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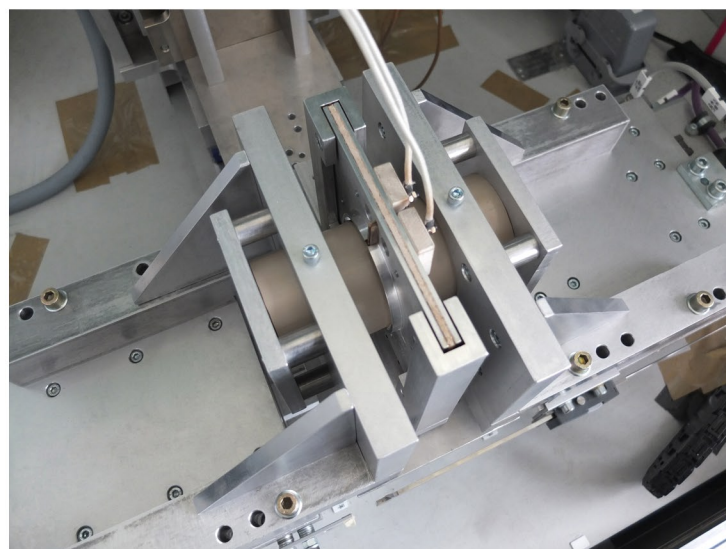


Bilateral beaming infrared emitter

New contour-tracking infrared emitter with a high energy efficiency. There are several advantages:

- low weight (low mass inertia, low acceleration forces of the machine necessary)
- low thermal inertia (sensitive responding behaviour and an precise control)
- little installation space / slimline design
- no smoke formation when heating carbon-black filled plastics
- short changeover time

Heating phase PEEK-tubes



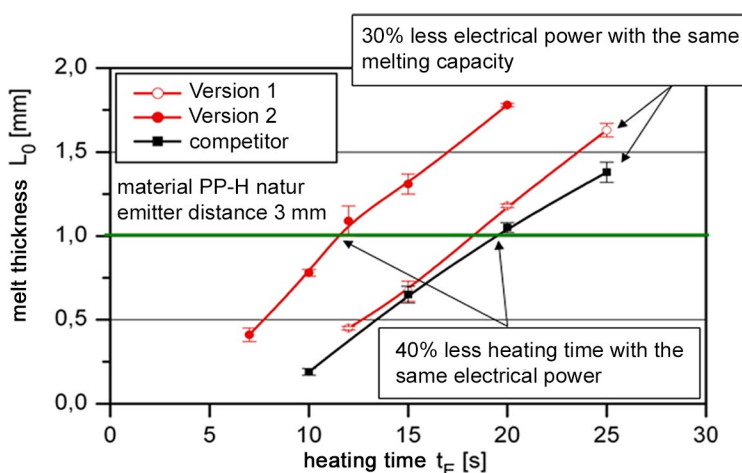
→ slimline design

→ low mass

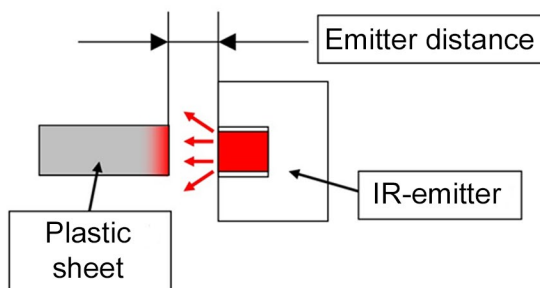
→ robust construction

→ medium-waved emission spectrum

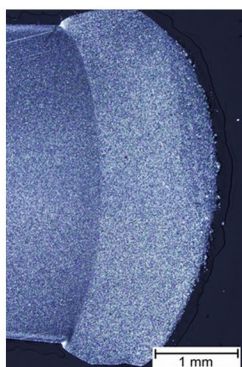
Comparative weld tests:



Experimental setup: Horizontal warm up of sheets with 4 mm thickness



By the new IR-emitter: symmetric profile



Emitter distance: 3 mm
Heating time: 20 s
Melt layer thickness:
~ 1,1 mm = const.
(transmitted light
microscopically photo
with polarized light)

By the competitor: Tilted profile because of the convection between emitter and component surface



Emitter distance: 3 mm
Heating time: 20 s
Melt layer thickness:
~ 1,1 mm = const.
(transmitted light
microscopically photo
with polarized light)

With the new developed emitter in the short- and medium waved radiation spectrum there are a number of technological advantages. The construction of the emitter enables the bilateral radiation yield. The emitter only needs a very little installation space and his tare weight is very low in comparison to other emitters. This, in turn, gives benefits in terms of the dynamic and the availability of the system.