WHAT DOES THE FACTORY OF THE FUTURE LOOK LIKE?

ENGINEERED BY:
LOCAL VACUUM ELECTRON BEAM WELDING
WELDING THAT'S 30 TIMES FASTER TO HELP YOU SPEED AHEAD OF THE COMPETITION

High speed single pass low heat input welds.

SINGLE PASS WELDS IN THICKNESSES UP TO 300MM WITH NO CONSUMABLES

Superior and completely revolutionary welding technology.

UNLOCK THE TRUE MANUFACTURING POTENTIAL OF YOUR FACILITY

Massive increases in throughput that will change your Business Model.

RE-INVEST THE MILLIONS SAVED

Bottlenecks move from your welding shop to other areas that you can now afford to upgrade.
CREATING THE FACTORY OF THE FUTURE

Quality
Single pass, low heat input welds result in reduced distortion. Autogenous electron beam welding facilitates continuous/repeatable high quality welds.

Lower Carbon Footprint
Ebfow requires as much as 75% less power/electricity than conventional arc processes.

Economy
Costs are driven down by huge increases in throughput. Pre-heat can be omitted and NDT testing can be performed immediately after welding, saving more time. No welding consumables required and much lower energy usage.

Productivity
High volume factory throughput. Increase your sales by a magnitude as your factory capacity just went through the roof!
APPLICATIONS

Oil and Gas
- Anchor Piles
- Jacket structure including nodes, cones, braces, legs and conductor framing
- Piles and followers
- J-tubes and caissons
- Riser clamps
- Flotation tanks and buoyancy tubes
- Module support frames including nodes, cones, braces
- Module framing including nodes, columns, fabricated beams
- Flarebooms
- Subsea structures such as manifold and production system support

Nuclear
- Pressure vessels for conventional, small modular reactor (SMR) and micro modular reactor (MMR) fabrication as well as associated pressure retaining and structural components

Shipbuilding
- Modular joining
- Hull shell
- Decks
- Tanks
- Web frames
- Bulkheads

Civil Engineering
- Flat plate
- Flat plate-strip
- Long product open sections i.e. I&H universal beams and columns
- Structural hollow sections
- Plate girders

Offshore Renewable Energy
- Monopiles
- Jacket structure including nodes, cones, braces, legs and conductor framing

Pressure Vessels
- Process Vessels (columns, reactors, separators, drums etc)
- Heat Exchangers (directly cooling towers, indirectly shell & tube/plate)
- Storage Tanks

Wider applications that require thick joint welding
- General Construction
- Earthmoving equipment
- Engineering and machinery
- Mining and quarrying
- Turbine generators
- Tunnel boring machines
To date it’s only been possible to perform electron beam welding – a key technology in the fabrication of large, heavy wall structures – at sites equipped with a vacuum chamber large enough to house the structures under manufacture. Ebflow’s coarse vacuum can be mounted on tracks and operated locally. The technology can be used in any plant where large components are welded.

With massive increases in throughput, this has the potential to change your business model and unlock the true manufacturing potential of your facility. In tests, Ebflow has been shown to be 20 to 30 times faster than conventional arc welding, offering transformational gains in productivity. It also uses less power than conventional arc welding processes, thereby lowering a plant’s carbon footprint.

Among the myriad of other benefits are the ability to perform low-heat input welds that result in reduced distortion – ensuring quality – and the option to perform NDT testing immediately after welding, fast-tracking the manufacturing process and driving down costs.
WHO IS CVE?

CVE designs and builds Electron Beam Welding Systems and has more than 60 years manufacturing experience from its base in Cambridge UK with over 1200 systems installed globally. With 95% of our equipment exported from the UK we have an excellent legacy business supporting them with sales and Service Centres in Beijing and Springfield Massachusetts. Ebflow represents the latest in a long line of EB innovations.