

Department of
Composite Process Technology

Toasting CFRP parts - Cellular heatable tooling and infrared thermography assisted process time stabilisation of full scale CFRP-parts in curing processes

Motivation for Toasting CFRP parts

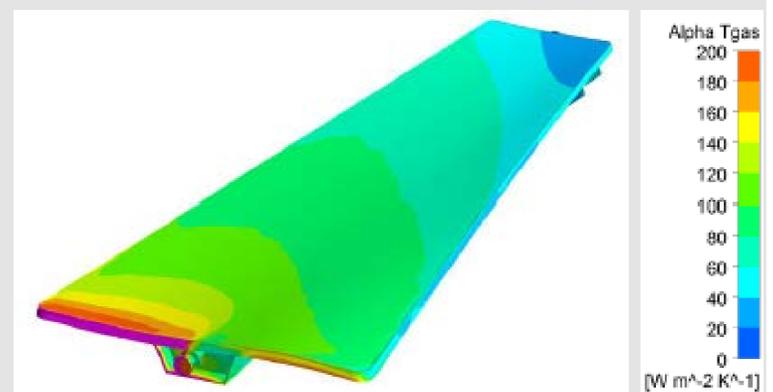
- Inhomogeneous temperature distribution along the length and along the thickness of a part leads to extended process times and to a decrease of part quality

Concept for Toasting CFRP parts

- Compensation of the mentioned temperature gradients inside the autoclave with
 - Active controlable / cellular heatable tooling
 - Movable infrared camera system
 - Development of an innovative control system that works as an extension beside the autoclave control system (state of the art)

Milestones and Results

- Patented and innovative process control (2014)
- Worldwide first installation of a movable infrared camera system inside an autoclave (2015)
- Worldwide first use of a cellular heatable tooling (primary structure) in an autoclave (2017)
- Reduction of process time is 33% (average) at the same time as improved quality



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