I progetti a partecipazione ENEA finanziati dalla UE

qSOFC

Automated mass-manufacturing and quality assurance of Solid Oxide Fuel Cell stacks

Dati progetto

Coordinatore:
VTT TECHNICAL RESEARCH CENTRE OF FINLAND - Finlandia
Responsabile ENEA:
MC PHAIL STEPHEN JOHN  DTE-PCU-SPCT
Sito WEB:
http://www.qsofc.eu

Descrizione:
qSOFC project combines leading European companies and research centres in stack manufacturing value-chain with two companies specialized in production automation and quality assurance to optimize the current stack manufacturing processes for mass production. Currently the state-of-the-art SOFC system capital expenditure (capex) is 7000...8000 €/kW of which stack is 1000 €/kW and create a further cost reduction potential down to 500 €/kW at mass production (2000 MW/year).

During the qSOFC project, key steps in cell and interconnect manufacturing and quality assurance will be optimized to enable mass-manufacturing. This will include development and validation of high-speed cell-manufacturing process, automated 3D machine vision inspection method to detect defects in cell manufacturing and automated leak-tightness detection of laser-welded/brazed interconnect-assemblies.

The project is based on the products of its’ industrial partners in stack-manufacturing value-chain (ElringKlinger, Elcogen AS, Elcogen Oy, Sandvik) and motivated by their interest to further ready their products into mass-manufacturing market. Two companies specialized in production automation and quality control (Müko, HaikuTech) provide their expertise to the project. The two research centres (VTT, ENEA) support these companies with their scientific background and validate the produced cells, interconnects and stacks.

Effective exploitation and dissemination of resulting improved products, services, and know-how is a natural purpose of each partner and these actions are boosted by this project. This makes project results available also for other parties and increases competitiveness of the European fuel cell industry.

Attività svolta da ENEA:
L’ENEA è coinvolta nelle seguenti attività:

- Testing delle celle prodotte da uno dei partner del consorzio e relativa validazione;
- Supporto alle analisi di impatto economico dei processi produttivi ottimizzati;
- Disseminazione e valorizzazione del know how, diffusione dei mercati e promozione del prodotto stesso facendo leva sulle piattaforme dedicate europee.

Programma Quadro:
HORIZON 2020
Programma UE:
JTI - Hydrogen
Tipo di progetto:
### Partner del progetto

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**Keyword**

Keyword associate al progetto dal database di CORDIS

- HYDROGEN AND FUEL CELLS
- INDUSTRIAL MANUFACTURE
- SCIENTIFIC RESEARCH

**Altre Keyword non presenti nel database di CORDIS**

- Fuel cell