Retrofitting Equipment for Efficient Use of Variable Feedstock in Metal Making Processes - REVaMP

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Lead Beneficiary: **BFI**

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Dissemination level

PU public ☒

CO Confidential, only for members of the consortium (incl. the Commission Services) ☐

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1. About REVaMP

The main objective of the project “Retrofitting Equipment for Efficient Use of Variable Feedstock in Metal Making Processes” (REVaMP) is to develop, adapt and apply novel retrofitting technologies to cope with the increasing variability and to ensure an efficient use of the feedstock in terms of materials and energy.

For this purpose, existing metal production plants shall be retrofitted with appropriate sensors for scrap analysis and furnace operation. Furthermore, the selection of the optimal feedstock in terms of material and energy efficiency shall be improved by application of appropriate process control and decision support tools. Also, a solid scrap preheating system operated with waste derived fuel shall increase the energy efficiency of the melting processes. To monitor and control the process behaviour in an optimal way, model-based software tools will be developed and applied.

The retrofitting solutions will be exemplarily demonstrated within three different use cases from the metal making industry, namely electric and oxygen steelmaking, aluminium refining and lead recycling. The performance of the different technologies will be assessed, and the benefits will be evaluated in terms of economic and ecological effects, as well as cross-sectorial applicability in other process industries.

2. Introduction and Summary

This deliverable D9.4, “Final dissemination event: joint dissemination workshop with other projects”, is included in the work package WP 9 “Dissemination, valorisation and exploitation of the project results” of the project. The corresponding task is Task 9.3: “Organisation of Dissemination and Exploitation Events”

BFI with support of all partners prepared a contribution for a joint workshop performed together with the RETROFEED project, which is running in the same call as REVaMP, and with the Horizon Europe project INITIATE. Sidenor I+D joint panel discussion at the end of the workshop, to discuss with representatives of the other two projects and a moderator about the achieved project results and their application in process industry.

Furthermore, BFI represented the REVaMP project at the ECOMONDO Expo at the booth of the EU Commission and with a presentation in one of the accompanying conference sessions entitled “Operational and assessment tools for the management of materials and energy in a circular economy”.

3. Joint Workshop with other SPIRE projects

BFI with support of all project partners prepared a contribution for a joint workshop performed together with the RETROFEED project, which is running in the same call as REVaMP, and with the Horizon Europe project INITIATE. The organisation of the on-line workshop was done by the RETROFEED project. **Figure 1** shows the invitation for this on-line workshop, which was performed on the 26th of September 2023.

Fig. 1: Invitation to the joint on-line workshop of SPIRE projects

The agenda of the workshop was as follows:

- Setting the scene: meeting the Green Deal targets (EUROFER)
- Solutions:
  1. Characterisation and intelligent use of metal scrap (REVaMP) - BFI
  2. Decision support & retrofitting tools (RETROFEED) – CIRCE/OPTIT
  3. Industrial symbiosis between the steel and ammonia sectors (INITIATE)
- Conclusions : panel discussion on synergies, replication and technology uptake.

BFI presented most of the solutions developed in REVaMP with a presentation entitled “Characterisation and intelligent use of metal scrap”. Sidenor I+D joined the panel discussion at the end of the workshop, to discuss with representatives of the other two projects and a moderator about the achieved project results and their application in process industry.

The workshop was visited by about 30 participants. It was recorded, and the presentations were distributed among the participants.

4. ECOMONDO Expo and Conference

The REVaMP project was presented by BFI at the booth of the European Commission at the ECOMONDO Expo 2023, which took place from 7th-10th of November at Rimini Expo Center. The REVaMP project was present at the booth on the 8th of November, together with two other projects which are running under funding programs handled by HaDEA.

Fig. 2: Advertisement for the Ecomondo Expo.

Figure 3 shows the part of the booth where the REVaMP project was presented. The solutions which were developed in the project were demonstrated with several videos, which had been recorded for this purpose. The videos were displayed in a loop on a video screen. About 15 visitors showed interest in the project and asked for more information via the project flyers or the project web site.

Fig. 3: Presentation of the REVaMP project at the booth of the European commission

Furthermore, BFI gave an overview presentation of the REVaMP project as invited speaker at the ECOMONDO conference in a session entitled “Operational and assessment tools for the management of materials and energy in a circular economy”, which was held on the 9th of November at the Expo site. About 50 participants joined the conference session.

5. Conclusions

The REVaMP project has been presented at a common on-line workshop in combination with two other Horizon projects and was presented at the booth of the European Commission at the ECOMONDO Expo with focus on solutions for the circular economy. By these two dissemination actions it was presented to interested stakeholders outside the metal making process industry area.