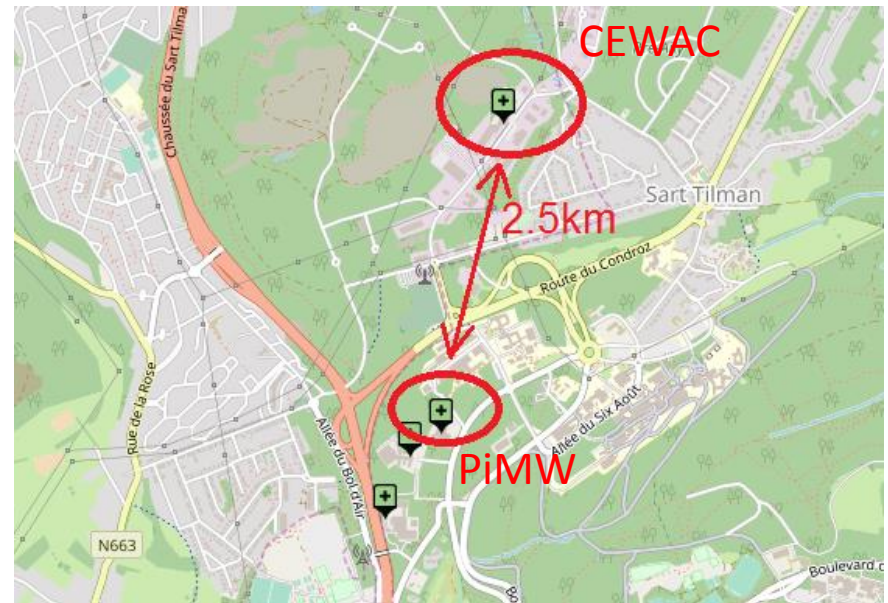


Visit to CRM Group – 13/9/2019 pm

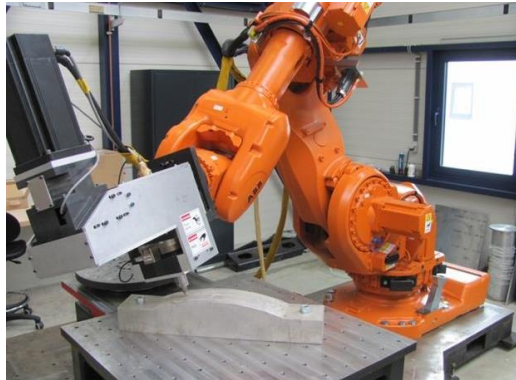
- Departure by bus from UCL to Liège at approx. 13h
- Arrival at CRM Liège to visit IDEAS unit (Innovative Designs & Assembly Solutions)
 - one group starts at CRM site CEWAC (welding and associated testing)
 - other group starts at CRM site PiMW (additive manufacturing and post-treatment)
 - *coffee break at CRM - CEWAC while both groups switch sites at approx. 15h*
 - *also coffee break at CRM - CEWAC for gathering all visitors in order to finish visits*
- Departure from CRM at approx. 16h (drop-off possible at Liège train station)
- Arrival back at UCL at approx. 17h30



CRM Group – site CEWAC

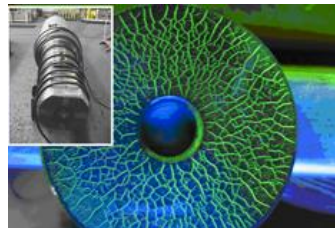
- Welding facilities (30')

- Friction stir (CNC and robot) & rotation friction welding
- Electron beam welding, laser welding & hybrid laser-GMAW
- Resistance spot welding etc.
- Wire Arc Additive manufacturing (WAAM)
- *Demo FSW etc.*



- Non-destructive testing facilities (15')

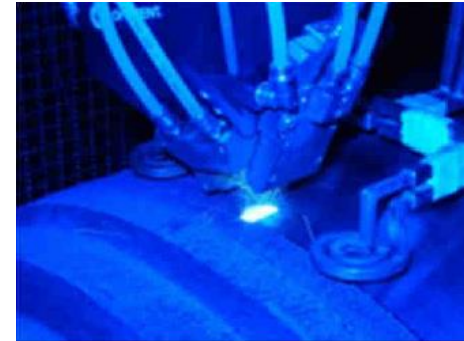
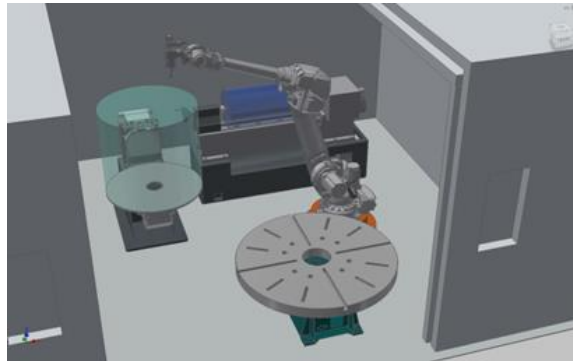
- VT, PT, MT, UT, RT & tomography
- *Demo, examples of indications etc.*



CRM Group – site PiMW

- Additive Manufacturing facilities (30')

- Large robotic AM cell and smaller CNC AM machine based on laser & wire/powder
- Laser cladding presentation
- *Demo on one of the machines*



- Post-processing facilities/examples (15')

- Surface treatments eg. tribo-finishing, electro- & chemical polishing ...
- *Show examples of (AM) parts that have been processed*

