

PENN COLLEGE[®]

Welding Expansion Project

EQUIPMENT LIST

TOTAL COST FOR ALL LABS

| Lab | Cost |
|---------------------------|------------------------|
| NDT Lab | \$ 172,440.00 |
| Specialized Welding Room | \$ 27,915.98 |
| Automation Lab | \$ 1,971,307.50 |
| New GMAW Lab | \$ 204,026.00 |
| Material Storage Area | \$ 88,000.00 |
| New Cutting Grinding Area | \$ 35,868.00 |
| <i>Fabrication Lab</i> | |
| Equipment | \$ 488,372.28 |
| Supplies | \$ 23,072.67 |
| Existing Labs | \$ 336,776.00 |
| Total | \$ 3,347,778.43 |

BREAKDOWN OF COST BY LAB

NDT Lab

| Equipment | Quantity | Price | Total |
|---|----------|--------------|----------------------|
| Workstation tables with 110 receptacles | 9 | \$ 1,000.00 | \$ 9,000.00 |
| Equipment storage cabinets | 4 | \$ 1,760.00 | \$ 7,040.00 |
| Ventilation downdraft system | 1 | \$ 14,000.00 | \$ 14,000.00 |
| Chemical fume hood | 1 | \$ 27,000.00 | \$ 27,000.00 |
| Digital X-ray machine | 1 | \$ 72,000.00 | \$ 72,000.00 |
| Film processor | 1 | \$ 8,000.00 | \$ 8,000.00 |
| Phased array UT units | 2 | \$ 17,000.00 | \$ 34,000.00 |
| Magnetic particle units with adjustable yokes | 2 | \$ 700.00 | \$ 1,400.00 |
| Total | | | \$ 172,440.00 |

Specialized Welding Room

| Equipment | Quantity | Price | Total |
|---|----------|--------------|---------------------|
| Workstation tables | 2 | \$ 1,000.00 | \$ 2,000.00 |
| Storage cabinets (GMI EX 843-1) | 2 | \$ 1,028.00 | \$ 2,056.00 |
| Bench top vises | 2 | \$ 329.99 | \$ 659.98 |
| Wall mounted ventilation units | 2 | \$ 3,000.00 | \$ 6,000.00 |
| Power supply (Miller Dynasty 200) | 1 | \$ 3,200.00 | \$ 3,200.00 |
| Purge tank/chamber (4-hole purge chamber) | 1 | \$ 14,000.00 | \$ 14,000.00 |
| Total | | | \$ 27,915.98 |

Automation Lab

| Equipment | Quantity | Price | Total |
|--|----------|---------------|------------------------|
| Welding power supply | 1 | \$ 3,500.00 | \$ 3,500.00 |
| Orbital welding machines | 1 | \$ 85,000.00 | \$ 85,000.00 |
| CNC plasma/Oxy-fuel machine | 2 | \$ 125,000.00 | \$ 250,000.00 |
| OMAX water jet cutter | 1 | \$ 92,675.00 | \$ 92,675.00 |
| Robot, to replace existing robot | 1 | \$ 100,000.00 | \$ 100,000.00 |
| Robot laser cell | 1 | \$ 500,000.00 | \$ 500,000.00 |
| Air drying system for the compressed air lines | 1 | \$ 5,000.00 | \$ 5,000.00 |
| Spot welding machines | 2 | \$ 17,566.25 | \$ 35,132.50 |
| Electron beam machine | 1 | \$ 900,000.00 | \$ 900,000.00 |
| Total | | | \$ 1,971,307.50 |

New GMAW Lab

| Equipment | Quantity | Price | Total |
|--|----------|--------------|----------------------|
| Welding power supply, multi process machines | 18 | \$ 11,057.00 | \$ 199,026.00 |
| Student project lockers | 1 | \$ 5,000.00 | \$ 5,000.00 |
| Total | | | \$ 204,026.00 |

Material Storage Area

| Equipment | Quantity | Price | Total |
|---|----------|--------------|---------------------|
| Metal rack | 2 | \$ 4,000.00 | \$ 8,000.00 |
| Metal shear, capable of cutting 3/4" material | 1 | \$ 80,000.00 | \$ 80,000.00 |
| Total | | | \$ 88,000.00 |

New Cutting/Grinding Area

| Equipment | Quantity | Price | Total |
|---|----------|-------------|---------------------|
| Two student grinding stations (GS-1067-1 model) | 6 | \$ 1,476.00 | \$ 8,856.00 |
| Dust collector (Model GSE-100.S1) | 3 | \$ 1,972.00 | \$ 5,916.00 |
| Plasma cutters (Hypertherm) | 4 | \$ 2,250.00 | \$ 9,000.00 |
| Oxy-fuel track cutters (BUG O) | 4 | \$ 3,024.00 | \$ 12,096.00 |
| Total | | | \$ 35,868.00 |

Fabrication Lab - Equipment

| Equipment | Quantity | Price | Total |
|---|----------|---------------|----------------------|
| Pipe coper/notcher | 1 | \$ 2,995.00 | \$ 2,995.00 |
| Pedal stool grinders (JET 1HP Model JBG-8A) | 4 | \$ 239.99 | \$ 959.96 |
| Plate roller (Baileigh plate roller, PR403) | 1 | \$ 18,000.00 | \$ 18,000.00 |
| Mitering band saw | 1 | \$ 70,000.00 | \$ 70,000.00 |
| Cold saw | 1 | \$ 5,450.00 | \$ 5,450.00 |
| Chop saw | 1 | \$ 350.00 | \$ 350.00 |
| Metal brake (ATEK PM442) | 1 | \$ 18,900.00 | \$ 18,900.00 |
| Pipe bender (WFPB 1000) | 1 | \$ 2,695.00 | \$ 2,695.00 |
| Hand held plasma cutters | 4 | \$ 3,500.00 | \$ 14,000.00 |
| Drill press | 1 | \$ 600.00 | \$ 600.00 |
| 6'X8' workstation tables | 4 | \$ 1,500.00 | \$ 6,000.00 |
| Welding power supplies (4 GMAW and 4 SMAW/GTAW) (Lincoln Multipurpose) | 6 | \$ 11,057.00 | \$ 66,342.00 |
| Welding power supplies (SMAW/GTAW) (pipe rack area) (Miler) | 6 | \$ 3,200.00 | \$ 19,200.00 |
| Equipment storage cabinets (GMI EX 845-1) | 5 | \$ 1,760.00 | \$ 8,800.00 |
| Roof mounted ventilation system | 1 | \$ 100,000.00 | \$ 100,000.00 |
| Student project lockers | 1 | \$ 5,000.00 | \$ 5,000.00 |
| Portable oxy-fuel cutting carts and torches/gauges | 4 | \$ 600.00 | \$ 2,400.00 |
| Plasma pipe bevelers (watts 60-20 straight pipe cutter) | 4 | \$ 4,000.00 | \$ 16,000.00 |
| TIP TIG units | 2 | \$ 27,734.74 | \$ 55,469.48 |
| Forklift | 1 | \$ 37,047.00 | \$ 37,047.00 |
| Material storage cabinets (GMI EX 843-1) | 5 | \$ 1,028.00 | \$ 5,140.00 |
| Throatless hand shear (Woodward Fab. SPS8) | 4 | \$ 120.00 | \$ 480.00 |
| 250 lb. anvils | 2 | \$ 350.00 | \$ 700.00 |
| Atlas pipemates (model 1200, rolls pipe automatically) | 4 | \$ 1,500.00 | \$ 6,000.00 |
| Idler rollers item # XT-IR | 4 | \$ 186.00 | \$ 744.00 |
| Stands for pipemates (item number AT-FLS) | 4 | \$ 197.00 | \$ 788.00 |
| Atlas positioners (item number XT-100) | 4 | \$ 1,121.00 | \$ 4,484.00 |
| GFCI cords | 4 | \$ 55.00 | \$ 220.00 |
| Bastard files | 12 | \$ 24.00 | \$ 288.00 |
| Round files | 12 | \$ 19.00 | \$ 228.00 |
| Center finders for pipe | 8 | \$ 35.00 | \$ 280.00 |
| Bench vises (Heck model WFFV6.5) | 10 | \$ 329.99 | \$ 3,299.90 |
| Chain vises, table mount | 6 | \$ 89.99 | \$ 539.94 |
| Chain vises, portable | 6 | \$ 240.00 | \$ 1,440.00 |
| V pipe stands | 6 | \$ 300.00 | \$ 1,800.00 |
| Roller pipe stands | 6 | \$ 350.00 | \$ 2,100.00 |
| Saw horse roller pipe stands | 4 | \$ 450.00 | \$ 1,800.00 |
| Electric pipe cutter, 2.5-8 inch pipe (Model 50767, RIDGID) | 1 | \$ 3,953.00 | \$ 3,953.00 |
| Power drive threading machine (Model 41935, RIDGID) | 1 | \$ 1,879.00 | \$ 1,879.00 |
| Heavy duty pipe racks | 2 | \$ 1,000.00 | \$ 2,000.00 |
| Total | | | \$ 488,372.28 |

Fabrication Lab - Supplies

| Equipment | Quantity | Price | Total |
|--|----------|-----------|---------------------|
| 20' extension ladders | 2 | \$ 520.00 | \$ 1,040.00 |
| Harnesses and lanyards | 10 | \$ 99.99 | \$ 999.90 |
| Hard hats | 18 | \$ 10.00 | \$ 180.00 |
| 10' step ladders | 2 | \$ 200.00 | \$ 400.00 |
| 12' step ladders | 2 | \$ 240.00 | \$ 480.00 |
| 25' extension cords | 6 | \$ 30.00 | \$ 180.00 |
| 3 way extension cords, 50 foot | 6 | \$ 45.00 | \$ 270.00 |
| GFCI cords | 4 | \$ 55.00 | \$ 220.00 |
| Bastard files | 12 | \$ 24.00 | \$ 288.00 |
| Round files | 12 | \$ 19.00 | \$ 228.00 |
| Center finders for pipe | 8 | \$ 35.00 | \$ 280.00 |
| 1/4" die grinders | 8 | \$ 55.00 | \$ 440.00 |
| 1/2" electric drills | 4 | \$ 119.99 | \$ 479.96 |
| 3/8" electric drills | 4 | \$ 69.99 | \$ 279.96 |
| Bur bits | 12 | \$ 18.00 | \$ 216.00 |
| Bench vises (Heck model WFV6.5) | 10 | \$ 329.99 | \$ 3,299.90 |
| Chain vises, table mount | 6 | \$ 89.99 | \$ 539.94 |
| Chain vises, portable | 6 | \$ 240.00 | \$ 1,440.00 |
| V pipe stands | 6 | \$ 300.00 | \$ 1,800.00 |
| Roller pipe stands | 6 | \$ 350.00 | \$ 2,100.00 |
| Saw horse roller pipe stands | 4 | \$ 450.00 | \$ 1,800.00 |
| 20' chain falls | 4 | \$ 130.00 | \$ 520.00 |
| 10' chain falls | 4 | \$ 120.00 | \$ 480.00 |
| 15' nylon rigging straps | 4 | \$ 58.97 | \$ 235.88 |
| 10' nylon rigging straps | 4 | \$ 39.24 | \$ 156.96 |
| 6' nylon rigging straps | 4 | \$ 40.72 | \$ 162.88 |
| Turtle clamps for picking up metal plate steel (1 ton) | 2 | \$ 965.77 | \$ 1,931.54 |
| Chain come along | 4 | \$ 80.00 | \$ 320.00 |
| 3/8" - 1-1/4" combination wrench sets | 5 | \$ 40.00 | \$ 200.00 |
| Allen wrench sets, standard and metric | 5 | \$ 15.00 | \$ 75.00 |
| 1 3/8"- 2" combination wrench sets | 4 | \$ 70.00 | \$ 280.00 |
| Drill indexes | 4 | \$ 120.00 | \$ 480.00 |
| 1/2" drive socket sets | 4 | \$ 40.00 | \$ 160.00 |
| Tool carts | 8 | \$ 119.00 | \$ 952.00 |
| Square drive adapter for 1AC02, 15/16" | 1 | \$ 156.75 | \$ 156.75 |
| Total | | | \$ 23,072.67 |

Updates for Existing Labs

| Equipment | Quantity | Price | Total |
|---|----------|--------------|----------------------|
| Miller Invisions with wire feeder (GMAW) - Lab C | 5 | \$ 4,973.00 | \$ 24,865.00 |
| Lincoln S350 with wire feeder (GMAW) - Lab C | 5 | \$ 6,557.00 | \$ 32,785.00 |
| Lincoln S350 with wire feeder and advanced module (multiprocess machines) - Lab E | 18 | \$ 11,057.00 | \$ 199,026.00 |
| Lincoln 375 precision TIG (SMAW/GTAW) - Lab B | 18 | \$ 4,450.00 | \$ 80,100.00 |
| Total | | | \$ 336,776.00 |