Samuel Durand

DESIGN OFFICE MANAGER, COMPOSITE MATERIALS SPECIALIST ENGINEER

18 RUE PAUL BELLAMY
44000 NANTES (FRANCE)

SKILLS

Perfect knowledge of the professional environment surrounding composites, material suppliers, tool makers, transformers, studies, experts, N.D.T., laboratories, construction sites and factories (France and Europe),

Experience and technical knowledge of the civil and military naval sector and of construction applied to composite materials,

Industrial innovation and R&D, to continuously improve product design and manufacturing methods.

PROFESSIONAL EXPERIENCE

MANAGER • MECA SARL (Calculations and Expertise)
CONCEPTION-MECA (Design Office), 18 rue Paul Bellamy ROUGE – NANTES • SINCE 01/01/2007
Creator and manager of MECA, a design office for the calculation/design/manufacture of composites,
Grew from 2 to 30 people in 13 years,
Sales manager, turnover €3M (+20%/year).

Management of companies: Steering and monitoring of company performance, action plans.
Management of international development (Europe, Saudi Arabia, Korea and Japan), 25% of turnover.

Human resources, team building,
Monitoring of high-stakes files, technical advice and arbitration.

Industrial strategy, interface with industrial partners (Naval Group, Chantier de l'Atlantique, Thalès, Bureau Véritas, etc.) and laboratories (IRT Jules Verne, M2P, ENSTA, E.C.N., etc.),
Representation within institutions (French Ministry of Defence Procurement, regions, centres of excellence),
Research, setting up and managing R&D projects (DGA Rapid, H2020, IRT, Regions).

EDUCATION

MECHANICAL ENGINEER • 1997 • ECOLE CENTRALE DE NANTES (E.C.N.)
Specialisation in Structures and Materials Calculation,
Internship at the French Atomic Energy Commission in Saclay (91), Seismic Mechanics.

DIPLOMA OF ADVANCED STUDIES IN MECHANICAL ENGINEERING and MATERIALS • 1997 • ECOLE CENTRALE DE NANTES (E.C.N.)
Specialisation in Advanced Research on Composite Materials.

CONTINUING PROFESSIONAL EDUCATION • 2001 to 2019
Team management, Trainer training,
Risk analysis, Contract law,
Verification and Validation (V&V) Certification for Design Office Activities - NAFEMS

MEMBER OF THE BOARD OF DIRECTORS • G.I.E. ALBATROSS • SINCE 2015
Group of SMEs involved in developing R&D on composite manufacturing processes (LOIRETECH, MULTIPLAST, CORIOLIS, SOCOMORE, CERO, OMEGA, ROC TOOL, MECA)

HEAD OF THE COMPOSITE CALCULATION ENGINEERING DEPARTMENT • CETIM (Loire-Atlantique) • 2001 to 2006
Business manager and design/calculation engineer for composite materials,
R&D studies manager, Failure analysis,
Planning and leading the team, 6 people, Internal and external trainer.

AUTOMOTIVE CALCULATION ENGINEER • IDVU (Yvelines) • 1999 to 2001
Static and crash calculation engineer, body in white, Master and Kangoo vehicles.

COMPOSITE CALCULATION ENGINEER • CETIM (Loire-Atlantique) • 1997 to 1999
Calculation engineer, services in several domains (naval, energy, aeronautics).

TECHNICAL

LANGUAGES • ENGLISH

Regular professional use,
Technical trainings given in English,
Cambridge First Certificate in English (FCE).

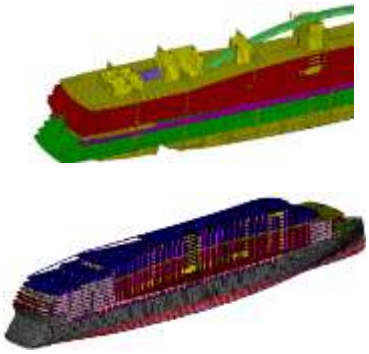
SOFTWARE

Full understanding of Office
Regular practice in composite calculations: Nastran, Cosmos/M, Adina,
CAD: Catia, SolidWorks, Autocad.

CODES AND RULES • KNOWLEDGE AND EXPERIENCE

BV NR 546 – Hull in composite materials
BV NI 603 – Current and Tidal Turbines
BV NI 613 – Adhesive joints and patch repair
DNV-GL, ST-C501 – Composite Components
ASTM, EN, ISO Material testing standards
EUROCODES rules - steel/aluminium, wood
EN13121 - Composite pressure vessels rules

FAB-HELI - Composite propeller



FUI NCT2 - Ship of the Future

HHR Composite Roof - Jeddah Saudi Arabia (60000m²)

TECHNICAL REFERENCES

JEC INNOVATION AWARD • SEOUL 2018 • DGA RAPID FAB-HELI(NAVAL GROUP, LOIRETECH, MECA)

Propeller made of composite materials, (design, manufacture and trials at sea)

WINNER OF JEC WORLD • 2017 • HOBIT PROJECT (GE, LOIRETECH, MULTIPLAST, MECA, IRT JULES VERNE)

Prototype of a hollow blade for a tidal turbine (design, optimisation and manufacturing)

LISTED EXPERT at AFNOR • 2002 renewed in 2018 • COMPOSITE MATERIALS

Member of WG4/CEN TC250, writing European Eurocode Composite construction code,
Member of E-LASS (European network for lightweight applications at sea),

PUBLICATIONS • CONFERENCES

ICSS 2019 Malaysia - Simulation of composites naval plates submitted to gel projectiles impacts - International Conference on Computational Science and Technology
ECCM 2018 Athens - VICOMTE- Aging of composite materials - methodology and application to tidal turbine blades - Meca/Bureau Veritas/GE Tidal/IRT JV - European Conference on Composite Materials
JEC Chicago 2017 - Composite Materials in Architecture: applications, regulations and future Challenges.
JNC and ICSS 2013- Integrity prediction of large GFRP-based civil engineering structures: Structural Health Monitoring for the roof of the Jeddah Railway Station - Meca/KAUST/Institut Clément Adler.

TEACHING

EMSHIP (European Masters Course Advanced Design in Ship and Offshore Structures) - Proposal of subjects and hosting interns,
ENSA Nantes, composite materials training for naval architects.

THESIS SUPERVISION

Mylène Deléglise - Internal stresses in thick composites - Ecole des Mines de Douai
Julien Mercier - Mechanical damage and composite aging - MINES ParisTech (Materials Centre),
Emilien Billaudeau - Sandwich panels for building and construction - IFSTTAR,
Ye Pyae Sone Oo - New analytical methods for composite materials subjected to underwater explosions and slamming - ICAM/GeM de Nantes.

SPORTS AND HOBBIES

CATAMARAN • SWIMMING • HIKING
BASS GUITAR AND MIXING • ROCK BAND