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Foundrybench

Foundry Energy Efficiency Benchmarking

Intelligent Energy – Europe (IEE)
SAVE – Industrial Excellence in Energy

D 23 Publications of the project results in renowned professional magazines or neewspaper

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Project website: www.foundrybench.fi

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1 INTRODUCTION

The common dissemination activities had been developed in order to increase synergies between the diferent foundries, as it is priorited the visibility of IEE supported projects.

The FOUNDRYBENCH project developed:
The creation of a common foundry energy analysis method.
The creation of a benchmarking tool.
The creation of an energy efficiency index for foundries.
The creation of a database of best energy saving practices.
The creation of a good practice guide on energy.

The confidentiality of the results has already been discussed by the consortium through e-mails and during each of the progress meetings held so far. This aspect will be further discussed during the final part of the project to identify the aspects of the project that the participants do not want to disseminate and in this project will be disseminate all of the project developed.

Regarding the dissemination of the results, non-confidential results (corresponding to the some internal aspects of the foundries) will be published.

The potential interest of research and technological development (RTD) partners is to utilize the project results in the foundry sector.

The objectives of the dissemination strategy, are: (a) to ensure maximum impact of Foundrybench within and outside the project consortium, (b) to stimulate the energy efficiency on improvement of rational energy use by usage of good practices and appropriate technologies in the manufacturing domain Europe foundries and to stimulate markets as support for the activities competitiveness, (c) to inform the RTD community about these results and (d) to provide an impact on the improved a database of best energy saving practices.
The target audience for dissemination includes: manufacturing end-users first in foundry sectors and their associations, installation/machine/lines vendor sectors, other manufacturing sectors, RTD community, wider society, etc.

In Foundrybench project the potential interest of research and technological development (RTD) partners is to utilize this project in order to improve the knowledge about how to obtain energy efficiency in the foundry sector. For this reasons to publish a book of good practices with the corresponding technical sheets is the princpal challenge to do as a summery of all the data, figars and results that have been studied during the devoloped of the project.

This project will help others SAVE program projects to check scores, contrasting and develop new actions to improve other areas of energy efficiency.

2 EXPLOITABLE KNOWLEDGE AND ITS USE

The main dissemination activities planned address three audience levels:

- internal to consortium's partners
- local and national, and
- Europe-wide and global.

Dissemination activities have already started and will be intensified throughout the whole project duration.

Information about the obtained results and the benefits of the project were published at the RTD performers' websites. Participation in conferences (oral communications and/or posters) scheduled to generate interest in potential customers as well as to identify additional applications for Foundrybench project had taken place.

Workshops and seminars were organized for foundry industrial sectors and associations where potential end-users will be targeted and Publication in technical journals were made as well in technical papers in specialise journals mainly.

The diffusion of the results of the project out of the research community, to the general society, has been promoted at the end of the project. In this way, the RTDs, with the previous approval of the Steering Committee, are encouraged to provide to mass media the information of nature of the activities carried out during the project and the benefits of the obtained results to the society.

The presented results should highlight the industrial applications developed by the project more than the actual technical details of the performed work. All the partners have the obligation to disseminate and explain the good practice book published by Foundrybenh proyect.

The dissemination of the results will preferentially be made through national associations of companies of the foundry sectors of interest, as it is considered to be the most efficient way of dissemination to reach the wider community of SME throughout Europe. The target groups for the disseminated results will be SMEs from Europe mainly.

The presented plan were updated by all the partners throughout the project duration and take into account interfaces and developments with other relevant activities that may impact such activities.

Each of the participants has been questioned on the dissemination of the results of the project. The following table presents an overview of the main actions that are planned by each participants. Near60 dissemination activities have been taken place.

The Foundrybench project dissemination strategy is structured in the following activities: internal dissemination, project web site, project presentation, user interest groups, European Commission dissemination actions, European level dissemination, conferences and exhibitions. Virhe. Viitteen lähdettä ei löytynyt. presents the organisation of the planned disseminations activities along the project duration.

Table 1. Publications of the project results

Activity	Date	Partner	Amount of participants
Pirkanmaan Energia Päivät, Pirkanmaan messukeskus (energy day)	29.9.2009	AXCONS	60
Pirkanmaan PK-yrityksille EU – rahoitusseminaari (seminar)	14.10.2011	AXCONS	50
GIFA messut, Dusseldorf (fair)	29.6.2011	AXCONS	60

AX Magazine (article)	Dec 2011	AXCONS	Distrubution about 1000 pieces
Valimoviesti Magazine (article)	Dec 2011	AXCONS	Distribution / All Finnish foundries and other target group
Presentation in the workshop, Brescia "Foundrybench-project"	24.11.2011	AXCONS	57
Presentation in the workshop, Brescia "Heat treatment"	24.11.2011	AXCONS	57
PP Presentation: "Foundrybench – Project on time" J. Przybylski.Wałbrzych IV International Scientific Conference: Innovation in the Pressure Diecasting Technology	18-20.05.2011	FRI	150
PP Presentation: "Audyt Energetyczny w Odlewni" (Energy Audit in the Foundry) J. Przybylski Kocierz Conference FORESIGHT of Foundry Technology in view of Energy aspect 2030.	01-02. 06.2011	FRI	150
Poster: foundrybench International Fair Poznań	14-17.06.2011	FRI	5.000 visitors
Poster: foundrybench Kielce International Fair and exhibition METAL'11	28-30.09.2011	FRI	2.000 visitors

PP Presentation: "Ladle Preheating Review" j. Przybylski. Milano/Brescia FOUNDRYBENCH Workshop	23-24.11.2011	FRI	57
Anonse: Project EEI Foundrybench J.Przybylski. Kraków olish Foundryman Day Conference	08-09.12.2011	FRI	230
PP Presentation "Dobre praktyki dla Poprawy Efektywności Energetycznej w Odlewni" (Good Practices for Improving of energy Efficiency In the Foundry), J. Przybylski-Krynica Górska oresight ENERGY –Closing Conference	14-15.12.2011	FRI	56
Papper: "Energy Efficiency in the foundry as a base for realization of Green Foundry" M. Latałło-Anulewicz. The Foundry Review (Przegląd Odlewnictwa PL ISSN 0033-2275),	Jan/Feb. 2012	FRI	
Fonderie Magazine	March 2011	CTIF	1400 readers
Fonderie Magazine	Sep 2011	CTIF	1400 readers
Fonderie Magazine	March 2012	CTIF	1400 readers
Fonderie Magazine	April 2012	CTIF	1400 readers
Empreinte (magazine	April 2012	CTIF	

Commission Technique (Iron Technical Commission)	Feb 2012	CTIF	15 pers
Réunions de région (meeting with foundrymen)	during 2012	CTIF	20 people each meeting
Internet site	during 2012	CTIF	Nº visit is thousands a year
Cupola Furnace –presentation, Brescia, Italy	24.11.2011	CTIF	57
Article in technical journal:gestion.com	03/12/2009	TECNALIA	>3000 readers
Article technical journal: Basque Research	23/12/2009	TECNALIA	> 5000 readers
Article technical journal: NUEVA GESTION.COM	21/12/2009	TECNALIA	>5000 readers
Article technical journal: EP EUROPA PRESS	18/12/2009	TECNALIA	>3000 readers
Article technical journal: Empresa XXI	01/01/2010	TECNALIA	>7800 readers
Article technical journal: Estrategia Empresarial	01/01/2010	TECNALIA	>10000 readers
Presentation Foundrybench Workshop in San Sebastian	29/09/2010	TECNALIA	25

Presentation: "Auditorias energéticas:" Spanish Foundries Association. Bilbao Workshop	18/11/2009.	TECNALIA	30
Presentation "Alternativas de las fundiciones para la eficiencia energética": CADEM (Basque Country Energy Agency) Bilbao	19/01/2010	TECNALIA	30
POSTER FOUNDRYBENCH GiFA 2011 Dusseldorf	June 2011	TECNALIA	>5.000 visitors
GiFA 2011 Dusseldorf Distribution of several 100 leaflets on the special exhibition ground of "advanced energy efficient technologies	28.06/02.07.2011	TECNALIA	>5.000 visitors
POSTER: FOUNDRYBENCH San Sebastian WorkshopFoundry	Sep 2011	TECNALIA	50
Presentation: "Induction Furnace, Heat treatment and Plasma best practices in order to reduce energy. Milano/Brescia,Foundrybench Workshop	24.11.2011	TECNALIA	57
Article technical journal:DYNA	March 2012	TECNALIA	> 5000 readers
Article technical foundry journal:FundyPress	March 2012	TECNALIA	>500 readers
Article journal: Tecnalia express	March 2012	TECNALIA	1500 readers
A great presentation in the preclaster Foundry in AFV	During 2012	TECNALIA	100

Meehanite Japan Conference	23.10.2009	IMMCO	15
Meehanite Japan Conference	29.10.2010	IMMCO	18
Energy Efficiency Management,Brescia,Italy	24.11.2011	IMMCO	57
Presentation at a seminar	November 2011	SFA	7
Article (scientific), hopefully in "Journal of Cleaner Production	during 2012	SFA	
Article in Gjuteriet (Swedish magazine)	Feb-Mar 2012	SFA	
Presentation "Heat Storage" in the workshop, Brescia Italy	November 2011	SFA	57
Presentation "Benchmarking" in the workshop, Brescia Italy	November 2011	SFA	57
Seminar Duesseldorf	27/28.10.2009	IFG	15
Conference Frankfurt "Energieeffizienz in Gießereien	11/12.03.2010	IFG	About 80
GIFA International Fair Duesseldorf Distribution of several 100 leaflets on the special exhibition ground of "advanced energy	28.06/02.07.2011	IFG	100

efficient technologies"			
Seminar Duesseldorf	21.-22.09.2010	IFG	11
Great Foundry Technology Conference 2012 Salzburg, Austria	26.-27.04.2012 in preparation	IFG	800 expected, different sections – one will be shared
Seminar Duesseldorf	21.-22.09.2011	IFG	16
Conference Duesseldorf	22.03.2012	IFG	100
Presentation in the workshop, Brescia, Italy "Induction Furnace	24.11.2011	IFG	57
Presentation in the workshop, Brescia, Italy "Best Practice Module"	24.11.2011	IFG	57

3 DISSEMINATION OF KNOWLEDGE

Workshops

1st Workshop
The first workshop was attended in Sevres (France) from 21st to 24th of September. The agenda included Foundrybench Steering committee meeting and two day training seminars.

2nd Workshop
The second workshop was celebrated from 23 to 25 of February in Skövde (Sweden). The agenda included Foundrybench meeting with all the partners and analysis of energy efficiency situation from the point of view of CEMAFON and the foundries: Georg Fischer from Germany, JAFAR S.A. from Poland, HUT and MESSO from Finland. In addition, new Volvo Foundry in Sweden was energetically studied, analyzing the influence of the energy saving measures in the different processes.

3th workshop
The second Workshop is going to celebrate from 29 of September to 1 of October in San Sebastian (Spain).

This second workshop was after the meeting of the 3rd Commission CAEF was celebrated on 15th May and it was explained all about the Foundrybench project to all the presents that are from different universities and several technological centres from European countries as Finland, Germany, Sweden, Poland, Portugal and Spain.

4th workshop
The meeting of the fourth workshop is going to celebrate during the edition of the GIFA in 2011. The 12th International Foundry Trade Fair GIFA will take place in Düsseldorf between 28 June and 02 July 2011. It is the most important trade fair for foundry technology in the world celebrated every four years, last one in 2007. The GIFA is the platform for excellent business activities and is the indicator of the innovations which will orientate the future of the foundry. At the same time there is trade fair as Metec, Thermprocess and new Cast.

In the GIFA partners were ready to attend a Congress GIFA in relation with Efficiency Energy. We presented the first results of Foundrybench by our partner Dr M.Tapola from Axcom and the audience was attend and participated asking many questions in the question time.

The 5th Workshop was taken place in Milan in Assofond (Italian Foundry Association) and on 23 and in Brescia in the AIB (Brescia Industrial Association) was presented
a workshop by the title: How to make foundries more energy efficient?. The participants were mainly Italian foundry representatives.

The agenda of the workshop was as follows:

FOUNDRYBENCH – Energy Efficiency in Foundries

"How to make foundries more energy efficient?"

24.11.2011 Brescia, Italy

Place: AIB (Brescia Industrial Association), Via Kefalonia 60, Brescia
Time: 10.00-13.00

Workshop Agenda

10.00	Welcome Coffee
10.30	Energy efficiency in Foundries and Foundrybench -project (Markku Tapola AX-Cons Ltd)
10.45	Benchmarking results (Emma Svensson, SFA)
11.10	Good Practice Guide (Joachim Helber, IfG)
11.20	Case: Good practice from Italian foundry, Torbole (Mr. Padello)
11.30	Energy Saving: Selected Solutions of Good Practices
	Ladle preheating (FRI, Jaczek Przybylski)
	Cupola technologies (CTIF, Jean-Marc Piatek)
	How to run the foundry in energy effective way? (IMMCO, Pekka Kemppainen)
	Induction furnace good practices to reduce kwh/t & plasma new heating process for maintenance furnaces (Technalia, Patricia Caballero)

	Heat storage – Storage of recycled energy for heating of premises, minimizing variations in the heat system and reducing peak load (SFA, Per Sommarin)
	Induction furnace operation (IfG, Joachim Helber)
	Heat recovery of Gas fired heat treatment furnaces and Fettling shop filtration plants (AX-Cons Ltd., Markku Tapola)
12.45	**Discussion**
13.00	**End of Workshop and Brunch**

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Project Web Site

The project web site has been established at www.foundrybench.fi since the beginning of the project. The website provides wide dissemination of the project results and publications as well as general information about the project activities. All public deliverables are available on the internet site.

Project Presentation

Foundrybench -project prepared and published a brief project presentation in English, containing key information about the project (e.g. participants, approach, expected achievements etc.). In addition, this presentation is also issued in a shorter version, as a leaflet, available on the project's website and within other dissemination activities.

As an additional way to reach the principals some of the deliberables were translated from English into Finnish, Spanish, Swedish, Polish, French and German languages (Italian as well).

European Level Dissemination

The RTD partners in the consortium have strong connections to other RTD institutions across Europe. Some of these organisations have expressed interest in the results of the project. Therefore, the RTD partners in Foundrybench project intend to disseminate the results of the project within a larger audience.

4 PUBLISHABLE RESULTS

This section provides a summary of good practices which is a flash of ideas of what would be a guide of good practices in energy efficiency. The content here presented is ready to be published by Foundrybench partners as a simple good practice guide on energy efficiency for foundries. This guide could be used in others sectors according to the metalic transformation


INTELLIGENT ENERGY EUROPE
FOUNDRYBENCH
Good Practice Guide on energy saving potentials and opportunities for Foundries
AX CONSULTING
AX-LVI Consulting Ltd. Finland
HERMIA
Hermia Ltd. Finland (Coordinator)
Centre Technique des Industries de la Fonderie, France
IfG
Institut fuer Giesserteitechnik GmbH, Germany
swerea SWECAST
SweCast AB, Swedish Institute of Casting Technology, Sweden
Foundry Research Institute, Poland
The International Mechanite Metal Co Ltd, United Kingdom
tecnalia
Tecnalia, Spain