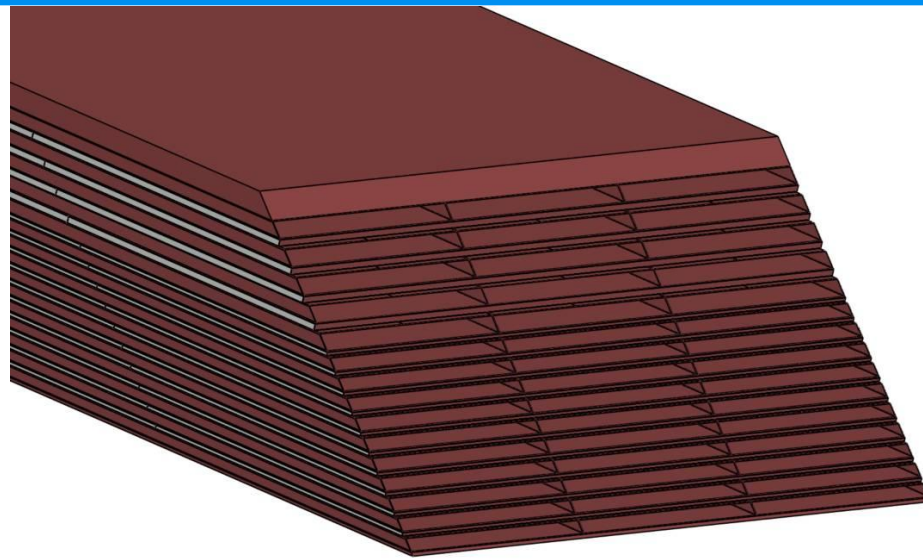


EUDET MECHANICAL R&D



EUDET news -

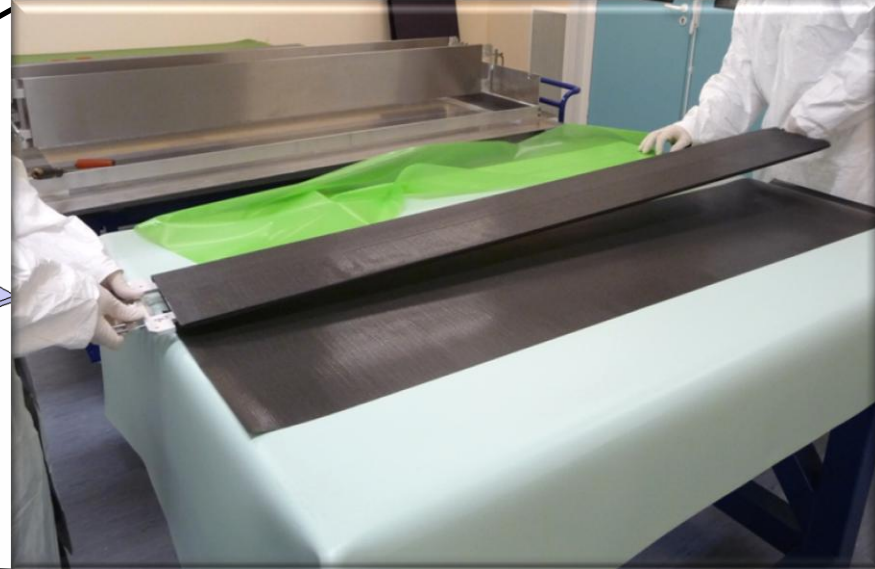
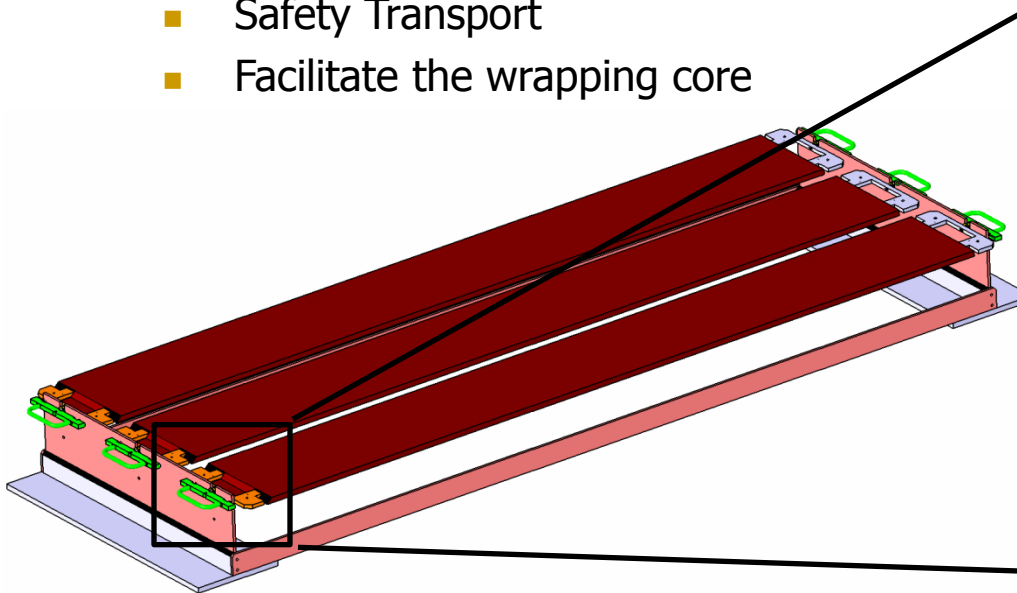


A handwritten signature in red ink, appearing to be "L.M.R.", located in the bottom right corner of the slide.

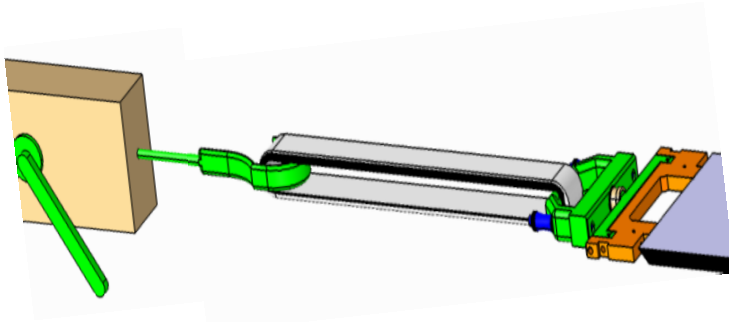
State of mechanical EUDET.

EUDET TOOLS : Study and design

- EUDET handle core
 - Safety Transport
 - Facilitate the wrapping core



- Winch extraction core
 - Control the traction force



EUDET – Product layer (1/3)

Main process steps :

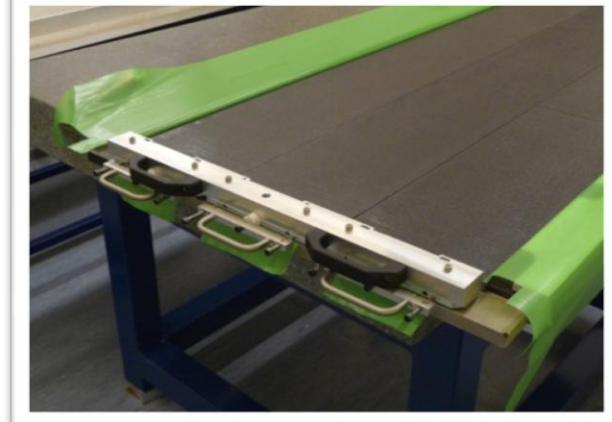
1 - mould release preparation



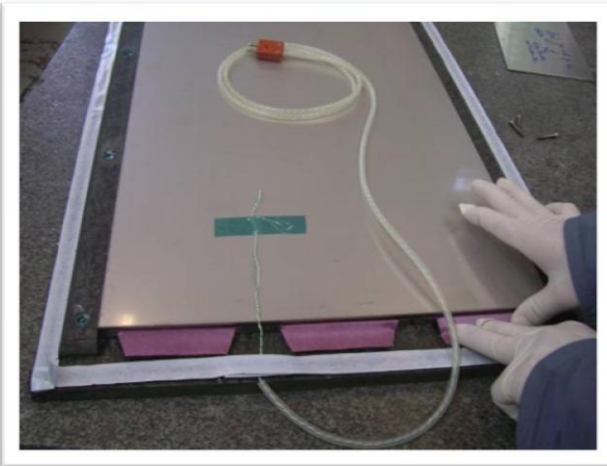
2 - Cores wrapped with prepreg



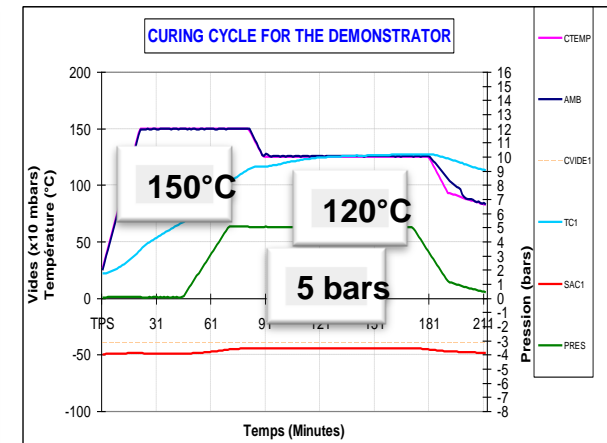
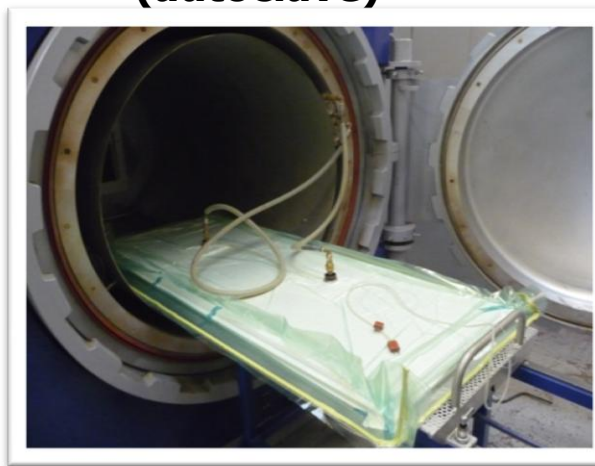
3 – Compression step



4 – Thermal sensor equipment



5 – Curing operation (autoclave)

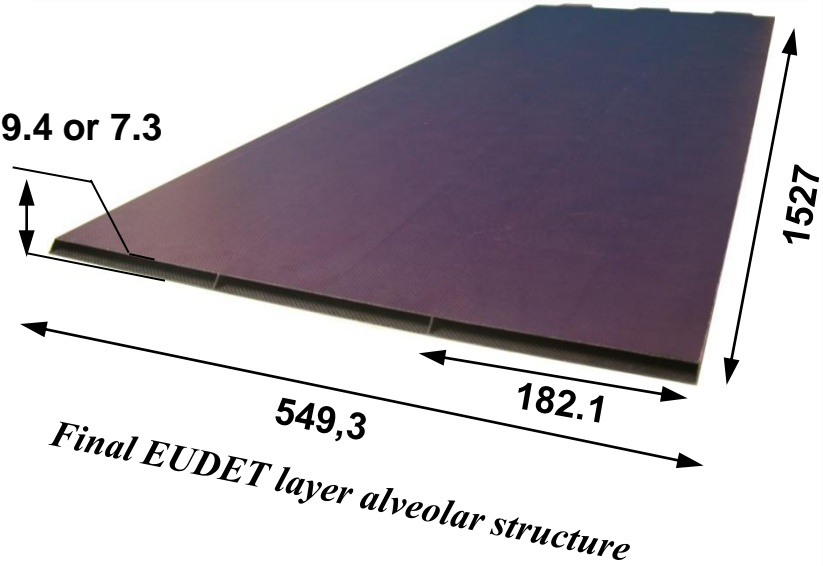


EUDET – Product layer (2/3)

6 – After curing step



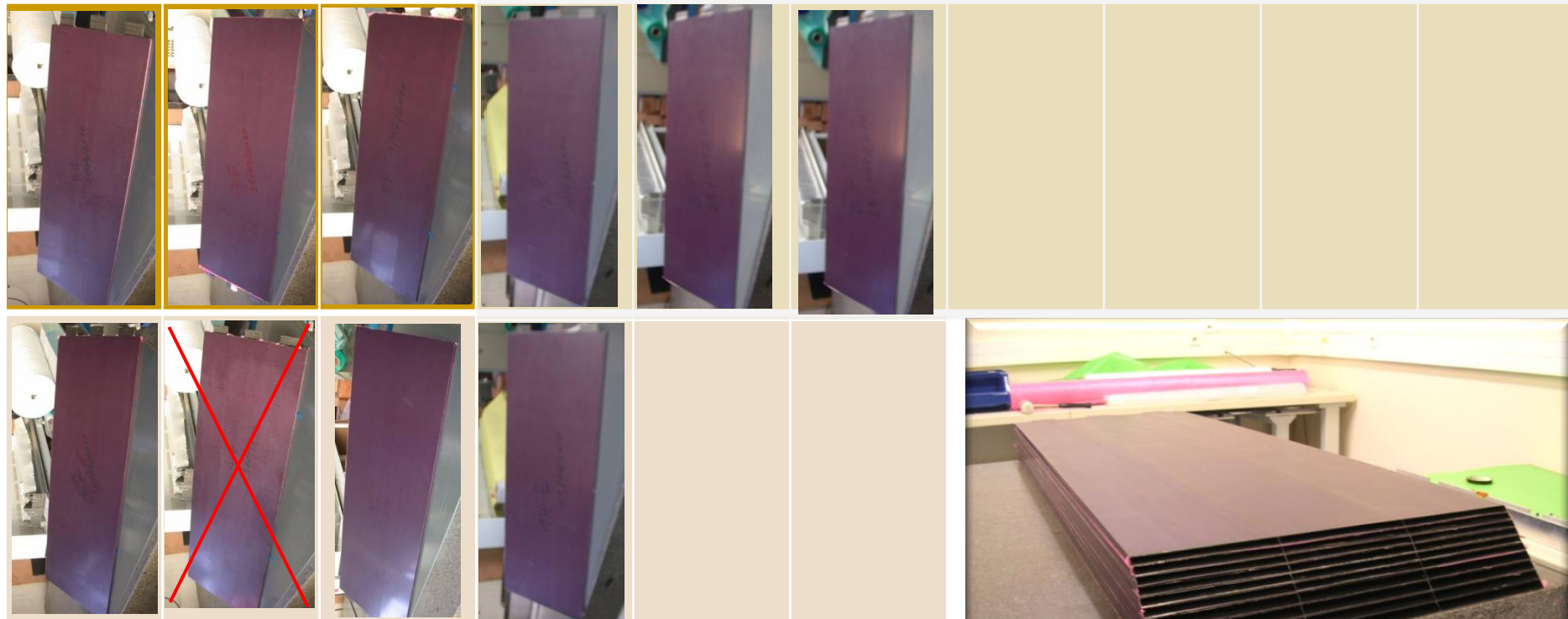
7 – Main issue : 1200 Newtons of cores traction



EUDET – Product layer (3/3)

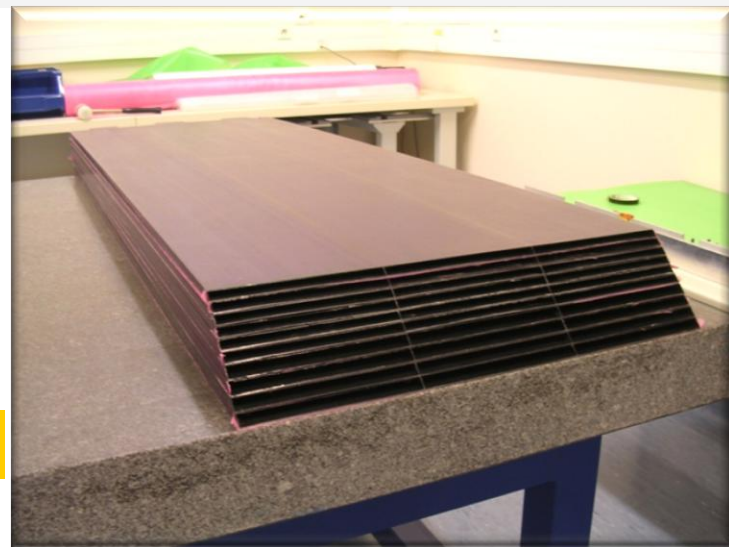
Layer 7.3

⇒ 6/10 "Alveolar EUDET layer" structure : *On going*



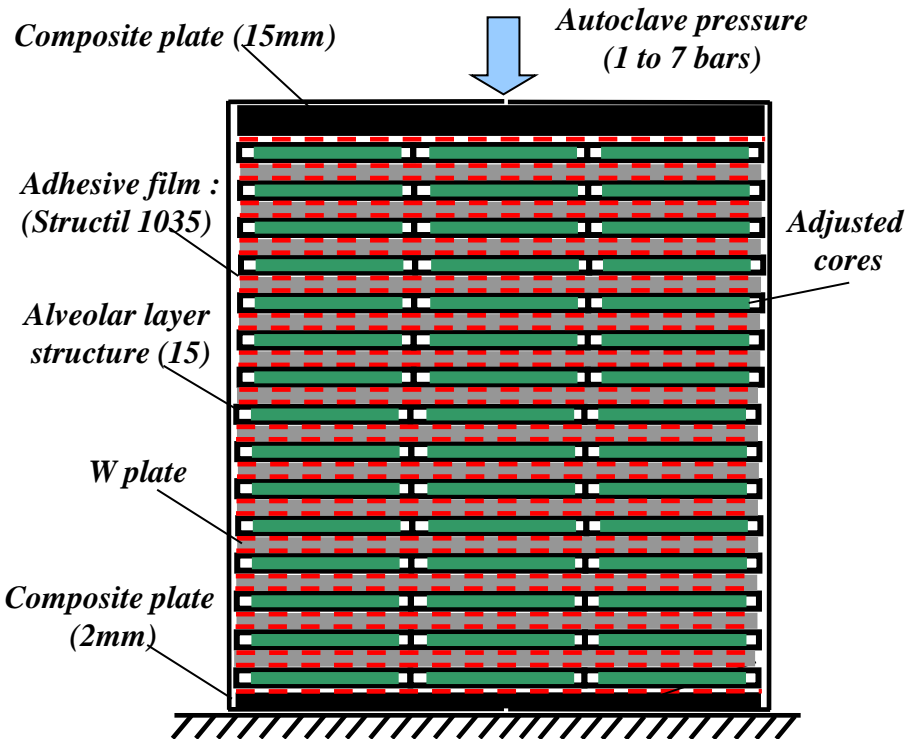
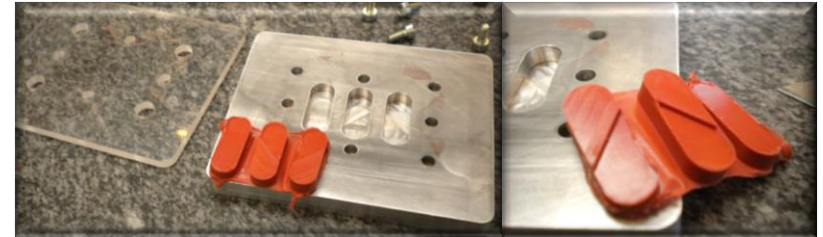
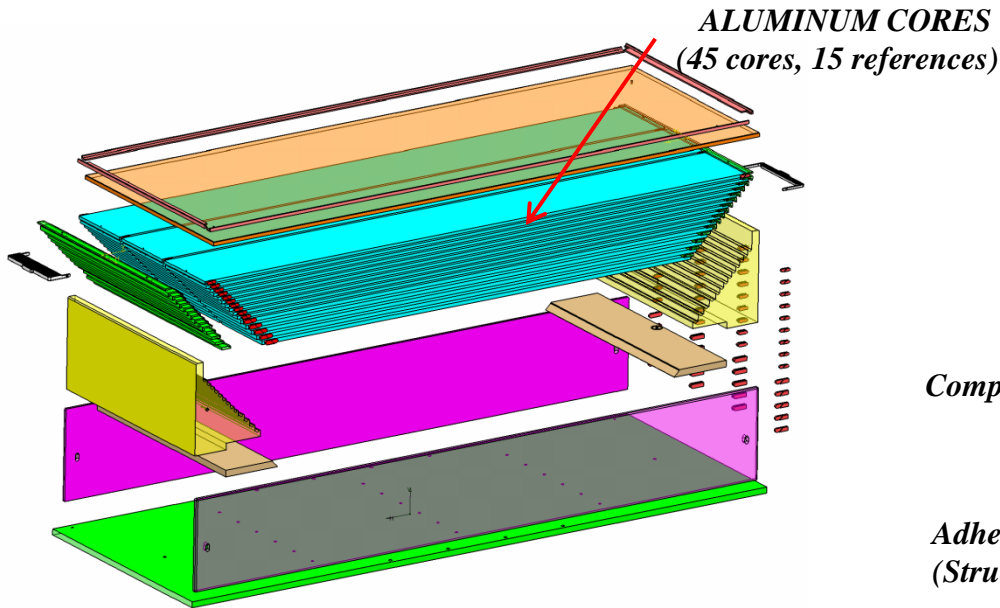
Layer 9.4

⇒ 3/5 "Alveolar EUDET layer" structure : *On going*



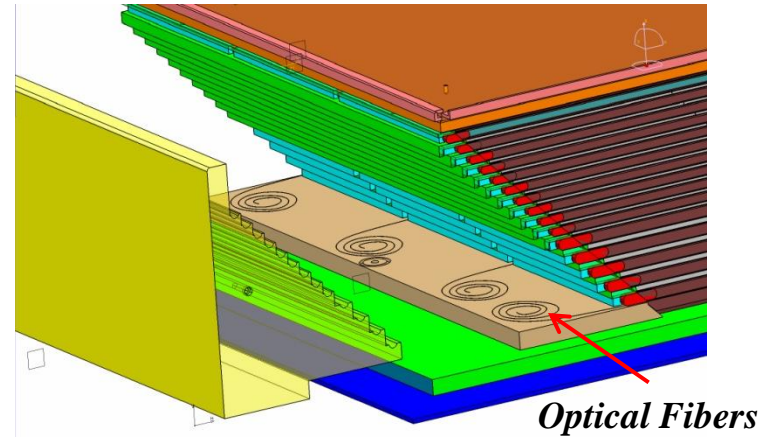
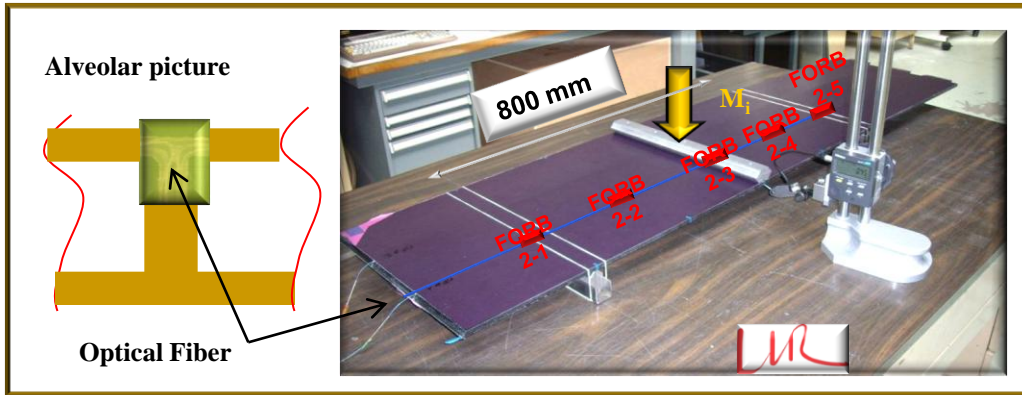
EUDET- Assembly Mould

Now, here is the EUDET assembly mould :

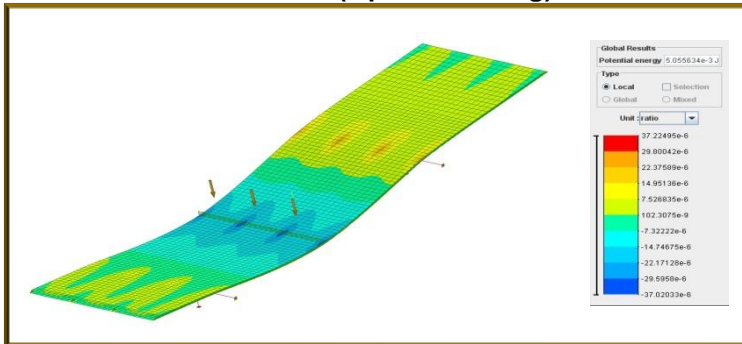


- ⇒ Global design : **OK**
- ⇒ W and Carbon Needs : **OK**
- ⇒ Detailed design description : **OK**
- ⇒ Ordered : **OK**
- ⇒ Reception part : **July 2010**
- ⇒ Assembly : **October 2010**

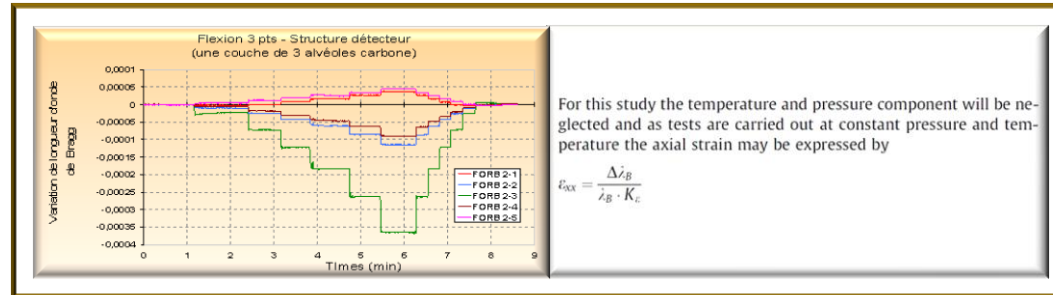
EUDET- Assembly Mould



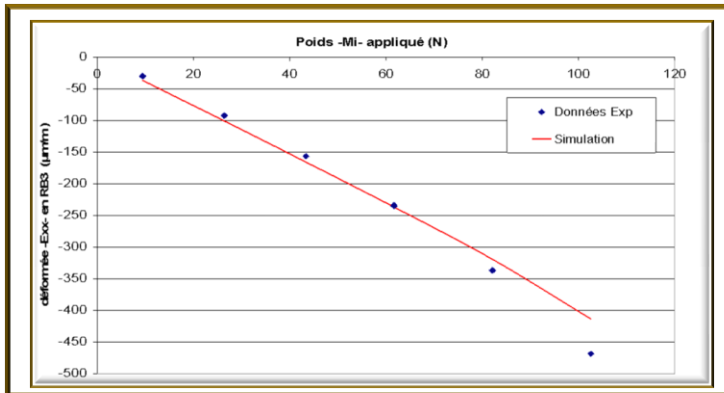
Mechanical behaviour (3 point bending)



Simulation of the alveolar layer with SAMCEF soft



Data analyse of Bragg Grating with Mr. MULLE of the Toulouse University



Data correlation (mesure and simulation)

- ⇒ Global design : *In July*
- ⇒ Ordered : *In July*
- ⇒ Optical fiber studies : *in October*

- We will plan:
 - 6 alveolar layers in **Septembre(2010)**
 - Optical integration Studies **October (2010)**
 - Eudet structure assembled **November (2010)**
 - "14" H and 1 H Short structure **December (2010)**
 - Mechanical demonstrator test **November (2010)**
 - Mould reception EUDET **July 2010**
 - Cutting layer operations **September 2010**
 - Studies the thermals inerties parameters **October 2010**
 - Build the EUDET module **October 2010**
 - EUDET tools and beam tests tools **December (2010)**

