

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 Pultrusion

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 Line :

- Pulling Capacity : 6 Tons
- Pulling Speed : 25 to 5000 mm/min
- Profile Capacity : up to 600 mm X 200 mm
- Continuous control IR thermometers

Pre-heating and post curing devices:

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

Creel racks

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

Online monitoring, data saving and post-processing

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



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



ABOUT IRT M2P

IRT M2P is a mutualised research center bringing together skills of industrial and public research, based on public-private co-investment and partnerships. IRT M2P accelerates innovation and growth for industrial companies, develops key technologies (shared amongst major industrial sectors) and provides technological platforms for industrial companies (such as processing of metallic materials, life cycle assessment and recycling, mechanical surface treatment, surface treatment and coating, thermal and thermochemical treatments, composites, forging, mechanical processes for multi-material assembly) and Composites (such as RTM, Pultrusion, Thermoforming, Injection .../...).

CONTACT

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Composites platform

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