

Welding Program Improvements

Hazard CTC – Hazard, KY

Owner: Kentucky Finance Cabinet - DECA

User Agency: KCTCS

Contacts: Bill Novack

Phone: 502.564.3155

Email: bill.novak@ky.gov

Construction Cost: \$ 389,675

Project Status: Completed 2021

Project Description:

Project was located in Hazard CTC's Industrial Education Building that included the expansion of the existing lab to accommodate 8 additional welding booths and a complete renovation of existing lighting and fume exhaust systems.



Engineering Highlights:

HVAC/Welding Exhaust System:

Existing welding exhaust system was based on low air velocity exhaust with 100% raw outside makeup air. The existing makeup air was tempered by a large gas fired outdoor furnace. This existing system was replaced with a new cartridge filter exhaust system that re-introduces the exhaust air back into the main space. This eliminates the need for heating the outside air in winter saving thousands in energy costs.

The new fume hood exhaust system also utilizes point source capture hoods that result in a cleaner and healthier environment for students.

Electrical:

Welding programs use a lot of electric for the electrical welding process. The existing building's electrical service was evaluated and found adequate for the expanded program. New power distribution panels were installed to separate out new and existing welding loads.

New task lighting was designed for welding as well as overall lighting replacement for the entire shop area.