

OTP

Optimized temperature pelletizing



Maag Automatik has developed a revolutionary process for pelletizing technical thermoplastics. With Optimized Temperature Pelletizing (OTP) you will be able to produce high quality pellets without any voids, dents or other defects. The proven underwater pelletizing technology from Maag is the basis for flawless technical plastic pellets.

Your benefits

- Flawless pellets without voids and dents
- Increased revenue by entering new markets
- High bulk density, reduced transportation costs
- Higher yield - less waste - improved pellet quality - additional turnover
- Closed loops result in operation conditions without any emission to the air and without contamination of the product
- Certified process and equipment

APPLICATIONS

Optimized Temperature Pelletizing is a revolutionary process to cut technical thermoplastics into flawless pellets



Range of applications

- Amorphous polymers with high risk of indentations or voids, e.g. PC, PS, SAN, PMMA, COC
- High temperature thermoplastics, e.g. PEI, PES, PEEK, PSU, HT-PA
- Semi-crystalline thermoplastics (with online crystallization), e.g. PET, PBT, PTT, PLA, PEN
- Other materials upon individual evaluation, e.g. PAN, POM, PA 6, PA 6.6, PA 11, PA 12, PTFE, PPS

Spherical pellets have less wear during any transportation process compared to other geometries. Less wear is equal to less dust formation and results in less effort for dust removal or cleaning. The improved process results in better pellet quality, which in turn generates increased profits.

NEW MARKETS



Entering new markets or market segments will be much easier with such geometrical shape of the material. Optical applications like glasses or screens can now be handled with Polycarbonate, pelletized with OTP.

OTP pellets also meet the high standards of plastics used in medical applications.

There is quite a large scope of utilization in the automotive industry. Panorama roofs, cable connections under the hood or even parts of the engine can be produced from OTP pellets.

Being able to create perfect round PMMA pellets with OTP now opens new possibilities in façade design.



OTP - PROCESS

OTP opens the way to pelletize technical thermoplastics in Maag's proven underwater pelletizing systems. It covers the entire process from plastic melt to finished high quality pellets.

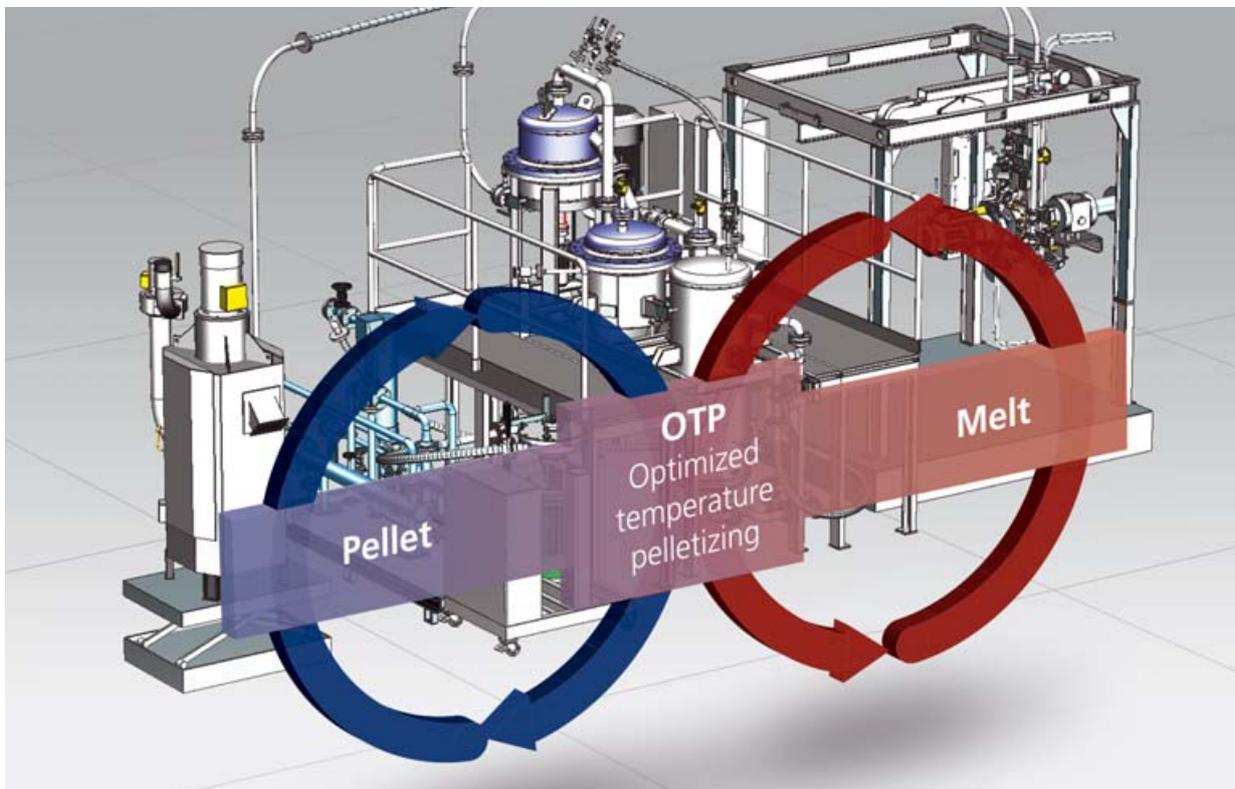
In the presence of pressurized over-heated water (> 100°C) pellets are cut and subjected to the first cooling step. In the transfer unit pellets are separated from overheated water and handed over to the second cooling circuit (< 95°C).

After subsequent cooling the pressure is released and the pellets are separated by the centrifugal dryer from

the process water. Leaving the drying process the pellets are ready for subsequent processing or packing.

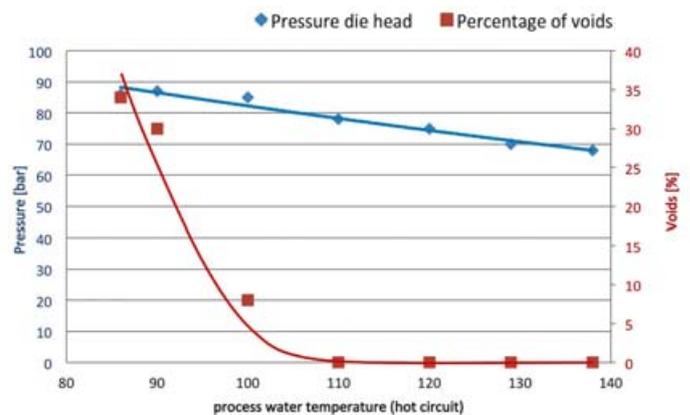
The closed loops result in operation conditions without any emission to the air and without contamination of the product.

Based on the higher temperature level in the isolated first cooling process, that energy could easily be used for heating purposes or transformed e.g. into electrical power, suitable for the involved consumption elements like pumps, motors, etc.



OTP

- Replaces the usual strand pelletizing processes of engineering resins by underwater die face pelletizing
- Reduces the risk of poor pellet quality (indentations, voids, rough surface)
- Reduces the risk of blocking the die bores
- Reduces the temperature gradient between plastic melt and process water



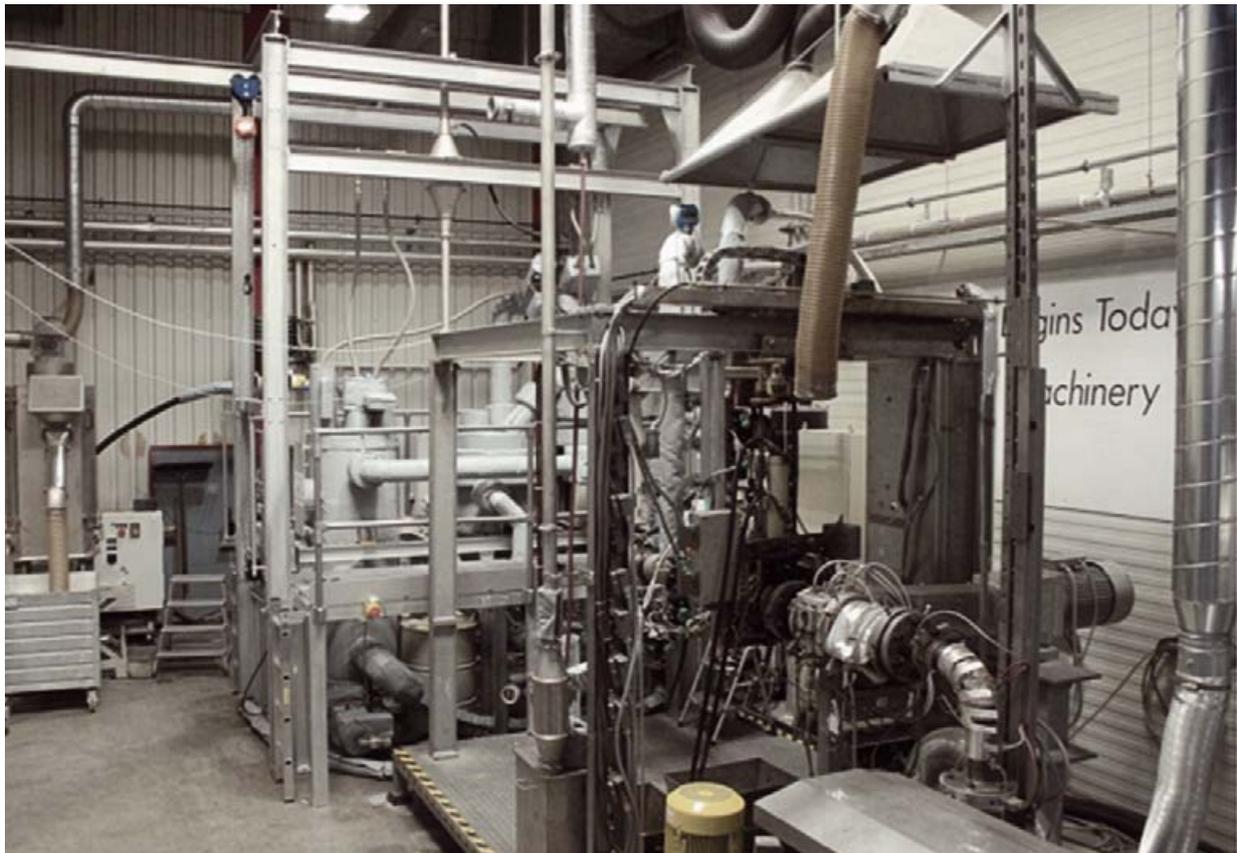
Increased process water temperature reduces the formation of voids and lowers the melt pressure.

TEST YOUR PRODUCT IN THE MAAG AUTOMATIK TEST CENTER.

Successfull laboratory trials with

- PC
- PET
- PMMA
- COC

and others, at water temperatures up to 160°C and up to 10 bar pressure , partly with elongated dwell-time in the high temperature circuit.



What is your specific application?

Test your material with our technology – our Technical Center is prepared for joint development.

According to advanced engineering practice subjected to HAZOP standards and confirmed by TÜV Cert. The process is protected by patents and applications.

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