

## LARGE VALORISATION ON SUSTAINABILITY OF STEEL STRUCTURES – LVS3

### Goal of the project

During the last decade, a lot of research projects have been funded to develop methodologies, systems and products aiming at improving the thermal efficiency as well as the global environmental footprint of steel buildings. The new standard EN15804 intended for environmental calculation of buildings takes now into account the fact that steel is a recyclable material (Module D). This project summarises all this acquired knowledge into a set of documents and two software, translate them into different European languages and finally, disseminate all over Europe by organising workshops.

### Short description of the project

LVS3 is a valorisation project, which aims to promote the recently developed knowledge and design methodologies concerning the environmental impact assessment of steel and composite buildings.

### Project implemented by

- ArcelorMittal Belval & Differdange S.A., Luxembourg
- Politehnica University of Timisoara, Romania

### Implementation period:

01.07.2013 – 15.12.2014



### Main activities

The project is divided 3 main parts:

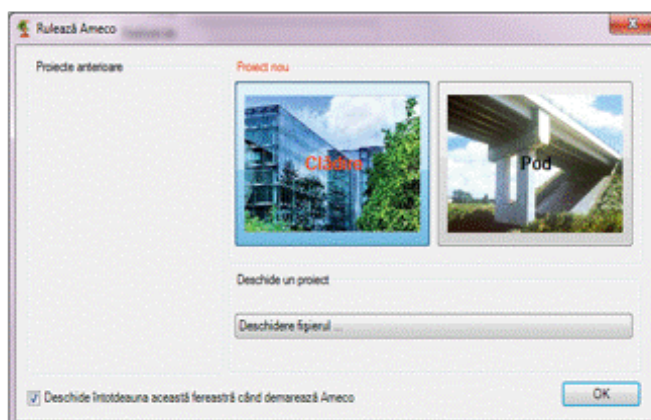
- Creation of supporting documents (background, design guide, leaflet, software, presentations);
- Translation of documents into national languages;
- Organisation of a special training for the project's partners;
- Dissemination of the knowledge into the different European countries.
- Preparation of all data for further dissemination based on HTML – web version;

In order to achieve the objectives of the projects, theses different parts have been divided into six work packages, i.e.:

- WP1: Realisation of documentation and software about the environmental assessment of steel and composite buildings. All these documents and software interface have be written in English;
- WP2: Translation of the documentation and software interface;
- WP3: Training for partners involved in seminars;
- WP4: Organisation of Seminars in each of the participating countries;
- WP5: Post dissemination activities;
- WP6: Coordination.

### Results

- The main results are the translation of the documents and software in Romanian language and dissemination of the knowledge by organization of a seminar in December 5th, 2014.
- The audience consists of designers, architects, developers, students and professors and last but not least the decision makers and authorities.
- During the seminar, printed documents as well as USB Keys that contain all data were distributed.
- A number of 83 participants attended the seminar.



## Applicability and transferability of the results

At this moment the industry and the academics have good understanding of the assessment of the environmental footprint and the improvement of the thermal efficiency of steel and composite buildings.

The added value is in the fact that the research outcomes have been presented to engineering community throughout Europe.

By translating the design guides and software into local languages, the partners will access even broader audience.

Finally, introducing the methodology in the whole Europe at the same time follows the systemised approach represented by Eurocode and EN Standards to promote homogeneous design.

## Financed through/by

- Research Fund for Coal and Steel
- Total budget of "LVS" project: 376.006 €
- Budget of the Politehnica University of Timisoara: 31910 €

## Research Center

The Research Centre for Mechanics of Materials and Structural Safety – CEMSIG, Politehnica University of Timisoara.

## Research team

- ArcelorMittal Belval & Differdange SA (Luxembourg)
- University de Ljubljana (Slovenia)
- Ceske Vysoke Ucení Technike V Praze (Czech Republic)
- University of Athens (Greece)
- University of Timisoara (Romania)
- University of Naples Federico II (Italy)
- University of Vilnius (Lithuania)
- University of Warsaw (Poland)
- Tecnalia (Spain)
- University of Miskolc (Hungary)
- University of Coimbra (Portugal)
- University of Tallinn (Estonia)
- CTICM (France)
- University of Liège (Belgium)
- Bouwen met Staal (Netherlands)
- Stalbyggnadsinstitutet Stiftelser (Sweden)
- AC&CS – CRM Group (Belgium)
- Club Asturiano de la Innovación Asociación (Spain)

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