

Newsletter

Issue 13 – July 2014



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Editorial



2013 was the year when the Commission delivered its new and ambitious **Horizon 2020** framework program for research and technology development, complete with new instruments (PPPs and EIPs, in particular) meant to collect the views of more stakeholders. ESTEP played a leading role in helping this happen, being involved at very many levels, with people involved in working groups of all kinds and with contributions to a large number of documents and road-maps at EU and member state levels.

2014 is the year when all this machinery is being set working: calls were published in December 2013 and various brokerage events were organized to foster participation and the construction of consortia. The outcome, at this point is fairly satisfactory, as ESTEP's community has proposed 26 projects in the first series of calls for 2014, i.e. for a period of 5 months (equivalent to a steady-state kinetics of **62 projects/year**. **This is the highest number ever of proposals answering framework calls!**) The spirit of H2020 has been clearly understood by ESTEP's community.

The next reality call will come up in August of this year, when the Commission publishes the list of proposals actually

accepted for funding. We will then see how effective we have been, collectively, in proposing research activities that meet the expectations of H2020.


The work on the definition of the **next series of call for 2016-17** has also started: ESTEP made its choice of priorities and sent them to the Commission, while we are working closely with SPIRE, EMIRI and other structures to help EU officers define the calls more finely.

RFCS activities continue to play a central role in ESTEP's agenda. The governance of the RFCS unit has changed and the way to work with the new team is being explored anew.

ESTEP is also involved in very many other activities in Brussels, in Europe and in the world. **A conservative estimate of actions lists 60 of them** during the first semester of 2014!

ESTEP has been directly involved in several **High Level Groups**, the HLG on Steel, the HLG on ETP's, the HLG on Factory of the Future. It is part of governing or advisory bodies of SPIRE, EMIRI, RECREATE, Water EIP, EU-Knights, CRM InnoNet, TP Wind, E-United, etc. It is joining several H2020 proposals of generic interest for the Steel community, like MATCH and EU_Great! through proxies.

ESTEP is regularly consulted on surveys or policy studies related to the circular economy, climate change & industry,



energy roadmaps, energy transition, societal challenges - particularly *challenge 5*, etc.

ESTEP's SG visited some of its members, in Sweden (Jernkontoret, MEFOS), Poland (IMZ), Italy (CSM) and Belgium (CRM) to explore tighter cooperation modes. ESTEP is also canvassing for enrolling new members (Ruukki, LKAB, IJL, etc.). It was also instrumental in working with **Ukraine** to help them set up a National Steel Technology Platform.

ESTEP is participating to major international conferences, with invited introductory lectures or keynotes. It has also started to communicate on its SRA through high-level international publications - with WG2 & WG5 in 2013 and WG4 & WGI2M in 2014.

Several important seminars were organized during the semester, under strong leadership input of ESTEP: one on **biodiversity** and its connection with the steel business in Dalmine, 6/02/2014, one on **Steel for Nuclear Applications** in Bruxelles, on 13/03/2014 and another one on **Society and Materials, SAM-8**, in Liège, 20-21/05/2014

One key issue presently is related to **high TRL projects**, which the Commission is keen to address. They require **imagination in funding**, as demonstrators cost much more than more simple research or even smaller pilots. Moreover, there is a **need for a continuity in funding**, when a particular project moves up the TRL scale, at its own pace, which usually involves a series of projects linked to each other. Finally, whereas **transectorality** is a brilliant concept for low or middle TRLs, it **breaks down at high TRLs**, which need to become sector-specific.

On the governance's side, **Michael Steinhorst**, of Tata Steel, replacing **François Mudry** of ArcelorMittal, now chairs the Support Group of ESTEP. Note also that a Mirror Group will be organized on 18 November 2014, an important occasion to liaise with Member States.

S1 of 2014 was a very active semester for our ETP and there is no sign of any slow down for the next one!

JP. Birat

WG1 PROFIT



The specific items covered by this working group concern the processing technologies applicable to the steel sector and having a major impact on production costs and productivity, as well as on the quality of the product mix. A close link is made with the different initiatives and opportunities launched at the European level for supporting research & innovation actions. Meetings of the group are regularly organized either face-to-face or by web and telephone conference in order to make possible a large participation of the members. During the period under review, two meetings were held in February and June.

The most relevant aspects and actions to be highlighted were focused on the new H2020 program with a specific emphasis on the "SPIRE" initiative, the preparation of the 1st calls and the selection of the future priority topics. Other important PPP's such as Factories of the Future or EMIRI are also of concern for the group. To be particularly pointed out is the issue of funding for large pilot & demonstration projects where no suitable financing frame is available today.

A dedicated effort is put on communication and exchange of information between the members about the proposals submitted in the various calls of the H2020 program with the observation that the ESTEP community has quite very significantly contributed to the 1st calls.

The group also actively contributes to preparing and proposing items for the annual priorities of the RFCS program.

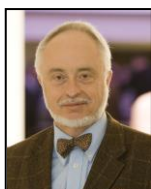
Should also be recalled that an ad-hoc working group was created to take over the initiatives related to the "Integrated Intelligent Manufacturing" (I2M). A separate account of the progress of this working group is presented next in this newsletter.

C. Marique



Above, a picture of the group during the June meeting

WG I2M - Integrated Intelligent Manufacturing



This WG, which has been very active since 2008, is formally a sub-WG of WG1. Nevertheless, due to its transversal process orientation, the activities are also related to WG4 and WG5. One year ago, Dr. Harald Peters (BFI) became co-chairman with Dr. Luc Chefneux (Arcelor-Mittal) and some new members joined the team, the motivation of which has thus been reinforced!

During the past semester two meetings were organized.

On January 29, the main objective was to start the major work of updating the roadmap, with, as a first output, a new definition of I2M.

The final remarks were exchanged concerning the keynote lecture that Costanzo Pietrosanti (CSM) was to present at the ESTAD conference, on behalf of the WG.

During the JIS/ESTAD conference in Paris, on April 7 & 8, and for the first time in conferences dealing with the steel industry, two sessions were devoted to Integrated Intelligent Manufacturing.

Chaired by key members of our WG, with many contributions from the companies involved, these two sessions have been very successful with a lot of attendants.

On May 5, a second meeting was held to continue the work on our roadmap.

The actual RFCS priority 2.2 has been confirmed with a very small improvement. Member companies have also shared the information on relevant proposals which were submitted to the first calls of HORIZON 2020, mainly in SPIRE 1 and in some FoF calls. Creating some synergies with the PPP Factory of the Future will be very important for the future of our actions! During the coming months, our activities will be focused on roadmapping, preparing the next 2015 ESTAD conference and exchanging on new opportunities in HORIZON 2020.

L. Chefneux, H. Peters

WG2 TRANSPORT



In the first two meetings in 2014, Working Group 2 (WG 2) focused on the identification of steel related projects in the framework of Horizon 2020 to strengthen the effort on revealing existing or developing new innovative but affordable steel solutions for society - at least in Europe. The mutual consent of the members is clear: Steel solutions are



underrepresented in the “European R&D environment” although the societal advantages for the transport sector in comparison to competitive materials are often evident. Highest safety level, excellent price performance ratio, easy processing combined with flexibility and a wide range of properties are unique steel features - but not really visible in European projects.

To underline the potential of steel as a key material in passenger cars, commercial vehicles, road and rail transport systems and to keep Europe’s transport sector in a leading position, the members of WG 2 are setting out for new shores. WG 2 started with a new kind of European proactive project management, which is also feasible in the context of pre-competitiveness. On 14 May we carried out a “creativity workshop” to screen the existing calls of Horizon 2020, RFCS and other steel related R&D programs as well as to generate new approaches of project scenarios and their contents which are simply missing in the context of fulfilling customer’s requirements concerning affordable lightweight solutions in the transport sector.

WG 2 changed partly from the “conventional” exchange of information and the obligation to report about steel related topics in the present and the past to the projection of “missing calls” and their possible content. Have you ever tried to be steel for a moment - the material itself just for a few seconds or minutes? Have you ever asked yourself (you as the material steel) what you are proud of? The WG 2 members did it and - unbelievable - the results were amazing. This new approach allows crossing borders, which appeared insuperable at first. WG 2 decided to go on with this system to come up with stronger approaches for new project scenarios, which could be starting points for the next European calls in Horizon 2020 or other programs.

O. Hoffmann

WG3 CONSTRUCTION

WG3 has been very active in the first half of 2014. Toward the objective of ensuring

that steel has the place it deserves and is well represented in European construction research arena, a number of initiatives are being supported and ongoing activities from last year are being maintained. The key areas of our activities have been priority setting, roadmap development, research dissemination and networking.



The group has been active in defining **priorities** and developing a strategy for getting value from the **H2020 initiative**. Key activities focus on **energy efficient buildings and adaptable envelopes**. In agreement with the strategy, WG3 priority proposal for 2015 is the development and improvement of hybrid solution (e.g. steel/concrete, steel/glass, HSS/MSS, etc.) for new and existing constructions in view of structural performance (e.g. efficiency, ductility, durability, etc.) and overall building performance (e.g. multifunctional, building physics, LCA, etc).

WG3 organized a very successful **workshop on energy efficient building** in collaboration with the BASSE project. We are also creating and exploring new connections and networks with other initiatives and projects including ECTP, ECCREDI and SUSCHEM.

S. Boudjabeur

WG4 PLANET



During 2014, the working group met either in face-to-face meetings or by telephone conferences in order to allow the largest possible participation of members. New members, Swerea-Mefos, Tenova and Platea, joined the Planet working group. The next main objective is to increase the involvement of academia.

The effort remains focused on the support to the European Commission (EC) public private partnerships (PPP) initiatives, SPIRE, the EIP Water and Raw Materials, that show the highest direct link with WG planet topics.



During the February meeting, the outcome of the RFCS evaluations on the proposals that are relevant for WG4 could not be discussed, because of new and stricter confidentiality conditions enforced since this year: this is hindering the work of this WG. Information on the potential interest for SPIRE call by the WG4 members was shared and the best ways to concretely support the preparation of proposals involving steel sector partners were discussed.

The second meeting, in May, dealt with the suggestion of annual priorities for the 2014 RFCS calls having a direct relevance for the working group and the ranking among priorities for SPIRE, EIP Raw Material and EIP Water through a fair vote exercise. The summaries of the projects related to WG4 topic presented in the Horizon2020 SPIRE calls (6 proposals involving 7 member companies) indicates that the interest to meet environmental requirements, promote sustainable steel production and develop Life Cycle Thinking is continuously growing in the steel sector. Moreover the members' experience, in the first step of Horizon 2020 proposal, confirms that a meaningful approach to sustainability topics requires a multi-disciplinary approach as well as overcoming the traditional sectorial views. Various initiatives were promoted as part of the activities of ESTEP's WG4 planet:

- a seminar on biodiversity and ecological services (BES) was organized in Dalmine, Italy, on 6 February 2014. It addressed BES from several standpoints, scientific and industrial ecology, management science, business management practice and agrobiolgy. A report is available for ESTEP members;
- dissemination of the vision of the European Steel Technology Platform's Strategic Research Agenda for the 2030s and beyond by presentation at conference in Washington D.C (June) and in Rome (October).

The next face-to-face meeting is scheduled in Brussels at EUROFER premises on 02/10/2014.

E. Malfa

WG 5 PEOPLE



Talent Management. To handle the demographic change in the steel industry in Europe and to create a strong foundation for recruiting and retaining talents, WG 5 conducted a

Europe-wide survey of talents, defined as employees who are going to be promoted in the next 2 or 3 years. 263 talents identified by EU-steel-companies have responded. In compare-son to earlier surveys, the first results show that new values in the career choice of talents are important, compared to some time ago. In particular, individual development and teamwork are more important than status and income. A detailed analysis of the survey will be available in autumn this year.

Innovation Management. As a follow-up of GT VET (Greening Technical Vocational Education and Training), the project **GREEN STAR** (GREEN skills for enterprises Sustainable Training for Automotive suppliers Cluster), was launched on 10 December 2013 in Venezia Marghera (Italy) and is currently being conducted. GREEN STAR aims at transferring GT VET to SME-orientated clusters of another industry. On the invitation of Antonius Schroeder (University of Dortmund – sfs), a meeting of the focus group "Reskilling and Up-skilling of Green Skills" took place in Dortmund on 4 June 2014. As a result of the project, a Local Stakeholders Action Plan will be implemented to test the sustainable training module from GT VET.

Members of WG 5 are also engaged in the **European Workplace Innovation Network EUWIN**. One of the recent activities of EUWIN is to create a knowledge bank of Workplace Innovation: <http://portal.ukwon.eu/euwin-knowledge-bank-menu-new>.

Acquisition. WG5 is involved in 2 technical Projects under HORIZON 2020 SPIRE. The integration of **social innovation** issues in technical processes is seen as an important success factor by WG 5.

One proposal was submitted to “Factories of the Future” (FoF) the other one to SPIRE 1.

V. Echterhoff

WG 6 ENERGY



During the first semester 2014 the working group continued to strongly support the European Commission (EC) public-private-partnerships (PPP) initiatives dealing with the group thematic topics such as Sustainable Process Industry Resource Efficiency (SPIRE - Applications) and Energy Materials Industrial Research Initiative (EMIRI).

Various initiatives on **steels & materials for nuclear applications** were also carried out. The 13th of March, for instance, the group organized in Brussels a workshop entitled “Steels for nuclear applications” with the support of the EC.

Regarding funding and H2020, the group made some proposals on energy materials prepared in line with the expectation of the **SET-PLAN roadmap**.

Concerning both the proposals and projects presented and approved in the RFCS frame, has to be highlighted the very strong increase in numbers. The interest of energy steel products and applications is continuously growing.

In the second part of the year various initiatives and actions on Horizon 2020, the R&I Program of the European Commission will be carried out. Representatives of the WG will participate and support the work of **SPIRE** (Applications), as well as of **EMIRI**, especially for **Wind & Marine, PV energy and CCS**.

Concerning workshop organization, one on materials for power generation and possibly another one on the USC in Europe are expected to start to be organized in the coming months.

All these initiatives on energy themes once more put the activities of WG 6 on the wavetop in EU research and innovation activities!

Date and location of next meeting:
23 September 2014 - Brussels.

P.Gimondo

Forthcoming events

23-24 September, Stockholm (Sweden): J.-P. Birat, *Life-Cycle Assessment-Resource Efficiency and Recycling*, Future Circular Materials Conference 2014,
15-17 Sep 2014, Teesside, UK, European Steel Environment Congress ESEC: Technology and Vision, Steel Solutions in the 21st Century, Plenary 1 session, J.-P. Birat.
1 October: WG1 meeting
2 October: WG4 and WG5 meeting
14 October: ESTEP Support Group
28-31 October, LUISS University of Rome (Italy): J.-P. Birat, E. Malfa, V. Colla, J.S. Thomas, *SUSTAINABLE steel production for the 2030s: the vision of the European Steel Technology Platform's Strategic Research Agenda (ESTEP's SRA)*, 14th IAEE European Energy Conference, Sustainable Energy Policy and Strategies for Europe.
18 November: ESTEP Mirror Group
18 November: EMIRI Steering Committee
24-28 November, Materiaux 2014, Montpellier: JP. Birat, *Le recyclage, à l'interface de la technologie et des défis sociétaux. Que signifie vraiment le terme d'économie circulaire ?*

Important events in S1-2014

J.-P. Birat and O. Hoffmann. *Steel and the green cars initiative in Europe*. Revue de Métallurgie, doi:10.1051/metal/2013083

J.-P. Birat, *Shale gas & unconventional energy in a steel context*, BHV annual conference, invited lecture, Örebro, Sweden, 25 January 2014

Steel, Biodiversity and Ecosystem services, Dalmine, 6 February 2024 (WG4)

J.-P. Birat, *Steel & humanity's grand challenges*, CRU World Steel 2014, 17-19 March 2014, Prague, Czech Republic, ESTEP website

ESTEP: Activity Report 2013, March 2014, ftp://ftp.cordis.europa.eu/pub/estep/docs/estep-activity-report-2013_en.pdf

M. Brummay et al., *The Integrated Intelligent Manufacturing approach for a sustainable, safe and profitable steel industry in Europe*, 31st JSI & 1st ESAD, Paris, 7-8 April 2014

J.-P. Birat, ESTEP & Poland, IMZ, Gliwice, 4 April 2014

J.-P. Birat, *Resource issues in the Steel Industry*, WS13, Industrial Technologies 2014, Athens, Greece, 10-12 April 2014

J.-P. Birat, *Materials & Humanity's grand challenges*, EUMAT workshop: materials as natural bridging elements between technological cultures, Industrial Technologies 2014, Athens, Greece, 10-12 April 2014

8th International Conference on Society & Materials, SAM-8, Liège, 20-21 May 2014

H. Lavelaine de Maubeuge, J.-P. Birat, *Electrification of iron metal production*, SAM8

J.-P. Birat, *Steel Industry: culture & futures*, plenary lecture, ECCO 2014, Graz

J.-P. Birat, E. Malfa, V. Colla, J.S. Thomas, *SUSTAINABLE steel production for the 2030s: the vision of the European Steel Technology Platform's Strategic Research Agenda* (ESTEP's SRA), CleanTech, TechConnect World, the world innovation conference, 15-18 June 2014, Washington, DC

The ESTEP Newsletter is issued on a regular basis by the ESTEP Secretariat to the ESTEP members. The editorial panel consists of JP Birat, Rosellina Di Santo and WHL. Moonen.

Contributions for the newsletter can be sent to the ESTEP secretariat.

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