

PERSONAL INFORMATION

Giuseppe Barbieri



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Sex Male | Date of birth 17/12/1972 | Nationality Italian

PREFERRED JOB

Research and development in new materials and technologies for the sustainability of the transport & Energy Power Plants

WORK EXPERIENCE

From July 2015 to now

Head of Laboratory SSPT- PROMAS-MATPRO
Development of new MATerials by chemical & physical PROcesses
ENEA CR ENEA CASACCIA Via Aguiarese 301, 00123 Santa Maria di Galeria (RM)

From January 2015 to now

Acting Technical Director of CALEF Consortium

From March 2013 to Now

President of CALEF Consortium
ENEA CR ENEA TRISAIA SS 106 Ionica Km 419+500, 75026 Rotondella (MT) –Italy-

- The consortium is participate of several Public and private companies, it is a no profit with the main objective to introduce new welding technologies and materials promoting innovation for the fabrication processes of the SMEs.

From April 1999 to June 2015

Researcher / Research Manager
ENEA CR ENEA CASACCIA Via Aguiarese 301, 00123 Santa Maria di Galeria (RM)

- Researcher in the New Materials and Technologies Department responsible for writing and managing project related to, the application of new materials and welding technologies for lightweight vehicles.
- Workgroup technical leader for laser welding (4-12 people), involved in several research projects granted by Government funding ,
- Designer and developer of new structural architecture for lightweight components for fast ferries and freight coach of hi speed trains.
- Project manager for the project “ Reducing energy consumption in the transportation sector”, leading a team of over 30 people for the research and developing of new recyclable materials (metallic, polymeric) and new components for the electric propulsion of vehicles with improved energetic efficiency.
- Member of the work group for the Italian’s Cluster of Transport

From January 2009 to Now

Member of Committee for Safeguarding of Impartiality
RINA Service S.p.A. Via Corsica 12 – 16128- Genova (Italy) www.rina.org

- I represent ENEA, as governmental authority, in the Committee for Safeguarding of Impartiality (CSI) of RINA certification body in compliance with international standard ISO 17021. I am an official observer for the technical committee "Personal and Industrial Products" .

Business or sector Research and Development / Certification of personal and Industrial Product

EDUCATION AND TRAINING

From Jan. 2004 to Dec. 2004

Master International Welding Engineer

Istituto Italiano della Saldatura (member of European Welding Federation) www.iis.it

- Welding coordinator with specific skills in the design and manufacturing of welded components/equipment with several kind of materials and welding technologies.

From Nov. 1997 to Oct. 2001

Ph.D Mechanical Engineer

Polytechnic of Bari (Italy) www.poliba.it

- Global characterization by steady flow bench and local Laser Doppler Velocimetry speed measurements on High performance Internal Combustion Engine for evaluate the best positions of the intake / exhaust valves.

From Oct. 1990 to July 1997

Graduate in Mechanical Engineer EQF: 110/110 & Iode

Calabria University (Italy) www.unical.it

- Design with unconventional materials, Materials Science & technologies, Internal Combustion Engine.

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)

UNDERSTANDING		SPEAKING		WRITING
Listening	Reading	Spoken interaction	Spoken production	
B	B	B	B	B

English

Communication skills

- Excellent communication skills gained through my experience as technical leader of several projects conducted together with ENEA colleagues and external people from industrial partners. All results and activities are thoroughly and routinely reported and communicated at scheduled/regular internal meeting within the team and at workshops and conference.

Organisational / managerial skills

- I participate to several work group for writing new project proposals , and organize the new projects or service activities using the managerial system of ENEA or, if necessary, developing specific spread sheets for process planning and control. Some of these skills proved to be fundamental to leading work groups.

Computer skills

- Excellent command of Microsoft Office™ tools; proficient user of 3D CAD software like Autocad, Solid Works , Pro E, Basic use of FEM software like ANSYS 11 and good command of Minitab Design Of Experiment and statistical analysis software.

Driving licence

- B (Italian driving license for "car")

Projects *Research projects jointly with the Italian Ministry of University and Education & Ministry of Economy and EU:*

ITALY 2020 from 2014 to 2016; Framework CLUSTER "Trasporti su gomma": Team leader of OR2.4: New material and new technologies for light weight structures to reduce emission and carbon footprint.

SIFEG from 2013 to 2014; Framework INDUSTRIA 2015: Responsible Contract Manager of ENEA-TRAIN activities, leading a team of over 12 people for whole activities. About my specific technical work, the objective was to reengineering a railway freight coach to reduce the weight and increase competitiveness by using new aluminium alloys & innovative laser Wobling technology and new power system managing.

LASERALLUMINIO from 2012 to 2015; Framework INDUSTRIA 2015: Project manager and leading a team of over 8 people. The project objective is developing an innovative laser welding workstation to allow high quality and productivity joining process of large aluminium extruded profiles for applications in different sector like shipbuilding, railway coach and structural components.

MATTER: Materlai Testing & Rules (FP7 2011-2014): Project manager of Work Package "Welding and Manufacturing" for updating design rules for GEN IV Nuclear Power Plants. In particular, the WP objectives are involved in studies and qualification of welding technologies and filler materials for ferritic-martensitic creep resistant steel (P91) and austenitic stainless steel (AISI 316 LN).

Reducing energy consumption in the transportation sector - Framework ENEA-MSE-2008-2012. The project objective was to improve the efficiency Well to Wheel for the vehicles through both: the developing of technologies an materials for lightweight material, and the developing of new electronic device (battery manage Systems, recharge systems, standardized battery) for a full penetration of the electric propulsion.

ALAS from 2005 to 2008 (Fully-Submerged Foil Hydrofoil), this project was to develop two full-scale prototypes each equipped with a fully submerged foil system for improved performance and passenger comfort versus the conventional surface piercing hydrofoils. Also, this will allow the vessel to operate in more adverse weather conditions as well reduce the resistance allowing greater speeds with the same installed power. The objective of my work was to develop the design and welding processes of the submerged Wing.

SINAVE from 2002 to 2006 (Sistema Innovativo di Trasporto Intermodale basato sull'impiego di Navi Veloci) - this project aimed to develop an intermodal transport system based on the use of fast ships. The objectives of my work were to investigate new materials (Steel, Aluminium, Titanium and Foams) for lightweight structures for the fast ship and for the special containers systems developed for the exchange ground highway- sea highway

*Enviroaliswhat –*from 2004 to 2007 this project was to develop a revolutionary vessel that combines the advantages of a Swath (Small-Waterplane-Area Twin-Hull) with those of a fully-submerged type hydrofoil as it will be equipped with a system of foils able to provide both dynamic support and stabilization. The objective of my work was to develop laser and laser hybrid welding of Structural Transition Joint between Aluminium alloy and Steel.

PALES from 1999- to 2001 (Lightweight sandwich panels for hi speed freight coach and Car deck for Fast Ferries) The target was the development of new methods for designing light modular structures, welded together with innovative laser and/or electron beam technique, thereby allowing the use of lighter materials for transport by train/ship.

Main Publications

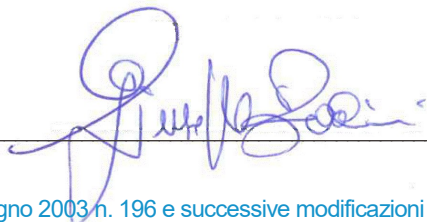
- G. ANGELLA, G. BARBIERI, R. DONNINI, R. MONTANARI, A. VARONE
Welding of IN792 DS Superalloy by High Energy Density Techniques
DOI: 10.4028/WWW.SCIENTIFIC.NET/MSF.884.166
IN BOOK: LIQUID METALS AND ALLOYS: FROM STRUCTURE TO INDUSTRIAL APPLICATIONS, CHAPTER: VOL. 884, PUBLISHER: TRANS TECH PUBLICATION, EDITORS: F. BONOLLO; R. MONTANARI, PP.166-177
- BARBIERI G., COGNINI F., MONCADA M., RINALDI A., LAPI G.
Welding of automotive aluminum alloys by laser wobbling processing
MATERIALS SCIENCE FORUM 879, PP. 1057-1062
- BARBIERI, G., SOLTANI, P., KACIULIS, S., MONTANARI, R., VARONE, A.
IN792 DS superalloy: Optimization of EB welding and post-welding heat treatments
MATERIALS SCIENCE FORUM 879, PP. 175-180
- R. MONTANARI, A. VARONE, G. BARBIERI, P. SOLTANI, A. MEZZI, S. KACIULIS
Welding of IN792 DS superalloy by electron beam by EDS and XPS
SURFACE AND INTERFACE ANALYSIS · FEBRUARY 2016 IMPACT FACTOR: 1.25 · DOI: 10.1002/SIA.5946
- G. BARBIERI, F. COGNINI, G. LAPI, F. VIVIO
Mechanical Behavior of Aluminum Sandwiches Made by Laser Welding
Procedia Engineering, DOI:10.1016/j.proeng.2015.06.256 Volume 109, 2015, Pages 427–434
- BARBIERI G., COSTANZA G., MONTANARI R.
LIBRO: **Schiume metalliche: tecniche di produzione, proprietà e applicazioni**
EDITORE **Associazione Italiana Metallurgia**
STAMPATO **Gennaio 2014** ISBN 978-88-85298-98-9
- FARAJI A. H., GOODARZI M., SEYEDEIN S.H., BARBIERI G., MALETTA C.
Numerical modeling of heat transfer and fluid flow in hybrid laser-TIG welding of aluminum alloy AA6082
The International Journal of Advanced Manufacturing Technology
DOI 10.1007/s00170-014-6589-6 Volume 75, Issue 9, December 2014,
- BARBIERI, G., COGNINI, F., MONCADA, M., MORABITO, G.
Welding of high-resilience martensitic stainless steel for hydrodynamic components in innovative seacraft: a comparison of traditional and HDE technologies
Welding International , DOI: 10.1080/09507116.2012.753308 , Volume 29, Issue 1, January 2013, Pages 40-53
- BARBIERI G., MONCADA M., SGAMBATI A.
EBW of AA 6061 T651 aluminium alloy cold plates for the space guinea pig living unit cooling system
Welding International , DOI:10.1080/09507116.2011.592693, Volume 26, Issue 5, May 2012, Pages 360-369
- G. BARBIERI, A. RINALDI, AND ALL
The Mechanical Behavior of Aluminum Foam-based Composite Beams Made as One-Piece or by Welding Joining of Two Pieces
Proceedings of ASST 2012 Aluminium Surface Science & Technology, Sorrento 27-31 May 2012 ISBN 978-88-907318-0-8;
- C. MALETTA, A. FALVO, F. FURGIUELE, G. BARBIERI, M. BRANDIZZI
Fracture Behaviour of Nickel-Titanium Laser Welded Joints.
DOI: 10.1007/s11665-009-9351-8 Journal of Materials Engineering and Performance
Volume 18, Issue 5-6, August 2009, Pages 569-574

Patent **“DISPOSITIVO PER SALDATURA LASER”** BARBIERI G., PETRIGLIANO G., DE BONIS R., PUTIGNANO E., SATRIANO A. A. RM2011A000189 APRILE 2011 **(RIF. ENEA 726)**

“DISPOSITIVO PER SALDATURA LASER” BARBIERI G., PETRIGLIANO G., ALBA M. B., DE BONIS R., PUTIGNANO ENZO RM2010A000347 GIUGNO 2010 **(RIF. ENEA 710)**

DATA 15/07/2015

FIRMA _____



autorizzo al trattamento dei miei dati personali ai sensi del D. L. 30 giugno 2003 n. 196 e successive modificazioni

LISTA PUBBLICAZIONI:

LIBRI, PUBBLICAZIONI SU RIVISTE E ATTI DI CONVEGNO	HTTPS://WWW.SCOPIUS.COM/AUTHID/DETAIL.URI?AUTHORID=24365897900&EID=2-S2.0-84930068710
ANNO2017	<p>G. ANGELLA, G. BARBIERI, R. DONNINI, R. MONTANARI, A. VARONE Welding of IN792 DS Superalloy by High Energy Density Techniques DOI: 10.4028/WWW.SCIENTIFIC.NET/MSF.884.166 IN BOOK: LIQUID METALS AND ALLOYS: FROM STRUCTURE TO INDUSTRIAL APPLICATIONS, CHAPTER: VOL. 884, PUBLISHER: TRANS TECH PUBLICATION, EDITORS: F. BONOLLO; R. MONTANARI, PP.166-177</p> <p>BARBIERI G., COGNINI F., MONCADA M., RINALDI A., LAPI G. Welding of automotive aluminum alloys by laser wobbling processing MATERIALS SCIENCE FORUM 879, PP. 1057-1062</p> <p>BARBIERI, G., SOLTANI, P., KACIULIS, S., MONTANARI, R., VARONE, A. IN792 DS superalloy: Optimization of EB welding and post-welding heat treatments MATERIALS SCIENCE FORUM 879, PP. 175-180</p> <p>R. MONTANARI, A. VARONE, G. BARBIERI, P. SOLTANI, A. MEZZI, S. KACIULIS Welding of IN792 DS superalloy by electron beam by EDS and XPS SURFACE AND INTERFACE ANALYSIS · FEBRUARY 2016 IMPACT FACTOR: 1.25 · DOI: 10.1002/SIA.5946</p>
ANNO2016	<p>BARBIERI G., CESARONI M., CIAMBELLA L., COSTANZA G., MONTANARI R. Influence of welding parameters on microstructure of welded joints SMAW/GTAW steel X10 CrMoVNb 9-1 (P91) METALLURGIA ITALIANA VOLUME 107, ISSUE 3, 1 MARCH 2015, PAGES 37-45</p>
ANNO 2015	<p>A. TATÌ; P. AVERSA, G. BARBIERI, R. TAMBORRINO, V. A.M. LUPRANO Controllo di saldature laser in lega di titanio di bassi spessori con tecnica TOFD PROVE NON DISTRUTTIVE MONITORAGGIO E DIAGNOSTICA NUMERO 4 DICEMBRE 2015 PUBBLICAZIONE AIPND ISSN 1721-7075</p> <p>G. LAPI, R. MONTANARI, M.E. TATA, G. BARBIERI, S.K. BALIJEPALLI, S. KACIULIS Investigation of skin-core joints in aluminium foam sandwich panels by EDS and XPS SURFACE INTERFACE ANALYSIS DECEMBER 2015 DOI: 10.1002/SIA.5900</p>
ANNO 2013	<p>BARBIERI G., F. COGNINI, F.VIVIO G LAPI Mechanical Behavior of Aluminum Sandwiches Made by Laser Welding PROCEDIA ENGINEERING 109:427-434 · DECEMBER 2015 DOI: 10.1016/J.PROENG.2015.06.256</p> <p>G. BARBIERI, F. COGNINI, M. MONCADA, G. MORABITO Welding of high-resilience martensitic stainless steel for hydrodynamic components in innovative seacraft: a comparison of traditional and HDE technologies WELDING INTERNATIONAL MARZO 2013 DOI:10.1080/09507116.2012.753308</p>
ANNO 2012	<p>BARBIERI G., COSTANZA G., MONTANARI R. LIBRO: Schiume metalliche: tecniche di produzione, proprietà e applicazioni EDITORE Associazione Italiana Metallurgia STAMPATO Gennaio 2014 ISBN 978-88-85298-98-9</p>
Pubblicate 2011:	<p>BALIJEPALLI S.K, BARBIERI G., KACIULIS S., LAPI G.,MONTANARI R., TATA M.E. Realizzazione e caratterizzazione di strutture sandwich di acciaio con core in schiuma di Al Conference Proceedings of 35° Convegno Nazionale AIM 5-7 Novembre 2014 In press on Rivista Metallurgia Italiana Febbraio 2015</p> <p>BARBIERI G., CESARONI M., CIAMBELLA L., COSTANZA G., MONTANARI R. Influenza dei parametri di saldatura sulla microstruttura di giunti saldati SMAW/TIG di acciaio di acciaio X10 CrMoVNb9-1 (P91)</p>

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Laser welding of aluminum foam sandwich panels [Saldatura laser di pannelli sandwich in schiuma di alluminio]
Rivista Italiana della Saldatura, Volume 65, Issue 1, January 2013, Pages 43-53

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Saldatura laser di pannelli sandwich in schiuma di alluminio
CONVEGNO IIS 21 Giugno 2012 Fiera LAMIERA (Bologna)

BARBIERI, G., COGNINI, F., MONCADA, M.
Processi di giunzione di pannelli AFS: tecnologie di saldatura High Density Energy
Giornata di Studio Schiuma Metalliche, Associazione Italiana Metallurgia 24 maggio 2012 Milano

BARBIERI G., TATI' A., MONCADA M., DE ANGELIS U.
Controllo e Caratterizzazione di Sandwich Compositi in Schiuma Metallica e di loro Giunti Saldati
Conference Proceedings of PnD 2011; Florence 2011 Oct 26-28, Florence, Italy (AIPnD 2011).
Available on NDT.net

BARBIERI G., COGNINI F., MONCADA M., DE ANGELIS U., BERNARDO F
Sviluppo e qualificazione di procedimenti di saldatura per pannelli AFS
Conference Proceedings 6GNS Giornate Nazionali della saldatura Genova, 26-27 Maggio 2011

BARBIERI G., BERNARDO F
Saldatura laser delle leghe di titanio: attrezzature per la saldatura Open Air
Conference Proceedings 6GNS Giornate Nazionali della saldatura Genova, 26-27 Maggio 2011

BARBIERI G., COGNINI F., MONCADA M., MORABITO G.
Saldatura di acciai inossidabili martensitici ad elevata resilienza per componenti idrodinamici di imbarcazioni innovative: confronto fra tecnologie tradizionali e tecnologie HDE
Conference Proceedings 6GNS Giornate Nazionali della saldatura Genova, 26-27 Maggio 2011

ANNO 2009:

ARMENTO A, BARBIERI G., BERNARDO F, LARocca
Applicazione della metodologia DoE alla saldatura laser di leghe di titanio.
LAMIERA, vol. 01/09; p. 44-54, ISSN: 0391-5891

BARBIERI G., COGNINI F., DE BONIS R., PUTIGNANO, E.
Saldatura laser di componenti idraulici in acciai inox a elevata resistenza per l'industria aeronautica
LAMIERA, vol. 11/09; p. 60 -69, ISSN: 0391-5891

BARBIERI G., MONCADA M, SGAMBATI A.
Saldatura EBW di cold plates in lega di alluminio AA6061 T651 per il sistema di raffreddamento dell'unità abitativa per cavie spaziali
RIVISTA ITALIANA DELLA SALDATURA , vol. 04/09; p. 435-443, ISSN: 0035-6794

BARBIERI G., MONCADA M, SGAMBATI A.
EBW of aluminum alloy AA6061 T651 cold plates for the space payload cooling system.
Conference Proceedings EUROJOIN 7 Seventh European Congress on Joining Technology. Venezia, 21-22 Maggio 2009

ANNO 2008

BARBIERI G., BRANDIZZI M, DEL RE M.D, PALUMBO G, TRICARICO L, SORGENTE D.
Saldabilità con fascio elettronico di lamiere alluminio/magnesio.
lamiere alluminio-magnesio. LAMIERA, vol. 6, p. 90-99, ISSN: 0391-5891

BARBIERI G., COGNINI F., MONCADA M.
Saldatura EBW di 4 differenti tipologie di contatti a radiofrequenza per il "Large Hadron Collider"(LHC) del CERN.
RIVISTA ITALIANA DELLA SALDATURA , vol. 02/08; p. 231-239, ISSN: 0035-6794

BARBIERI G., ARMENTO A, BERNARDO F, BRANDIZZI M.

Realizzazione di un'unità di carico innovativa per il trasporto navale veloce.
APPLICAZIONI LASER, vol. giugno luglio 2008; p. 42-47, ISSN: 1973-7238

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BARBIERI G., C. CAPPABIANCA, M. MONCADA, F.VERRE, M. ALBA, E. PUTIGNANO, R. DEBONIS
Messa a punto di un processo di saldatura laser su lamiere di acciaio S 460 NL (UNI EN 10113-2) per applicazioni nella cantieristica navale e controllo RX mediante l'elaborazione delle immagini.
CONFERENZA NAZIONALE SULLEPROVE NON DISTRUTTIVE MONITORAGGIO E DIAGNOSTICA. MILANO, 11-12-13 Ottobre, ISBN/ISSN: 978-88-89758-03-8

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G. DAURELIO, BARBIERI G., S. LUSSI, A.M. SPERA (2002).
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Sviluppo di applicazioni industriali con saldatura LASER: saldatura di pannelli strutturali leggeri per applicazioni nel settore delle costruzioni navali e ferroviarie
IL LASER NELLA SALDATURA E NEL TAGLIO CONVEGNO IIS FIERA LAMIERA.
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ANNO 2014

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BARBIERI G.
Recommendation for the codes requirement on welding consumables and process for 316SS and P91
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<http://www.matterfp7.it/Layout/matter/index.asp?page=/Upload/Moduli/wbdms/public/login.asp&target=contenitore&tit1=Public%20documentation>

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ANNO 2007

CARMIGNANI B, TOSELLI G, VISPARELLI D, BONIFAZIO M, DE MAIO U, MINGHETTI T, PANZANI G, SANGIORGI S, TRESTINI D, TIMPARANO M, **BARBIERI G.**, COGNINI F
IGNITOR Project :Numerical simulation of the Welds for the Components of Plasma Chamber of IGNITOR Fusion Machine : Technical Report 6
 Rapporto tecnico ENEA RT/2007/33/FIM ISSN/0393-3016

ANNO 2009

CARMIGNANI B, TOSELLI G, CLAI G., MUSMECIA, VISPARELLI D, TRESTINI D., DE MAIO U., RICCI A., SANGIORGI S, **BARBIERI G.**, COGNINI F., VERRE F., MOLLICA D.
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ANNO 2011

G. Barbieri, F. Cognini, M. Massimo, L. Piloni
Sviluppo delle apparecchiature e del protocollo di qualifica meccanica per pannelli AFS
 Rapporto tecnico RDS/2011/202 http://www.enea.it/it/Ricerca_sviluppo/documenti/ricerca-di-sistema-elettrico/risparmio-di-energia-elettrica-nei-trasporti/rds-202.pdf

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Processi di fabbricazione di profilati estrusi rinforzati con schiuma metallica
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Procedimenti e progettazione di apparecchiature prototipali per la produzione di precursori per schiume metalliche ed AFS
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M. Moncada, G. Barbieri, A. Tati, U. De Angelis
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Tecnologie di scale-up del processo di produzione di materiali ibridi metallo polimero basati su sfere/grani cavi
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ANNO 2013

G. Barbieri, F. Cognini, M. Moncada, F. Padella, D. Mirabile Gattia, U. De Angelis, G. De Santis
Ottimizzazione dei parametri di compattazione ed estrusione di precursori originali per schiume di alluminio
 Rapporto tecnico RDS/2013/098 http://www.enea.it/it/Ricerca_sviluppo/documenti/ricerca-di-sistema-elettrico/elettromobilita/2012/rds-2013-098.pdf

G. Barbieri, F. Cognini, M. Moncada, A. Tati
Tecniche di saldatura ad elevata efficienza per il settore ferroviario.
 Rapporto tecnico RDS/2013/100 http://www.enea.it/it/Ricerca_sviluppo/documenti/ricerca-di-sistema-elettrico/elettromobilita/2012/rds-2013-100.pdf