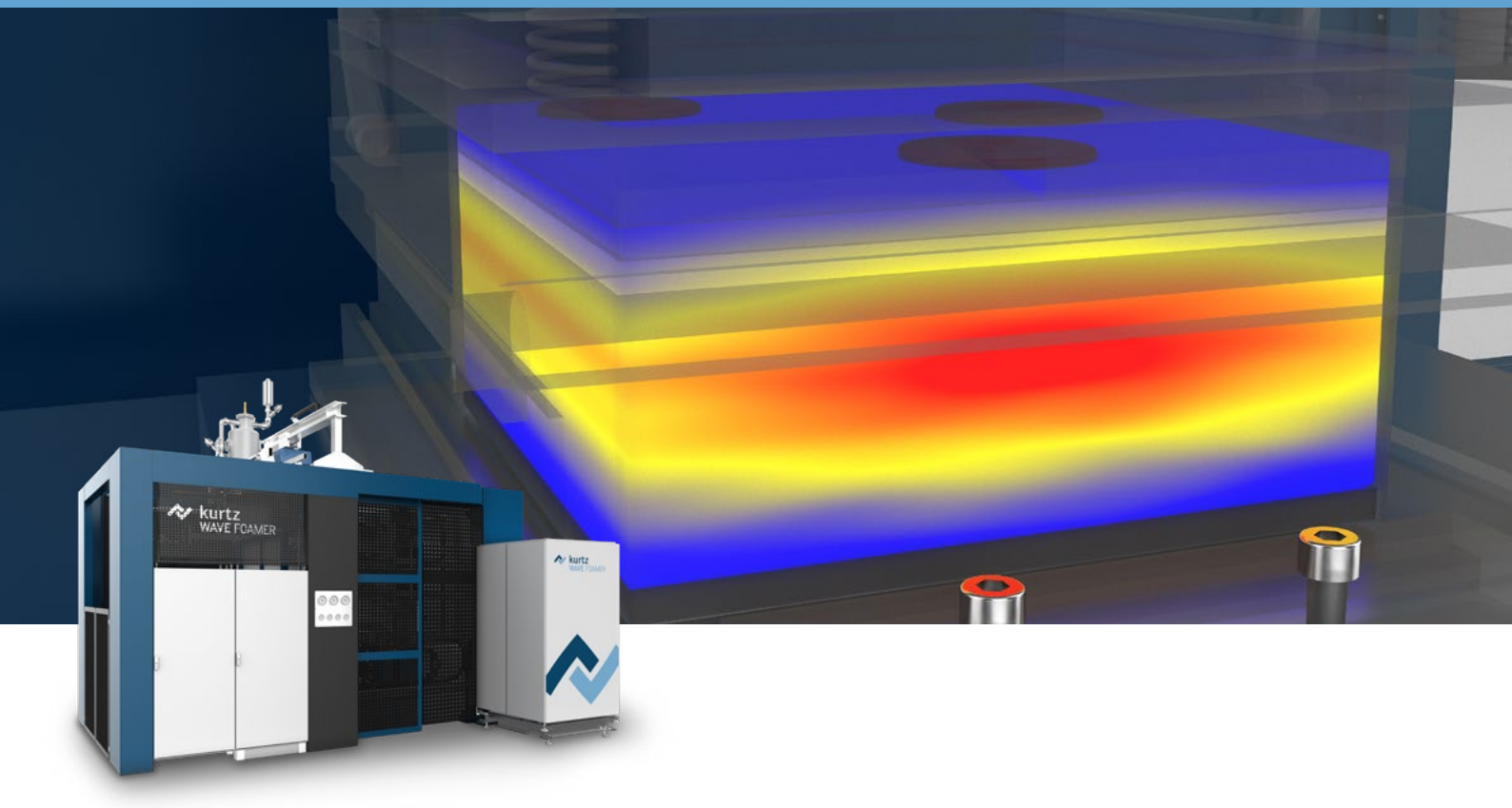
Revolutionary RF Technology

Fusion without Steam –
Innovative & Future-oriented



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Circular Economy
Energy-efficient Steamless Moulding Process

Highlights

- Energy savings of up to 90 %
- Fusion from inside to outside for perfect core fusion
- Best solution for new particle foams with high temperature resistance – fusion temperature up to 250 °C
- Perfect for high densities, e.g. EPS with densities above 200 g/l
- No expensive media installation necessary; steam generation plants and cooling tower installations with water basin are not required
- High proportion of recycled material e.g. ≥ 70 % in EPS moulded parts

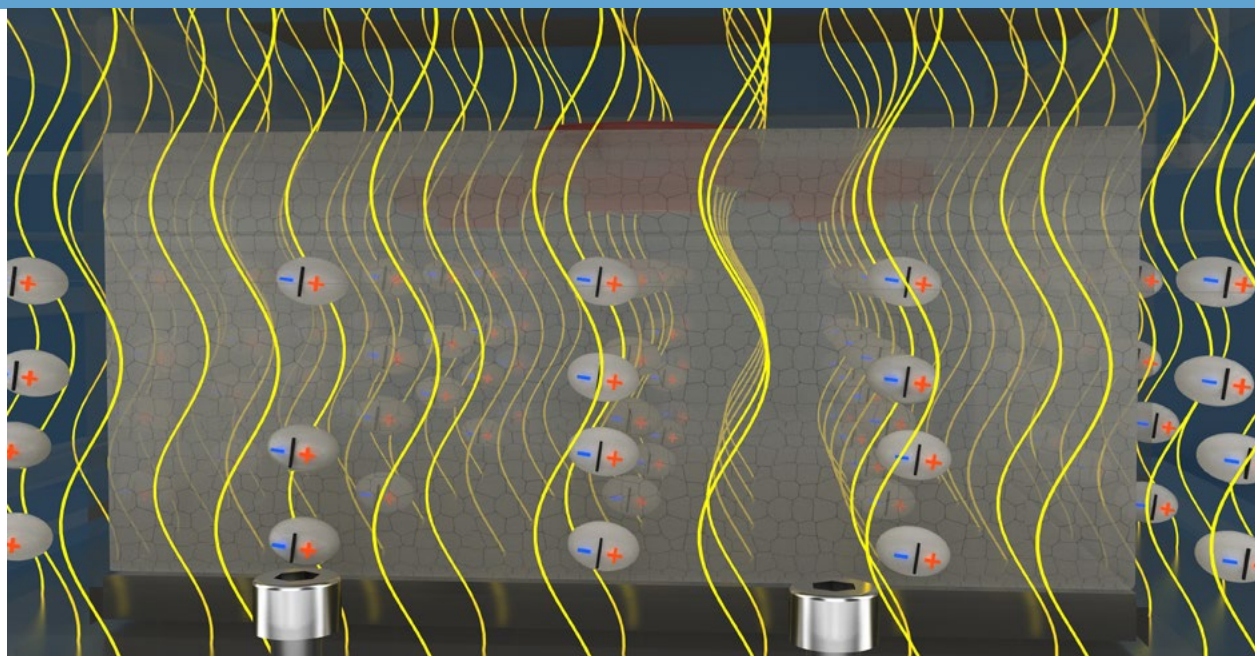
Fields of Applications

Due to their high dynamic and static shock resistance, their low weight and their strong insulating properties, particle foams are ideally suited for lightweight construction. In addition to the construction and packaging industries, potential fields of application will be found in electromobility.

By processing high temperature resistant material, completely new business fields can be opened up, too, such as in aviation or the automotive sector. The development of new materials is in full swing.

The production machine with electromagnetic waves is completely safe by integrated shielding. If the shielding is interrupted the process will be stopped immediately.

Foaming with Electrical Energy
Perfect Core Fusion from Inside to Outside



The basis for processing the material beads is a dielectric alternating field that causes polar molecule chains to oscillate. This generates friction and thus heat. The beads are heated by excitation with high voltage.

Steamless Processing with Electrical Energy

The innovative Kurtz process using radio waves is ideal for foaming materials with a polar molecular structure. Non-polar materials such as EPS can be processed using suitable additives.

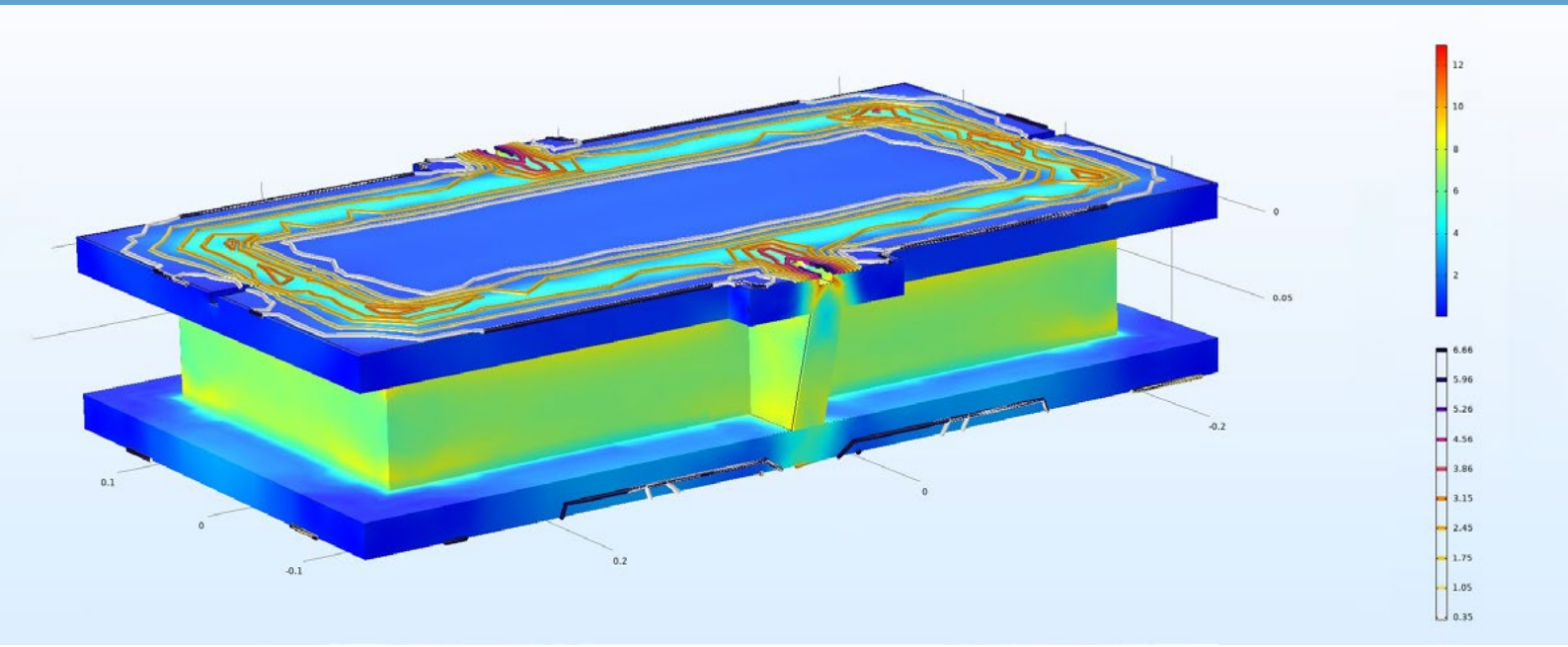
Product Benefits

- Remarkably better fusion
- Reduced moisture absorption
- Very low residual moisture in the moulded part
- Notably lower shrinkage and higher dimensional stability
- Significantly higher tensile strength

Improved product properties of EPS panels due to RF processing

EPS processing available already now. Biodegradable materials and EPP soon to be processed.

Simulation & Automation Possibilities
Development and Handling According to Individual Requirements



Complete Simulation

A dielectric tool is required for the RF process. Kurtz is able to carry out reliable simulations for toolmaking. This means that optimizations can be implemented into the design even before the tool is manufactured.

- Fast and cost-effective representation in virtual space
- Results feed directly into further developments
- Display of thermal behaviour and electromagnetic fields
- Energy calculations
- Optimized tool construction
- Can be used for staff training and internal qualification

Kurtz Ersa Automation

Smart handling and automation systems help to release rationalization potential and guarantee a short ROI.

Advantages

- Customized material flow concepts
- Latest safety technology
- Innovative control concepts for plants and robot systems
- Control station system for central control system
- Support during start-up period

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