Blueprint “New Skills Agenda Steel”: Industry-driven sustainable European Steel Skills Agenda and Strategy (ESSA)

Mid-term Conference of the European Steel Skills Alliance (ESSA)

„Skills and Jobs in the Future-Proven Steel Industry“

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A. Polo del Acero (Steel Innovation Cluster)

www.polodelacero.com

Mission:

✓ Boosting leadership of Steel Innovation Cluster by means of *technological differentiation* of its products and processes.

✓ **Promoting technological collaboration** that allows assuming projects with large scope, attracting talent and new companies.

✓ **Promoting innovation and technology development** among the Cluster members.

The objectives include the **promotion of training and qualification** in all matters related to R&D&i within the Steel Value Chain.
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Main features

- **19 partners**
- **Turnover** close to 5,000 M€ (80% partners cover 80% of the sector)
- Almost 10,000 **direct employment** (49% of the sector).
- **Working Groups for turning the strategic approach** into outcomes for the partners.
- **R&D Activities** and **Training** as example
9. Regional Rollout Steel Regions

Asturias region covers several value chains with steel products. The clusters aims at improving competitiveness at the same time that facing current challenges such as twin transition and promoting the skills for the future.

Sectors Involved

Working Groups
B. CALDIA

Training Initiative

- **3 times since 2017.** More than 150 participants from Industry.
- Open to partners all along the **Steel Value Chain**
- Including tailored modules for the **promotion of Digital Competences**
- **Digital skills** include Advanced Manufacturing, Sensors, Data, Process Simulation or Digital Twins
- Special focus on solving particular challenges **under collaborative schemes**
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Training course (200h) with an integrated approach
- Arranged for industry technical staff and for young professionals
- Involvement of steelfmaker and metal processing firms, as well as Materials Research Centre and University.

Diagram:
- Steelmaking
- R&D Projects
- Proj. Management
- Industry 4.0.
- Steel Products
- Characterisation
- Mech. Properties
- Welding
- Corrosion
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B. High regional involvement in education/training activities and in ERASMUS+ projects with direct impact on Steel industry

ERASMUS+ Blueprint “SAM: Sector Skills Strategy in Additive Manufacturing” where IDONIAL is a key partner

+ SAM aims to tackle the current European need for developing an effective system to identify and anticipate the right skills and profiles for sectors where Additive Manufacturing (AM) plays a role.

+ In response to the increasing labour market needs, thus, contributing for the smart, sustainable and inclusive growth and industrial implementation of AM.

*International Qualification system established implemented through a network of AM training Centres

www.skills4am.eu
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-IDONIAL (Asturias Region) as 1st Spanish Authorised Training Body

-Profiles created for METAL AM processes in industry and training courses in place:
  Operator, Designer, Inspector and Supervisor

- Design new training curricula and assessment tools
- Innovative training approaches
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C. STEEL SQUARE. An strategic asset

Open Innovation Ecosystem blending material science, manufacturing, technology and digitization
9. Regional Rollout Steel Regions

STEEL SQUARE. An strategic asset

Origin: Strategic Partnership Between ArcelorMittal and Idonial

Key Objectives

- Collaboration to become competitive
- Time-to-Market Reduction
- Lab scale
- Added Value: New products and processes
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STEEL SQUARE. An strategic asset

1. Composition and process design
2. Controlled induction melting
3. Chemical analysis
4. Machining
5. Heating
6. Hot / Cold rolling
7. Cutting/Thermal coating
8. Controlled Cooling
9. Mechanical properties testing
10. Microstructure analysis
11. Cold rolling
12. Controlled annealing and hdg
13. Functional coatings
14. Coating testing
15. Auxiliary tech.
ArcelorMittal Spain Holding and ArcelorMittal Poland are partners of ESSA Project.

Both countries have regional campuses of ArcelorMittal University.

Both campuses can be a key factor in the test and roll out of ESSA project tools.
9. Regional Rollout Steel Regions

E. CONCLUSIONS

- **Asturias region** has a powerful role in Steel-related developments.

- Activities in training and acquisition of **skills adapted to the Digital Transformation** are ongoing.

- **Collaborative R&D Approaches** are being promoted together with Steelmaker, RTOs and industries involved all along the value chain.

- **Steel Square** is a unique facility that provides solutions in and for steel.
Thanks for your attention!
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