

Europass Curriculum Vitae



Personal information

First name(s) / Surname(s) **Petcu Cristian-Mihai**
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E-mail cristian.petcu@rokura.ro; crispet@gmail.com
Nationality Romanian
Date of birth 25 December 1956
Gender M

Work experience

Dates	1981-1983
Occupation or position held	Debutante engineer
Main activities and responsibilities	Updating overhaul military engines' technologies
Name and address of employer	Mechanical Factory Ploiesti
Type of business or sector	Military factory
Dates	1983-2005
Occupation or position held	R&D engineer; Chief of the quality-system's implementation's project (cf. ISO 45001 and 17025) in the engines' tests laboratory; Chief of the Research Department
Main activities and responsibilities	Worked in the research institute – S.C. MASTER S.A., former INMT Bucharest. At this institute I worked in the research fields of turbocharged diesel engine and combustion processes. Very good experience in the projects' management. As Project Manager I know very well Romanian Machinery Construction Industry. Since 1996 working in an engines' tests laboratory with OMCAS accreditation (Romanian Military Certified and Accreditation Body). Very good experience in the field of quality-system's implementation in the engines' tests laboratory of MASTER S.A., and in the Certification Body, MASTER OCP.
Name and address of employer	S.C. MASTER S.A. former INMT Bucharest
Type of business or sector	R&D
Dates	2005-2007
Occupation or position held	Technical Director.
Main activities and responsibilities	As Technical Director I lead the Training and Technical Support Department providing the Technical Support for Europe, Russia, Turkey and India
Name and address of employer	Firepower Industrial srl, member of Firepower Group, an Australian Company

Type of business or sector	Fuels conditioners
Dates	2007-June 2011
Occupation or position held	R&D and Scientific Manager
Main activities and responsibilities	As manager of the research department the main activity is focused on R&D projects involved in National Research Program projects, as project leader and as partner together with University "Politehnica" Bucharest, ICIA Cluj R&D Institute: -renewable energy projects, -co-generation systems projects, -hydrogen combustion in i.c. engines projects, - producing hydrogen rich gas for fuels treatment is another activity. Project Manager: PILOT TECHNOLOGY AND INSTALLATION TO OBTAIN A DIESEL FUEL REFORMULATED BY CATALYTIC TREATMENT OF NON-ADDITIVE DIESEL OIL WITH HYDROGEN ENRICHED GAS, COMBDIEREF Project Responsible: BIO-DIESEL OBTAINED BY THE TREATMENT OF FATTY ACIDS AND OF THEIR ESTERS AND GLYCERIDES WITH HYDROGEN ENRICHED GAS, BIOHID Project Responsible: TECHNOLOGY BASED ON ENZYMATIC TRANSESTERIFICATION PROCESS IN ORDER TO OBTAIN 2ND GENERATION BIOFUELS, CARENZI Project Responsible: SULFUR OXIDE AND FLY ASH EMISSION REDUCTION USING ENRICHED HYDROGEN GAS INJECTION TECHNOLOGY, REDSOCENZ
Name and address of employer	S.C. Rokura Aplicatii Industriale srl, Bucharest
Type of business or sector	R&D
Dates	2007-June 2011
Occupation or position held	R&D Project Manager
Main activities and responsibilities	As project manager I am involved in: -renewable energy projects, -co-generation systems projects, -hydrogen combustion in i.c. engines projects, - producing hydrogen rich gas for fuels treatment is another activity.
Name and address of employer	S.C. Rokura srl, Bucharest
Type of business or sector	R&D

Education and training

Dates	1975-1981
Title of qualification awarded	Engineer
Principal subjects/occupational skills covered	Thermal engines
Name and type of organisation providing education and training	Polytechnic Institute Bucharest, Mechanical Faculty
Dates	1998
Title of qualification awarded	Doctor Engineer
Principal subjects/occupational skills covered	Thermal engines
Name and type of organisation providing education and training	Polytechnic Institute Bucharest, Mechanical Faculty
Dates	1998
Title of qualification awarded	Doctor Engineer
Principal subjects/occupational skills covered	Thermal engines; Researches about improvement of work processes in supercharged Diesel 4 stroke engines; contribution to the study of the interaction between engine and turbocharger
Name and type of organisation providing education and training	Polytechnic Institute Bucharest, Mechanical Faculty
Dates	2000
Title of qualification awarded	QA qualification

Principal subjects/occupational skills covered
 Name and type of organisation providing education and training
 Title of qualification awarded
 Principal subjects/occupational skills covered
 Name and type of organisation providing education and training

PHARE PRAQ III "Modular Training Program on the Machine Directive and its links with Low Voltage and Electromagnetic Compatibility Directives", Target Group: Conformity Assessment Bodies of CECs
 RENAR, Bucharest

Personal skills and competences

Mother tongue(s)

Romanian

Other language(s)

English; French

Self-assessment

European level (*)

Language

Language

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
B1	English	B2	English	B1	English	B2	English	B2	English
A1	French	A1	French	A1	French	A1	French	A1	French

(*) *Common European Framework of Reference for Languages*

Technical skills and competences

Managing R&D projects

Computer skills and competences

PC, Microsoft Office, AutoCAD, Borland-Pascal;

Driving licence

Driving license since 1987.

Annexes

1. C. Petcu, H. Pitaru, A. Belei, *Beitrag zur genauigkeitsverbesserung der festigkeits rechnung bei kurbelwellen*, Bulletin. I.P.B., 1982
2. L. Teodorescu, C. Petcu, *Determine the equivalent nozzle aria of the radial turbine* The 6th Road Automobiles Conference, Pitesti, 1995
3. C. Petcu, *The computation of the scavenge coefficient of the 4 stroke Diesel turbocharged engine*, The 6th Road Automobiles Conference, Pitesti, 1995
4. C. Petcu, *Directions in the development of high turbocharged engines with constant admission pressure in turbine*, Scientific Communications " Present and perspective in the construction of thermal engines", MASTER FOUNDATION, Bucharest, 1995
5. C. Petcu, P. Despa, *Contributions at the study of the possibilities of rising the power of a diesel engine, at high boost pressure*, Scientific Communications " Present and perspective in the construction of thermal engines", MASTER FOUNDATION, Bucharest, 1995
6. C. Petcu, *Study of the possibilities of raising the power of four stoke diesel engine, by increasing the level of supercharged degree*, dissertation, Bucharest, 1993.
7. C. Petcu, *Solutions of matching the gas exchange processes with the performances required by the turbocharged diesel engine*, dissertation, Bucharest, 1993.
8. C. Petcu, *Researches about improvement of work processes in supercharged Diesel 4 stroke engines; contributions at the study of the interaction between engine and turbocharger* , Thesis at "Polytechnics" University, Bucharest, 1998.
9. C. Petcu, *A numerical solution of isentropic 1-D unsteady flows in pipes*, JUMV & SIAR Scientific Communications The 17th International Conference under FISITA Patronage: "SCIENCE AND MOTOR VEHICLES '99. AUTOMOTIVE ENGINEERING FOR BETTER QUALITY OF LIFE", Constanta, June 11, 1999
10. R. Alboteanu, C. Petcu, *An approach of the engine charge efficiency ascertainment*, Seoul 2000 FISITA World Automotive Congress, June 12-15, 2000, Seoul, Korea
11. L. Teodorescu, I. Nițu, C. Petcu, *Some considerations regarding improvement of the functional stability of the motor vehicle engines at the idle speed and small charges*, CAR 2000, November, 16 -17, Pitesti, Romania
12. R. Alboteanu, Cr. Petcu, Cr. Andreescu, M. Oprean, *Engine Charging By Using Full Variable Valves Timing*, Pitesti, Romania, 2003
13. C. Dica, C. Petcu, G. Bleaja, R. Chiriac, N. Vasiliu, *Hydrogen Rich Gas A Possible Challenge For*

The Fuels Future, Conferinta IPA - Bucharest, October, 2007

14. Birtas, C. Petcu, C. Dica, R. Chiriac, *On the possibility to predict the performance of a tractor engine using AVL BOOST simulation code*, International Conference ORV2008-, Military Academy, 12-14 October, 2008,

15. T. Prisecaru, C. Dica, C. Petcu, M. Prisecaru, R. Chiriac, *Injection Technology of Hydrogen Gas to Reduce Sulfur Oxide and Fly Ash Emission*, ASME International Mechanical Engineering Congress and Exposition, Boston, Massachusetts, USA, Paper IMECE2008-66936, 31 October - 6 November, 2008,

16. Birtas, I. Voicu, R. Chiriac, N. Apostolescu, C. Petcu, *Constant burning characteristics of HHO gas*, Proceedings of the 9th International Autumn Seminar on Propellants Explosives and Pyrotechnics, Beijing China, Science Press USA Inc, Kunming PEOPLES R CHINA, 22-25 September, 2009,

17. T. Prisecaru, M. Teodorescu, M. Prisecaru, C. Petcu, G. Bleaja, E. Popa *, C. Ciobanu, R. Chiriac, P. Dumitru, L. Mihaescu, *Numerical model and infrared analysis of a hydrogen enriched gas flame*, 50th Conference on Simulation and Modelling, DONG Energy, Skaerbaek Danemarca, 7-8 October 2009,

18. Birtas, I. Voicu, Gh. Niculae, A. Racovitza, R. Chiriac, N. Apostolescu, C. Petcu, *Effects of LPG-air enrichment with HRG gas on performance and emissions of a SI engine*, FISITA 2010 World Automotive Congress, "Automobiles and Sustainable Mobility", Budapest Hungary, F2010-A-064, 30 May-4 June, 2010,

19. Birtas, I. Voicu, Gh. Niculae, R. Chiriac, N. Apostolescu, C. Petcu, *Hydrogen assisted combustion in DI diesel engine*, CONAT 2010 International Automotive Congress, Brasov, XI-th Edition, CONAT20102037, pag. 201-208, 27 - 29 October, 2010.

20. T. Prisecaru, I. Pisa, Cr. Petcu, M. Prisecaru, Cr. Ciobanu, L. Mihaescu, E. Pop, *The influence of the hydrogen enriched gas injection upon the SO₂ emissions coming from a 1 MW pulverized brown coal pilot furnace*, Third International Conference on Applied Energy - 16-18 May 2011 - Perugia, Italy

21. A. Birtas, I. Voicu, Cr. Petcu, R. Chiriac, N. Apostolescu, *The effect of HRG gas addition on diesel engine combustion characteristics and exhaust emissions*, International Journal of Hydrogen Energy, page 12007...12015, 2011

INVENTIONS

1. MULTISTAGE STABILIZED FLOW INJECTOR

OSIM Patent number: 118979

2. PROCEDURE AND INSTALLATION FOR THE DE-SULPHURATION AND DE-AROMATIZATION OF THE DIESEL FUELS BY MEANS OF AQUYGEN™

OSIM Patent application number: A/00686/07.09.2009

