

# Deliverable 6.2 Public Web site

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Actual delivery detay	M6 –
Actual delivery date:	M18

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#### **Document** approval

Name	Position in project	Organisation	Date	Visa
K. VanGeem	Coordinator	UGENT		
P. Lenain	Quality manager	AYMING		

#### **Document history**

Γ	Version	Date	Modifications	Authors
Γ	V0	21/03/2017		B. Cuenot
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### EXECUTIVE SUMMARY

### 1.1 <u>Description of the deliverable content and purpose</u>

Deliverable 6.2 reports on the Public website that has been set up. The functionalities and available information are presented. The contents in terms of results are also summarized.

### 1.2 <u>Brief description of the state of the art and the innovation</u> <u>breakthroughs</u>

N. A.

### 1.3 <u>Corrective action (if relevant)</u>

Following the review, the Monitor commented:

The document does not present clearly the functionalities and available information in each of the websites. Include the publications already available in each of the websites. Please refer to the information already provided namely EC funding acknowledgment. Please review it and use the IMPROOF Report template.

The updated template has been used. The functionalities and information have been detailed. The official acknowledgment has been added.

### 1.4 IPR issues (if relevant)

N. A.



### 2 PUBLIC WEB SITE

### 2.1 Graphical Chart

The website address is: <u>https://improof.cerfacs.fr/</u>. It has been built with project graphical chart already used in the project logo and leaflet.

A person of CERFACS (Marie Labadens) is in charge of regular updates of the website, the publication approval procedure and the publication of project results submitted by the partners.

#### 2.2 Home page

The home page is illustrated in the figure below.

Integrated model guided	I process optimization of steam cracking furnaces
HOME PARTNERS PEOPLE EVENTS PUBLICATIONS OUTPUTS & RESULTS APPROVAL REQUEST FORM	۹
* / HOME	
Welcome to IMPROOF	News +
IMPROOF is a European Project alming at improving the energy efficiency of steam cracking furnaces, while reducing emissions of greenhouse gases and NOx. The strongly industrial oriented consortium is composed of 7 industrial partners, including 2 SME completed by 2 RTO and 2 Universities, showing a clear and strong path to the industrial and economical world. Duration: Start date: 1 September, 2016 End date: 31 August, 2020	Welcome to IMPROOF © 7 MARCH 2017 • On November 5-9, 2018 XXIII international Conference on Chemical Reactors (CHEMREACTOR 23) to be held in Ghert, Beigium • On April 24, 2018 '2018 Ethylene Producers Conference (EPC) ' to be held in Orlando, Floride (USA)
	On April 23-24, 2018 Workshop on READ MORE READ MORE
This project has received funcing from the European Union's Horizon 2020 research and Innovation programme under grant agreement No 72370"	Booklet
Objectives	
The objective of IMPROOF is to drastically improve the energy efficiency of steam cracking furnaces by at least 20%, in a cost effective way, while simultaneously reducing emissions of greenhouse gases and NOx per ton ethylene produced by at least 25%.	\$14000 - \$4\$14000 - \$4\$14000 - \$4
One important way to reduce the energy input in steam cracking furnaces is to <u>reduce coke formation</u> on the reactor wall. The use of either advanced coil materials, combined with 3D reactor designs, improved process control, and more uniform heat transfer will increase run lengths, reducing simultaneously CO2 emissions and the lifetime of the furnaces.	DOWNLOAD
Biogas and bio-oil will be used as alternative fuels because they are considered renewable, and hence, decrease net CO2 production.	
Application of <u>high emissivity coatings</u> on the external surface of the radiant coils will further substantially improve the energy consumption. Less firing is required to reach the same process temperatures in the radiant coils. This will reduce fuel gas consumption and CO2 emissions by 10 to 15%.	





It has been designed to be appealing, thanks to the color palette, the text style and a choice of images. It offers an easy access to the menu and gives first some general information about the project. It also give access to the leaflet which can be downloaded and contains a "News" flash box.

## 2.3 Main menu

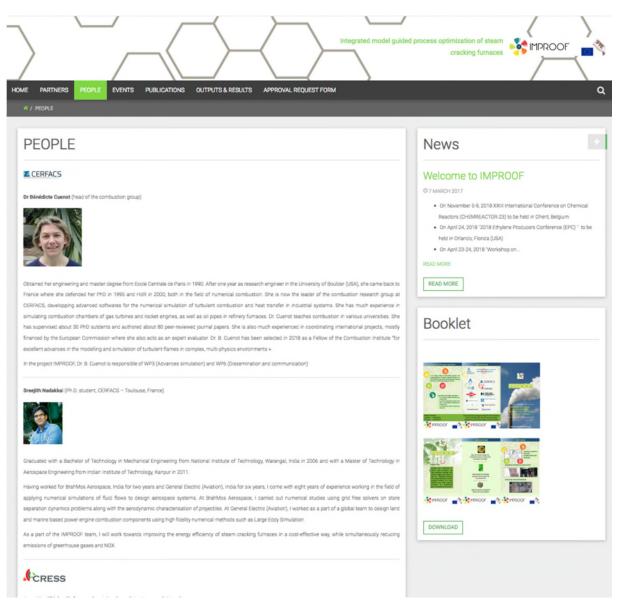
The menu is the following:

- Home page
- Partners: list of partners with logo and role in the project. Contact mails are also given

HOME PARTNERS PEOPL		d process optimization of steam cracking furnaces
IF / PARTNERS	consortium is composed of 7 industrial partners, including 2 SME completed by 2 RTO and 2 universities. This partnership shows a strail and economical world with the involvement of all actors of the furnaces business. Gheret University coordinates the project and leads the development and integration of furnace system innovations through plot plant testing and advanced process simulation (kinetic modeling and CFD modeling). Furthermore, Ghert University will be involved in the scaling up study as well as in the sustainability assessment of the new technology. <i>Dr. Prof. Kevin Van Geem</i> is the project coordinator. <u>Contact</u> kevin vangeem@upint.be	✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ </th
• Partners	marko djokio@upent.be www.ict.upent.be	Booklet
AVGI	AVGI will give a qualitative and quantitative evaluation of the techno-economic, environmental and operational advantages of developments made in IMPROOF. Dr. Ir. Andrés Mufloz currently works as R&D Manager of AVGI. He is responsible for the technical and commercial development of COLISIM1D, a highly accurate and flexible simulation package for steam cracking. <u>Contact</u> : andres.munoz@lavgl.be guy.maring@telenet.be	
ayming   💮   internet	www.avgl.be Ayming, with UGENT, helps the partners to focus on their H&D activity by following up the project (strategic, admin and financial). Ayming also participates in the dissemnation of the results through the stakeholders management and networking. On the project outcome valorization activities, Ayming focuses on the exploration and commercialization of the project results. Pre- business plan, key technology identification as well as ecosystem analysis and benchmark are proposed to clearly design the cuickest route to the market. On this aspect, intellectual property will also be managed by Ayming to assure IP capture and ultimately propose a complete freecom to operate to the whole consortium. <u>Context</u> plenainglayming com	

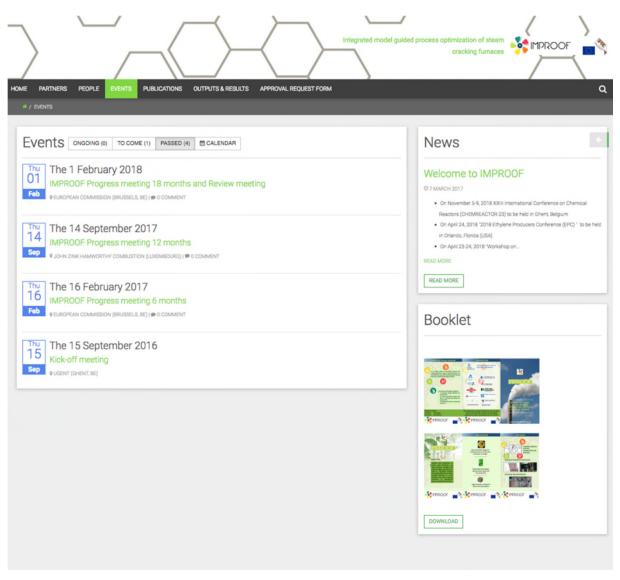


#### - People: list of involved researchers with short bio and picture





- Events : list of past, present and future events organized within the project



- Publications: list of publications done by the partners, with link to the conference web site for conference papers and downloadable pdf file for open access papers. Indeed for each publication the authors are asked to provide open access and a pdf file of the paper.

The publications already realised by the consortium are the following:

"Improof: Integrated Model Guided Process Optimization of Steam Cracking Furnaces" K Van Geem in 2018 Ethylene Producers Conference (EPC), Orlando, Florida (USA) – April 24, 2018

"New trends in olefin production" K. van Geem in *EEPC 2017 Ethylene seminar, Dresden (Germany)* – October 25-27, 2017

"Exploring the reactivity of C4-C6 linear alcohols: from jet stirred reactor and rapid compression machine experiments to operating regimes in a HCCI



engine." M. Pelucchi & al. in 3rd General Meeting and Workshop on SECs in Industry of SMARTCATs Action, Prague (Czech Republic) – October 25, 2017

"Poster: Etude de l'oxydation de molécules représentatives d'une bio-huile en réacteur agité par jets" *S. Namysl & al. in SFGP 2017* – July 11-13, 2017

"Experimental study of oxidation of bio-oil surrogates in jet-stirred reactor" S. Namysl & al. in *CLEAN-Gas Combustion Summer School Brussels* – June 26-29, 2017

**"Poster: Temperature oscillation of methane oxidation in a jet stirred reactor"** Y. Song & al. in *International Bunsen Discussion Meeting on Chemistry and Diagnostics for Clean Combustion* – June 21-23, 2017

"IMPROOF: Integrated Model Guided Process Optimization of Steam Cracking Furnaces" M. R. Djokic & al. in International Conference on Sustainable Design and Manufacturing – April 26-28, 2017

"Integrated model guided process optimization of steam cracking furnaces" K. van Geem & al. in *EPC2017* – March 28, 2017

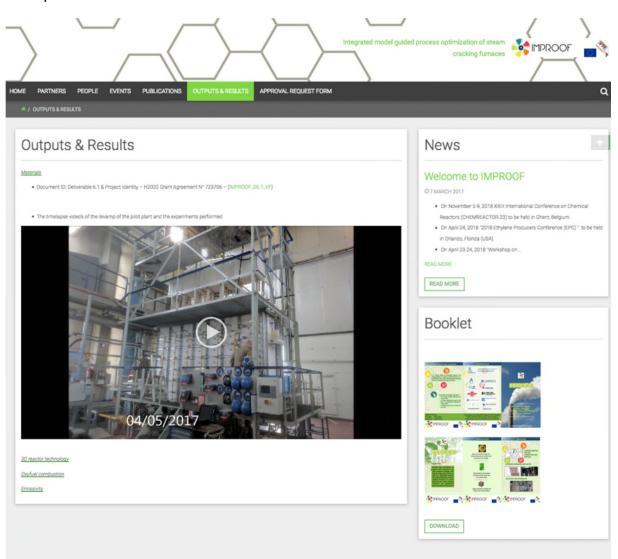
Book series

M. R. Djokic, K. M. Van Geem, G. J. Heynderickx, S. Dekeukeleire, S. Vangaever, F. Battin-Leclerc, G. Bellos, W. Buysschaert, B. Cuenot, T. Faravelli, M. Henneke, D. Jakobi, P. Lenain, A. Munoz, J. Olver, M. Van Goethem, P. Oud. **IMPROOF: Integrated Model Guided Process Optimization of Steam Cracking Furnaces.** *Smart Innovation, Systems and Technologies, Springer (68), pp. 589-600, 2017.* 

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PUBLICATIONS	News
Conferences / Workshops	Welcome to IMPROOF
"Imported: Helped Model Devices Optimization of Steam Cracking Parnases" K Van Germ in 2018 Ethylene Producers Conference (SPC), Orlands, Plancia (USA)           - April 24, 2018           "New trends in olefo production" K, van Germ in EEPC 2017/Ethylene sammat; Desden (Germany) – October 25:27, 2017           "Debuter be neerbind production" K, van Germ in EEPC 2017/Ethylene sammat; Desden (Germany) – October 25:27, 2017           "Policitaria B, and Gereal Meeting and Workshop on EECC in Industry of 2004/REGN, Action, Player, Clean Pachadic   October 25, 2017           "Policitaria B, and Gereal Meeting and Workshop on EECC in Industry of 2004/REGN, Action, Player, Clean Pachadic   October 25, 2017           "Policitaria B, and Gereal Meeting and Workshop on EECC in Industry of 2004/REGN, Action, Player, Clean Pachadic   October 25, 2017           "Statis: Challe de Toryolation de molitarioe representatives e industry of 2004/REGN action, Player, Clean Pla	O 7 MARCH 2017  • Ch Noverbar 64, 2018 XXIII streamstand Conference on Chenneal Reactors (D-MRRACTOR 20) to be held in Chent. Belgium • Charles 12, 2018 Conference (SIC) - to be held in Orlinois, Roma (SIA) • Ch Agert 23, 43, 2018 Yorkshop cn READ MORE READ MORE
"MAPROOP: Integrated Model Guided Process Optimization of Steam Checking Furnaces" M. R. Upsice & al. in International Conference on Bustainable Design and Manufacturing - April 26-28, 2017	Booklet
*Integrated model galded process splitization of steam cracking fumaces* K. van Germ & Jr. II. (2020)? – Murch 20, 2017 Book series M. R. Bjoloc, K. M. Van Germ, G. J. Heynderloo, S. Delevanter, S. Vanganne, F. Battin-Lacking, D. Bellow, W. Bayaschart, B. Currot, T. Faravell, M. Hunnele, D. Jakob, P. Lenan, A. Municz, J. Ower, M. Van Gotter, P. Out, IMPROPT: Integrated Model Galded Process Optimization of Steam Cracking Fumaces. Direct Innovation, Systems and Technologies, Springer (M), pp. 589-600, 2017.	



- Output & results : illustrations of recent results and pdf files of Deliverable public reports





- Approval request form: form to be filled to ask for approval by the Consortium of any new publication.

$\rangle$	Integrated model guide	ed process optimization of steam cracking furnaces
	UTS & RESULTS APPROVAL REQUEST FORM	٩
Approval request form		News
Approval request form IMPORTANT: * Acknowledgements : The work leading to this intervention has receive agreement n*723706 and from the COST Action CM1404 *Chemistry of smart energy Date of the request *  04/12/2018  Applicant Name *  Figure 4		Welcome to IMPROOF 07 MARCH 2017 • On November 5-9, 2018 XXIII International Conference on Chemical Reactors (CHEMREACTOR 23) to be held in Chert, Belgium • On April 24, 2018 '2018 Ethylene Producers Conference (EPC) * to be held in Orlanco, Florida (USA) • On April 23-24, 2018 'Workshop on READ MORE READ MORE
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Description of the document Author(s) •		
Title • Type of publication •		
Name of the Journal or the Conference •		DOMNTOVD
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## 3 SPIRE WEB SITE

The project is also visible in on the SPIRE web site, see below. However the limited functionalities of the platform have made it necessary to look for an alternative platform.

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