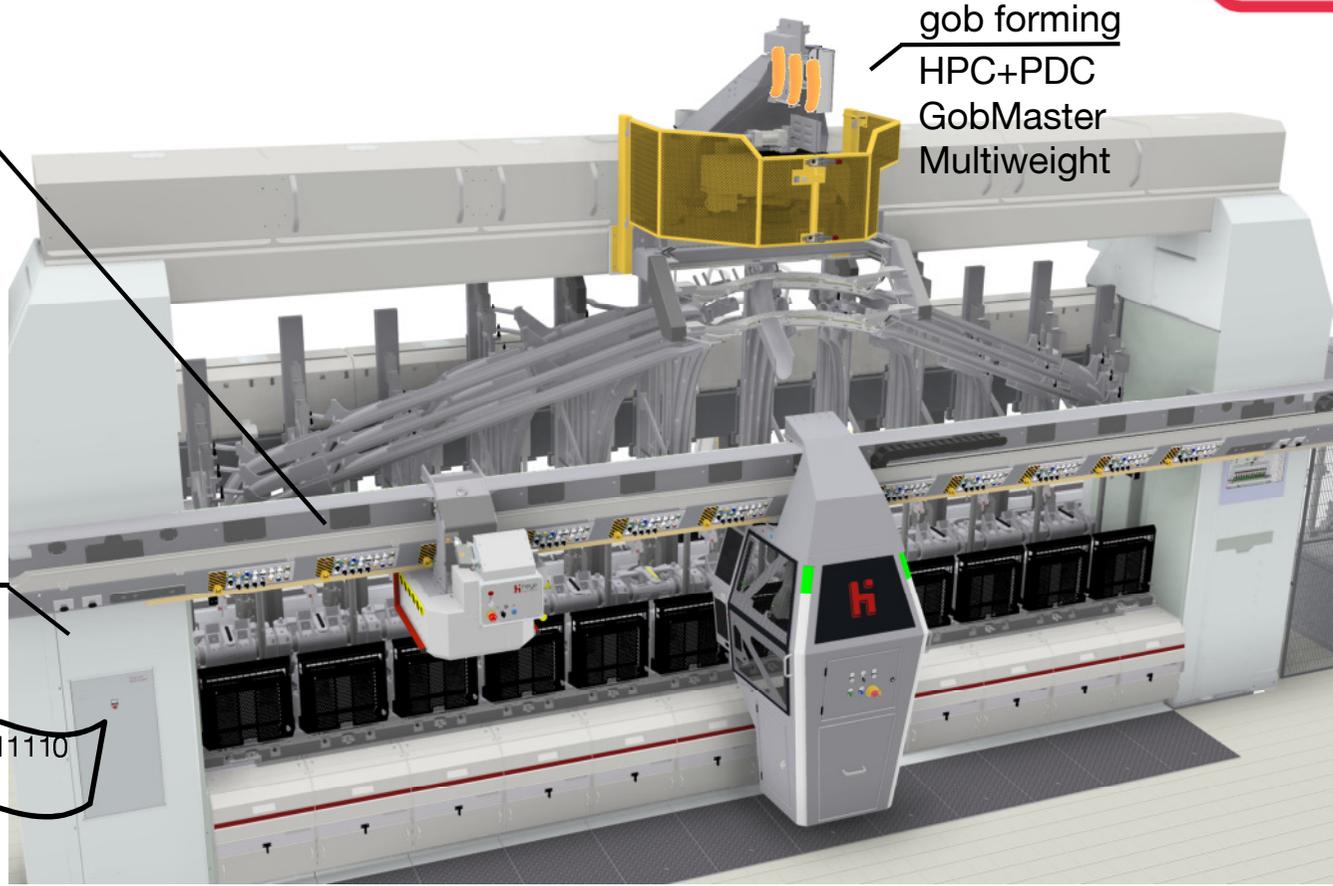


parison forming  
TIS  
BlankSide Robot

gob forming  
HPC+PDC  
GobMaster  
Multiweight

data exchange  
SmartLink

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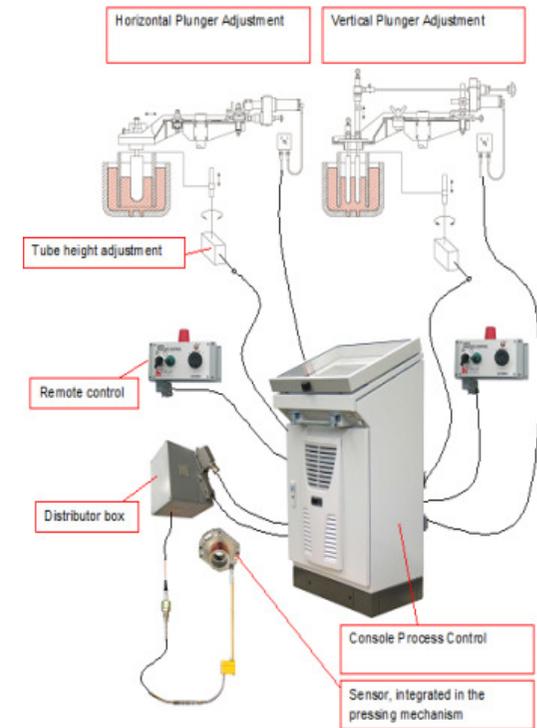


# SmartPlant Solutions: Heye Process Control

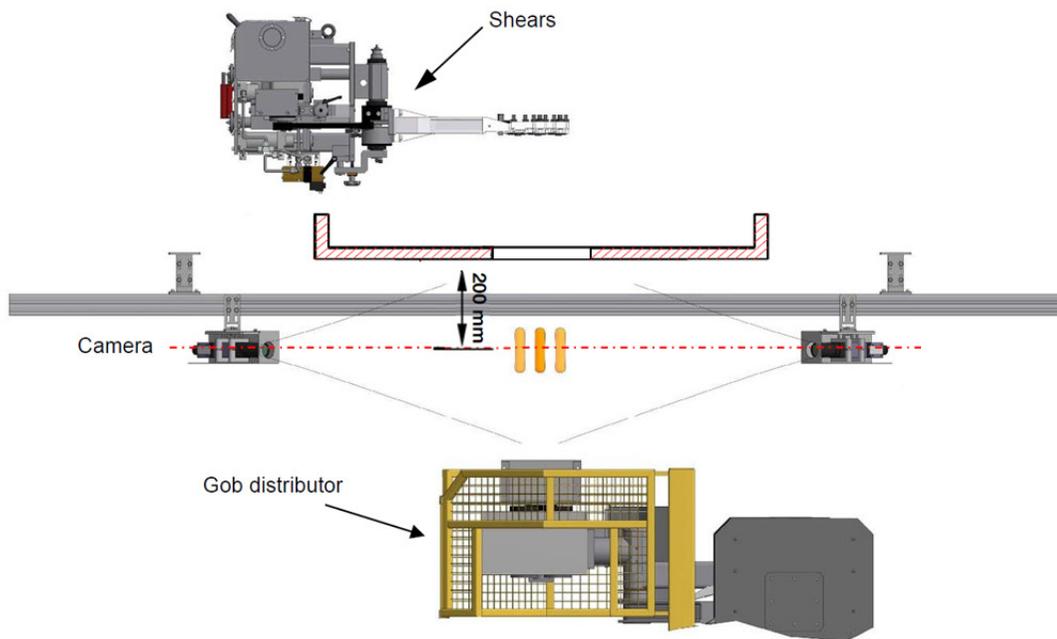


## Forming Process Control HPC+PDC

- ✓ Stable Gob Weight
- ✓ Unified Press Time
- ✓ Hot End reject
- ✓ Closed loop



# SmartPlant Solutions: GobMaster



- 2 cameras
- Gob weight and shape control
- Closed loop
- Heye and non-Heye systems
- Accuracy 0.5%
- No water cooling
- Temperature sensor
- Hot End reject

# SmartPlant Solutions: Multiweight production



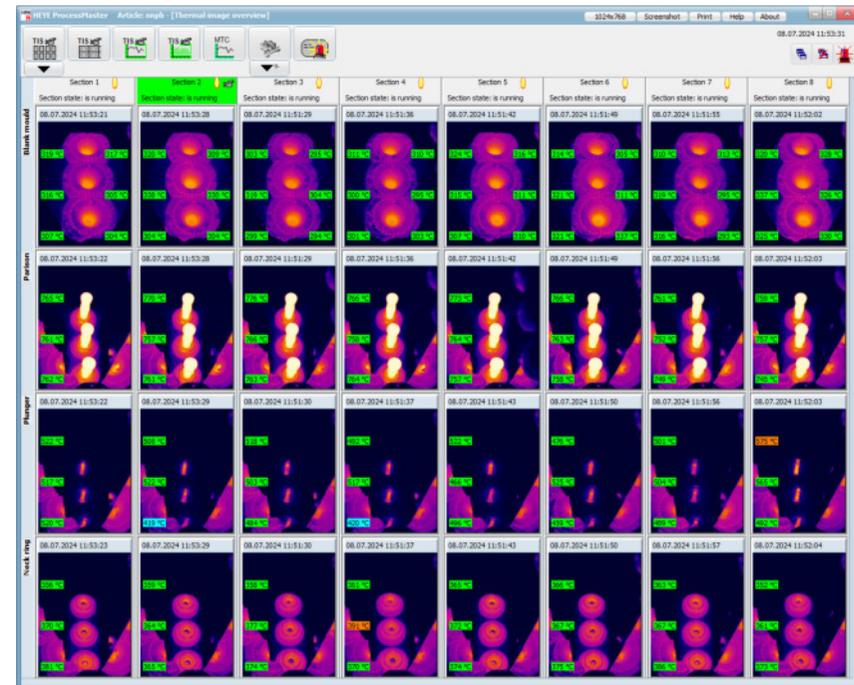
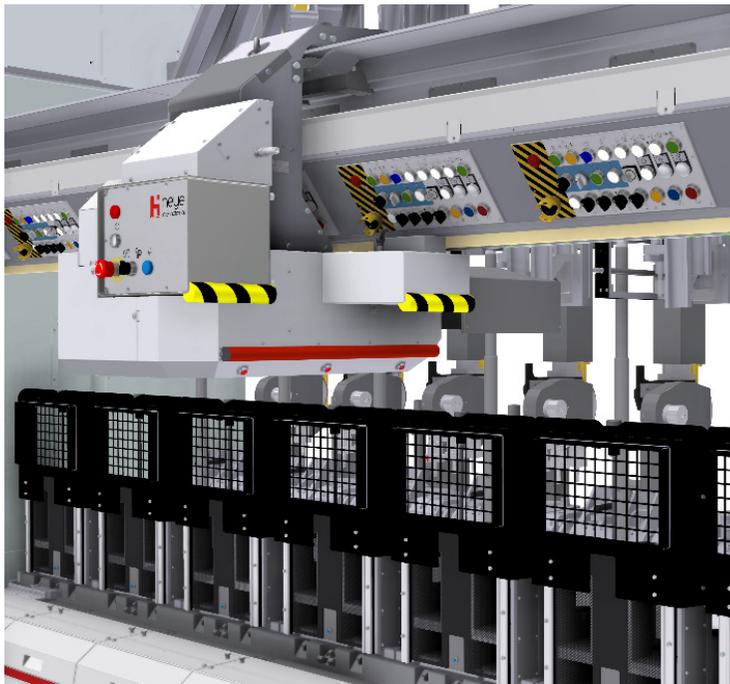
Section									
1	2	3	4	5	6	7	8	9	10
425 g	380 g	380 g	380 g	380 g	380 g	380 g	380 g	380 g	380 g
425 g	425 g	425 g	425 g	425 g	380 g				
425 g	425 g	425 g	380 g						
380 g	380 g	400 g	400 g	425 g	425 g	380 g	380 g	380 g	380 g

- Different weights on IS-Machine
- Also for NNPB
- Heye and non-Heye IS-Machines
- Full production flexibility
- Less job changes
- Reduce down time
- Sampling and small series

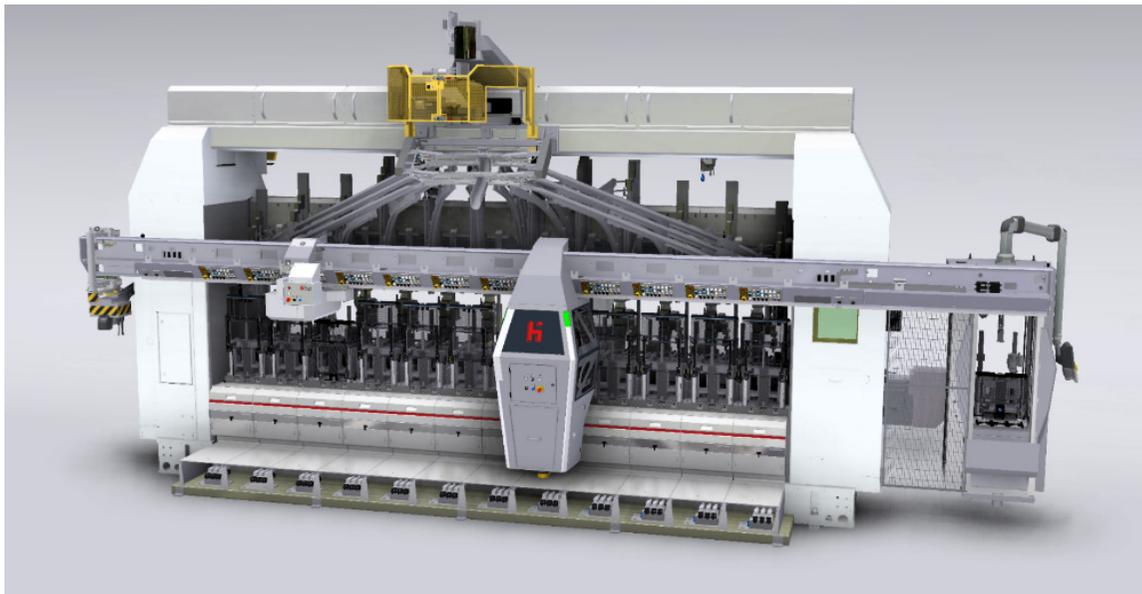
# SmartPlant Solutions: Thermal Image Sensor



IR camera for  $t^\circ$  control on the blank side, adjusting cooling in closed loop



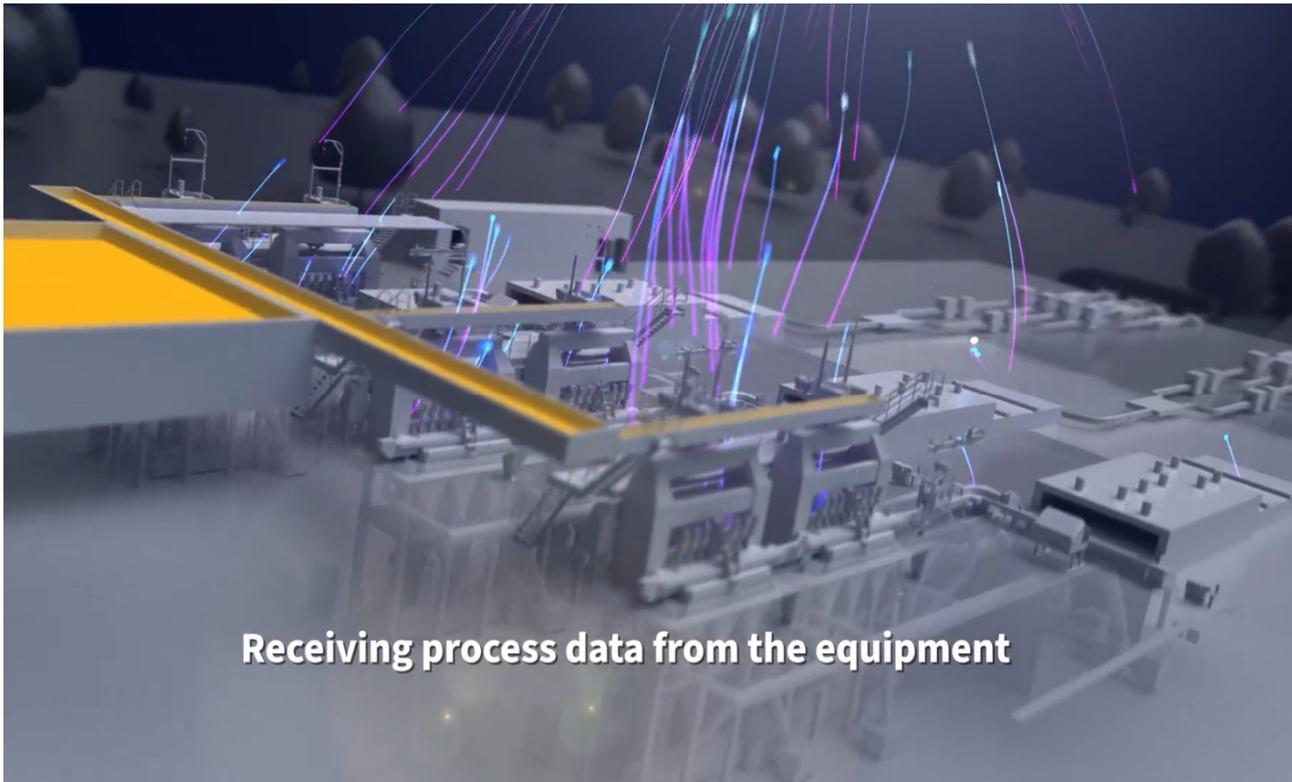
# SmartPlant Solutions: Heye BlankSideRobot



- 75% savings on lubrication
- 2% improved pack-to-melt
- No rejects from swabbing
- No section stop
- High safety for operators

**500 tons of glass and 250 tons of CO<sub>2</sub> saved per IS machine/year**

# SmartPlant Solutions: Heye SmartLink



## Data Gateway for

- secure data transfer from equipment to user's local network
- uniform data format (JSON)
- communication via MQTT-Broker
- integration into user's equipment infrastructure

# Glasspex India Show 2025 – Booth B46



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