



# IRT M2P

Institut de Recherche  
Technologique

Matériaux Métallurgie  
et Procédés

## PULTRUSION PLATFORM



The Pultrusion is a continuous process and a cost effective solution providing the best of carbon and glass fiber with unmatched properties.

### Process overview

Continuous process	✓
High Pressure Injection	✓
Resin bath impregnation	✓
Thermoset resins (TS)	✓
Thermoplastic resins (TP)	✓
All reinforcements	✓
Production speed	Up to 5 m/min
Part dimensions	Up to 600 x 200 mm
Pre-heating reinforcements	✓
Post curing in line	✓
Process parameters monitoring and recording	✓

### EQUIPMENTS

#### Pultrusion Lines

- Pulling Capacity: 6 Tons / 12 Tons
- Pulling Speed: 10 to 5000 mm/min
- Profile Capacity: up to 1000 mm x 600 mm
- Continuous control IR thermometers

#### Online monitoring, data saving and post-processing

- Online contrais
- Centralised acquisition and archiving of process parameters
- Energy consumption measurement

#### Pre-heating and post curing devices

- Cooling Table: 5000 mm x 500 mm
- Optional reinforcement preheating device (up to 400°C)
- Adjustable lenght post curing tunnel (up to 4m and 400°C)

#### Creel racks

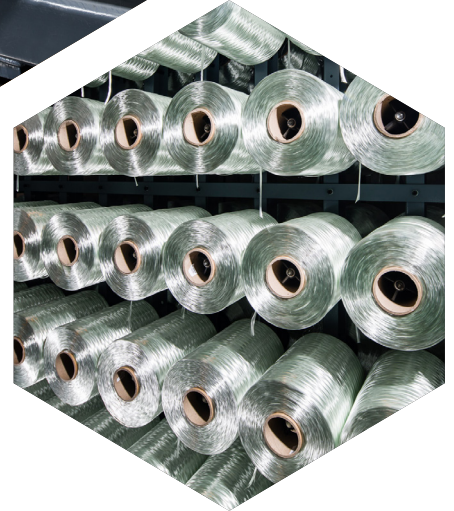
- Carbon and glass fibres compatible
- Individually tension regulated yarn
- Enclosure with controled hygrometry





## TECHNICAL SERVICES

- **Scale-up:** Validate process/materials at an industrial scale
- **Pre-industrialisation:** Validate robustness and production rate of Pultrusion processes in an industrial context
- **Manufacturing cost reduction:** Production cost reduction - Quantify economical advantages of Pultrusion processes
- **Materials development:** Maturation and industrialisation of new materials (resins or reinforcements)
- **Process development:** Optimisation of Pultrusion processes and development of new processes
- **Injection process optimisation:** Development and/or optimisation of injection configuration (experimental and/or simulation)



## PLATFORM AVAILABILITY

- Multi-partner research projects with public co-funding
- Research studies/services
- Platform rental with technical support
- Training

## CONTACT

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on this activity  
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### About IRT M2P

The Institute of Research and Technology for Materials, Metallurgy & Processes (IRT M2P) is your partner for developing innovative products and processes to accelerate your company's growth.

We bring our expertise, a wide array of state-of-the-art semi-industrial technological platforms and a network of academic labs to the R&D projects we carry out with our more than 120 industrial partners.

Contact us to discover our 9 areas of technological expertise:

- > Advanced Foundry
- > Life Cycle Assessment & Recycling
- > Metal Powders
- > Surface Treatment & Coatings
- > Mechanical Surface Treatment
- > Heat & Thermochemical Treatment
- > Composite Materials
- > Multimaterials Joining
- > Analysis & Characterization



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