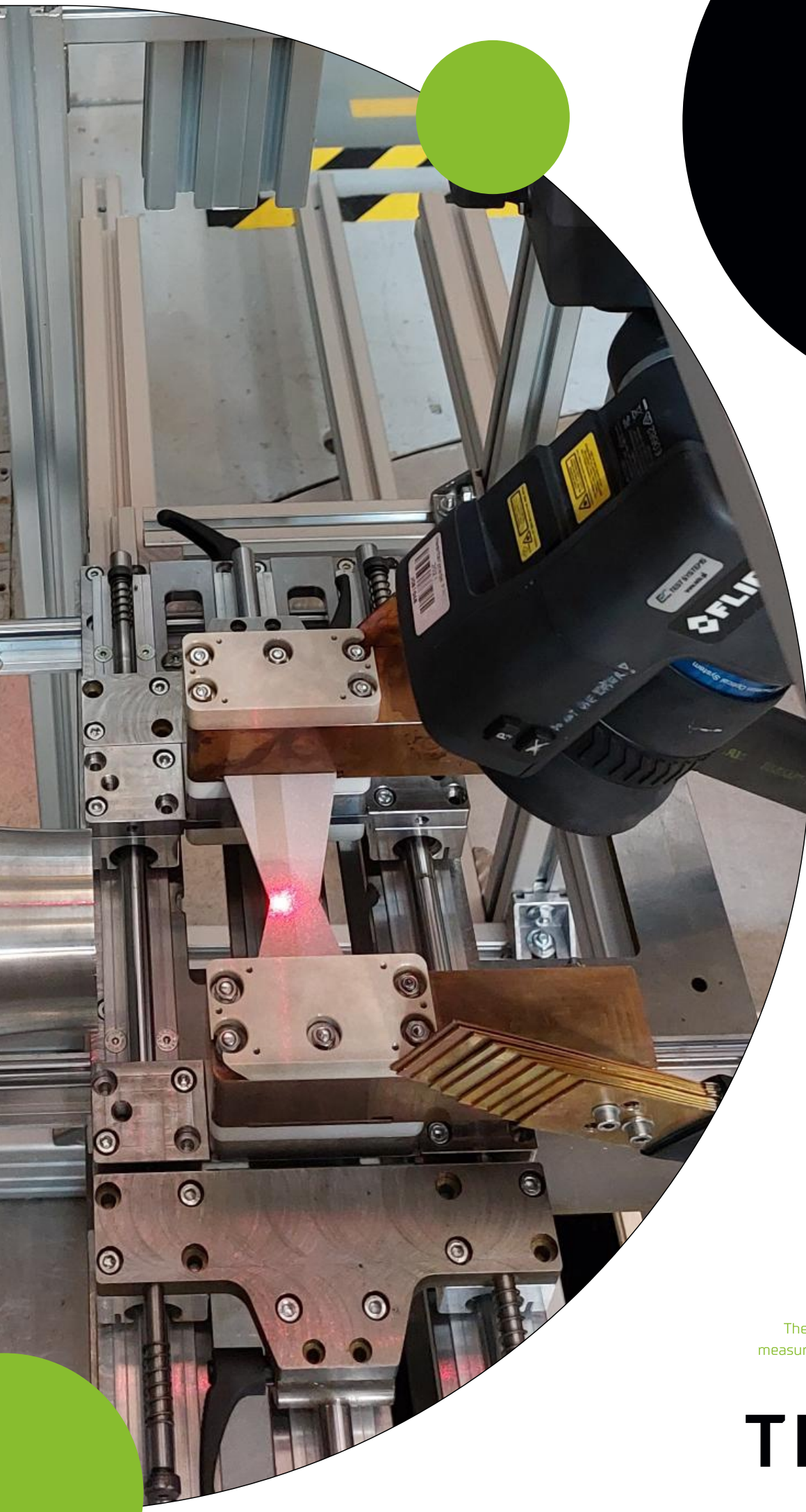




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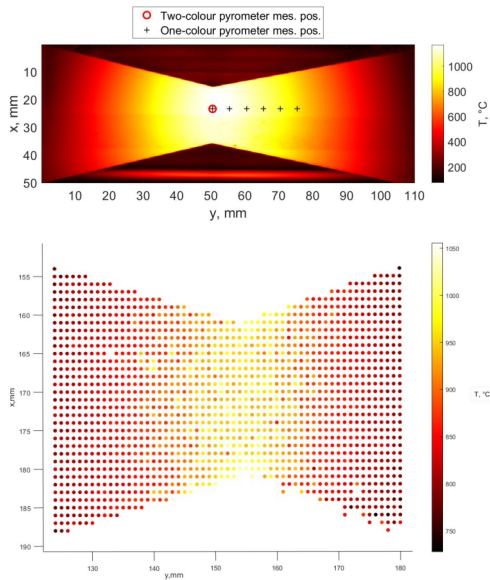
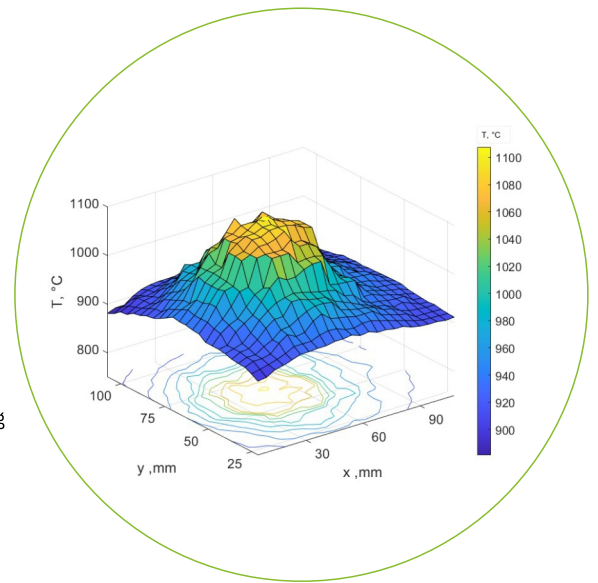


The innovative method of temperature  
measurement using heat memory coatings

# THCOAT

# CHARACTERISTICS

Łukasiewicz Research Network – Institute of Aviation offers a service for determining the distribution of maximum surface temperature of propulsion modules and spacecraft components, using temperature memory coating technology. This method allows for precise measurement of the maximum temperature field in hard-to-reach areas subjected to high gasdynamic loads.



Infrared camera (top) vs THCOAT (bottom).

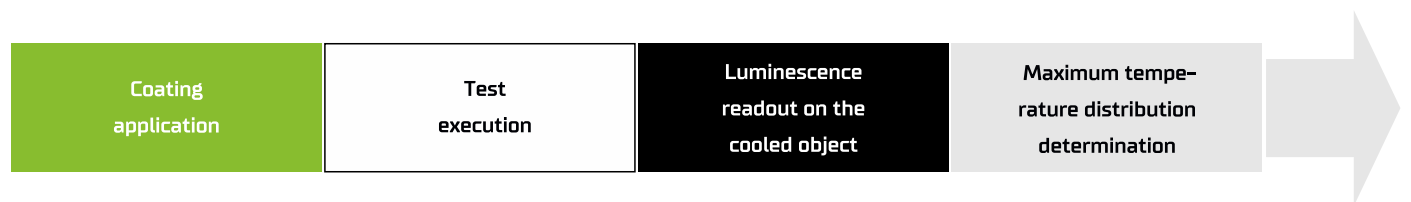
# TECHNICAL DATA

- Measurement range 700°C – 1150°C.
- Accuracy below 10 K for  $T > 1000^\circ\text{C}$ .
- Fast response 0 (seconds).

# KEY FEATURES

- Offline measurement of maximum temperature distribution (power supply do not required during the test).
- Customized calibration procedure.
- Simple application on complex geometries.
- Good agreement to IR and pyrometric measurements.
- Temperature distribution measurement possible through the luminescence of the coating.

# METHODOLOGY



The Łukasiewicz Research Network – Institute of Aviation

offers a wide range of specialized research, engineering services and products. We provide comprehensive solutions, ranging from dedicated analyzes, simulations, engineering design, through the selection, testing and certification of materials and structures, to rapid prototyping and additive manufacturing.

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