

Advantages of QED's Immersion Burner Galvanizer and Galfan® Furnaces

The QED Immersion Burner Furnace is built to coat continuous in-line steel wire strands with either zinc or Galfan®. The wires dip into a longitudinal bath of molten metal, pass under a ceramic sinker and exit the bath through a wiping system. The molten metal is contained in a special ceramic lined bath designed for a long trouble free life of over 30 years. The bath is heated by the latest generation gas fired Immersion Burners using recuperative technology that maintains a high thermal efficiency.



- Rugged Construction & Latest Generation Refractory
- High Efficiency and Low Emissions
- Patented Combustion System
- PLC Control with Remote Monitoring
- Excellent Bath Temperature Uniformity
- Monorail & Burner Handling Equipment
- Ceramic Sinker Assembly

✚ **High Efficiency and Lower Fuel Costs** - This latest generation Advanced Recuperative Technology Mk4 immersion burner offers a very high thermal efficiency of over 75%. The burner heats the incoming combustion air by channeling it through an internal two-pass annular labyrinth heat-exchanger.

✚ **Cool Running and Quick Starting** – Our Mk4 burners offer exceptional flame stability and easy starting characteristics. The heat-exchange design results in a much cooler running body for easier maintenance.

✚ **Patented Combustion System** - With the integration of our patented “Pressure Control System” and proportional flow technology, we have developed a combustion system that accurately controls the firing rate of each burner and provides a high turn-down ratio.



✚ **Excellent Bath Temperature Uniformity** – The immersion tube high heat-transfer rate promotes a convective “stirring” in the bath that distributes the zinc temperature evenly. The convective currents also keep much of the Zn-Fe in suspension, considerably reducing dross accumulation in baths with heavy coat production.



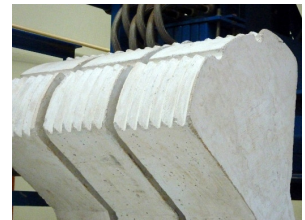
Refractory

The refractory lining is multiple layers of the latest generation of refractory materials. The hot-face lining is made of interlocking high strength, high alumina content tiles. A special “freeze plane” design is employed to guaranty zinc containment, even in the unlikely event of a hot-face lining crack. A layer of back-up and a layer of insulating refractory ensure additional bath integrity and low heat loss. **QED provides the installation of the refractory as part of the equipment price.**



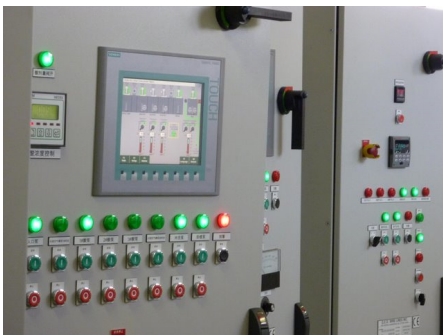
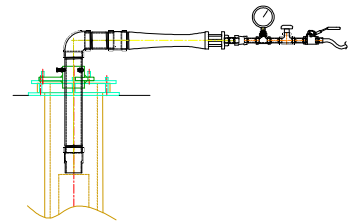
- ✚ **Long Tube Life** – QED supplies the highest quality **ceramic** immersion tubes available today. They are hydrostatically compressed silicon carbide material and can easily exceed one year life in the hands of experienced operators.

- ✚ **Ceramic Sinker Assembly** –Our high-strength wear-resistant ceramic sinker blocks are mounted in robust frameworks to providing provide exceptional strength and minimize wire vibration. A heavy-duty large-reduction gearbox, hand-wheel and locking mechanism are standard equipment.



- ✚ **Monorail & Burner Handling Equipment** - In addition to a crane rail, trolley and hoist, QED supplies burner & tube mounting stands, special flanges and a tube-sinking device to permit a safe and easy changeover of ceramic immersion tubes.

- ✚ **Back-Up Heating System** – In the event of a temporarily loss of natural gas or electricity, our easy to install manually controlled back-up burners keep the zinc liquid.



PLC Control System

The furnace is controlled from a custom designed electrical control panel with the latest Siemens PLC hardware. Our engineers and programmers have developed a user friendly control system geared to the wire industry. The touchscreen is networked to the other control panels on the line, providing instant control and monitoring of all the equipment. The system includes data logging and troubleshooting functions as well as networking capability for easy customer hookup to SCADA software.