

Production of composite turbine blades

HOBIT Project

IRT
JULES
VERNE

Development of a new numerical model tools of reliability mechanical and hydrolic



20 Rue de l'Heronnaire - 44000 NANTES
Samuel DURAND
samuel.durand@calcul-meca.fr
02 51 83 96 45



8 Boulevard Albert Einstein - 44323 NANTES
Erwan JACQUIN
erwan.jacquin@hydrocean.fr
06 88 70 01 82



Development of an innovative manufacturing process Low Cost and high volume



Rue de l'Industrie - 44310 ST PHILBERT DE GRAND LIEU
Vincent HENON
v.henon@omega-systemes.fr
06 21 22 35 93



24 Allée Loic Caradec - 56000 VANNES
Guillaume KEMLIN
g.kemlin@multiplast.eu
02 97 40 98 44

Development of innovative tooling



ZAC de la Verdrière - 44470 MAUVES SUR LOIRE
Franck BOURCIER
franck.bourcier@loiretech.com
06 72 93 53 31

Development of an innovative resistant and durable coating and biologique antifouling



5 rue Paul Sabatier - 71100 CHALON SUR SAONE
Philippe CAPON
p.capon@pinetteemidecau.com
03 85 47 43 12



Zone Industrielle du Prat - 56000 VANNES
Bernard LE TURDU
bleturdu@socomore.com
02 97 43 76 90

Development of a robotized finishing step



2 Rue de la Fonderie - 44470 Carquefou
Vincent DESFONTAINE
v.desfontaine@europetechnologies.com
02 51 70 04 94

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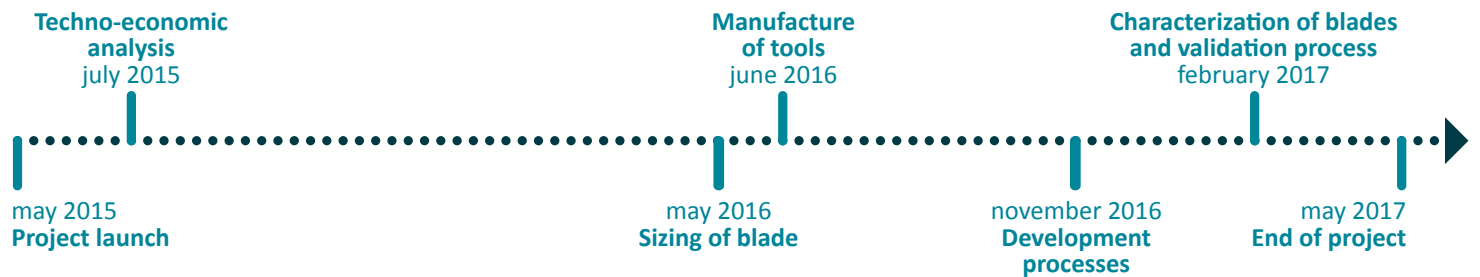
This project aims to develop a series of manufacturing, automated, low cost and large volume turbine blades. In order to have the closest possible future industrial data applications, specifications have been forwarded by a key player in the sector. This project brings together a set of regional SMEs.

Technical and economic impacts

- ▶ Increase the pace (production referred to 1000 units/year)
- ▶ Weight gain

Keywords

Composite // Large dimensions
High speed // Heating equipment
Modelization // Innovative coating



INDUSTRIAL CONTEXT

The HOBIT project fits into an example of direct industrial application whose annual production potential is in the order of several thousand parts. The sector has a high visibility given the Strong energy potential that represents the energy of the tides and the favourable geographical location of the France and the United Kingdom.

The industrial need concerns blades for turbines (size ranges about 8 m) and blades for industrial ventilation (size ranges about 3 m).



INNOVATIVE FEATURES

- ▶ Development of reliability calculations
- ▶ Development of high production rates of production-specific processes and tools
- ▶ Formulation of a protective coating
- ▶ Automate finishing operations



INDUSTRIAL APPLICATIONS

The automation of the manufacturing process will allow to increase the production rate of turbine blades and thus meet the market needs of marine renewable energies that represent a great potential in coming years.

Partners

- ▶ IRT JULES VERNE
- ▶ EUROPE TECHNOLOGIES
- ▶ LOIRETECH
- ▶ OMEGA SYSTEMES
- ▶ PINETTE EMIDECAU INDUSTRIES
- ▶ MECA
- ▶ HYDROCEAN
- ▶ MULTIPLAST
- ▶ SOCOMORE

Equipments

- ▶ Means of High-Capacity injection

Budget

▶ 2 640 k€

Sales contact

Philippe Piard

philippe.piard@irt-jules-verne.fr

Press contact

Sophie Péan

communication@irt-jules-verne.fr

www.irt-jules-verne.fr

