

# Economically welding in a healthy way

## Purpose and Objectives

The ECONWELD Project came into being as a joint effort to stop the perceived downward spiral in which the welding activity is currently heading.



Fig. 1 – Ergonomic Research under the Econweld Project

## Significant Achievements

With the Project now in its final stage, important achievements have been reached:

### Innovative Welding Tools:

1. An aspiring welding torch, capable of capturing the fumes from the welding activity, while also providing increased productivity;
2. A remote controlled extensible hydraulic arm;
3. An innovative ventilation concept for welding helmets allowing for an increase of air flux efficiency and reduced discomfort for the welder

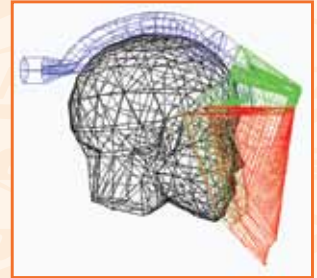


Fig. 2 – CAD Modelization of Welding Helmet with new Ventilation System

### Software Development:

1. A cost calculation software (COSTCOMP) allowing for estimations of costs and cost comparison between different welding process / practical procedures.
2. A virtual welding tool (Viweld) for support in the decision-making process in terms of welding fumes and ergonomics issues;



Fig. 3 – Vertical Welding with New Welding Torch

### Partners:

EFW (PT) / NIL (NL) / MHTe (HU) / RIPH (PL) / DVS-FV (DE) / ValkWelding (NL) / Inovamais (PT) / Almor (UK) / Jesva (CZ) / ETP (SK) / Aspirmig (IT) / IIS (IT) / IR JB van den Brug (NL) / MS di Mauro Sala (IT) / Plasma Team (IT) / DIMEL (IT) / CFD Engineering (IT) / IST (PT) / IS (PL)



Fig. 4 – Welding Arm improving Welding Process