



coperion

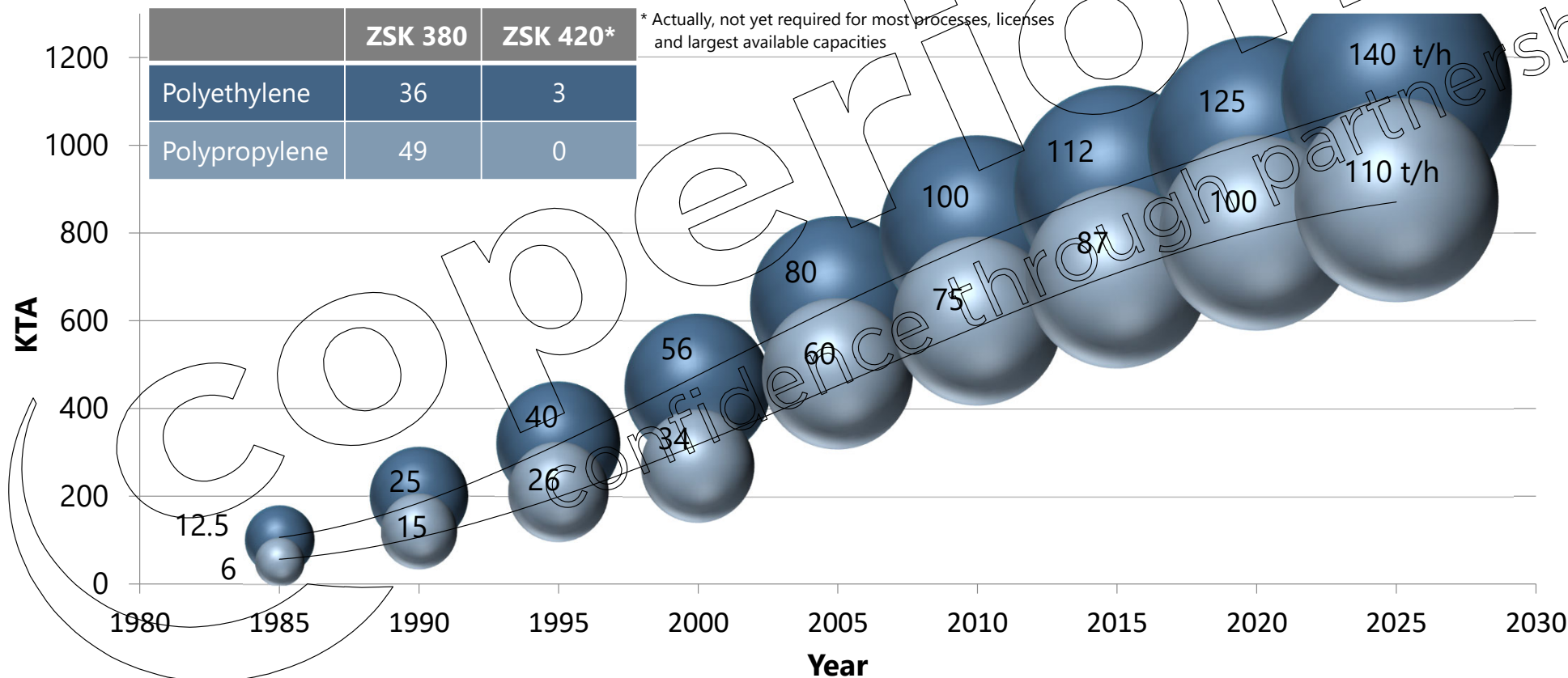
Latest Developments in Polyolefin

Overview

Clark Son (Jihyung Son) / Deputy General Manager

Capacity growth in Polyolefin plants

The trend is going up



Product demands steadily increasing

Bimodal HDPE

- Demands for > 100 t/h
- Energy efficient processes and lower operating costs
- No pellet fines generation
- Coloring of pipegrades (driven by infrastructure developments)

HDPE / LLDPE

- Demands for 100 t/h - 150 t/h
- Energy efficient processes and lower operating costs
- No pellet fines generation

PP

- Demands for 100 t/h - 120 t/h
- Energy efficient processes and lower operating costs
- No pellets fines generations
- High peroxide ppm's requirement challenge homogenization in extruder and pelletizer performance
- Request for devolatilization and deodorizing

Key components for mega capacity plants

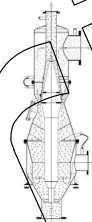


Ready for 1000 kta and more

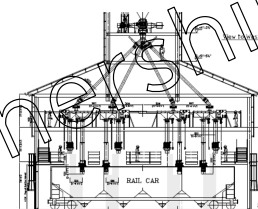
High Pressure **Powder**
Rotary Valve ZXQ
Capacity >140tph



Pellet Cleaner / Elutriator UGS
Capacity >150tph



Railcar Loading Facility
Capacity >400tph



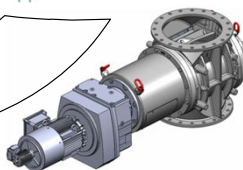
Additives

ZSK- Extruder System
Capacity up to 150 t/h
Av. torque: 481,000 Nm

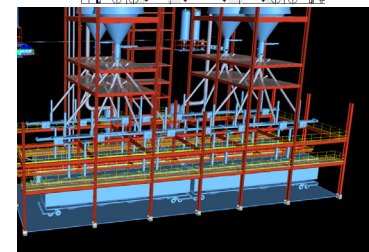
Blending

Elutriation

Process / Chopping Rotary
Valves
Capacity > 125 tph
Torque up to 14000 Nm



High Pressure **Pellet**
Rotary Valve ZVH
Capacity >170tph



Dispatch
Office

Compounding & Extrusion in Polyolefins

Confidential

October 24, 2024

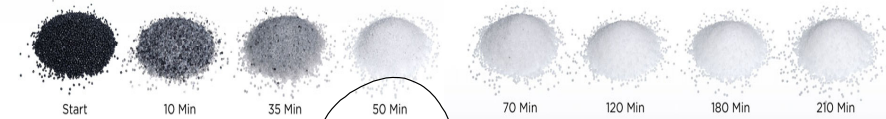
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Extruder Layout



COPERION's differentiators on the market

COPERION could provide unique advantages for the customers



Coperion Lean Concepts:

- Holistic optimizations downstream the reactor
- Saving potentials in space, building, equipment, CAPEX/OPEX,

Energy Savings:

- e.g. pressure reduced discharge @ Diehead housing / Screen Pack ...
- Optimited screw profiles by improvement
- Also as retrofit

Color Change:

- Colored pipe grades on one line „due to self cleaning“
- „With process guarantee“
- No waste, all prime-product

Quality / Reliability:

- Increase of overhaul cycles through tech. features
- 98% onstream (proven data)
- Monitoring systems
- Emergency spares stock

Highest capacities:

- actually: 1000 kta for PE, 750 kta for PP
- Equipment for even high capacities available
- „Economy of scale“

Unique technical features:

- e.g. non-destructive clutch (Gear Box Protection / EKW)
- on-line filter screen (Consequential Operation)
- Superpositioning gearboxes,



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Thank you
very much for
your attention.

You're very welcome to follow us.

