Welding Program Expenses and Estimated Welding Cost

The welding-cost assessment of any particular job is the sum of all the terms, which contributes to the total cost, considering the same base unit (length of weld and unit time; mostly welding hours). The manufacturing and welding industries norm is to calculate real or estimated welding-costs of any given job by the sum of the following terms:

1. Base metal costs
2. Preparation costs
3. Filler Metal and consumables costs
4. Industrial Gases costs
5. Welding Equipment and welding accessories costs
6. Shop Equipment maintenance and accessories costs
7. Energy costs
8. Inspection and finishing costs
9. Overhead costs

Out of all these expenses, 80% of the cost is due to the overhead and labor expenses, 6-15% is for wire, consumables, and accessories, 3-5% is for gasses and 2% is for energy consumption.

Our welding program’s final product is not measured in the same monetary terms as the requirements for the manufacturing and welding industries estimations; nevertheless, genuine and professionally qualified workers are shaped, which, through their skills and knowledge, assist the industry in attaining their strategic objectives. To accomplish this task, this welding program needs a budget revaluation based on a realistic, proper and fair approach to funding. Each year the welding budget allocation has been stagnant or trimmed down to suit in-house or state wide budgetary constraints and quandaries, being devoid of a realistic or specific concern for the real program supply running cost. The prices of consumables and accessories have been increasing along with the rate of inflation, in many cases doubling or tripling the inflation rate, and yet the welding supply budget remains the same ($5,600) for the last six years.

The following assessments intent is to discuss, analyze, and evaluate the existing program’s budget allocation, as well as the consideration of the uniqueness of this program, and its needs, the actual investment in the form of supplies made for each student per year.

I will start with the welding particularities, which defines this specific program.

This program runs for 17 weeks in the fall, 17 weeks in the spring and 6 weeks in the summer, for a total of 40 weeks each academic year with student’s enrollment being over
100% each term. The total weekly lab hours for spring or fall semester add up for 37 hours and 12 weekly hours for summer the session. The total weekly lab hours per year, consist of a total of 1330 hours. The total number of students served by this program this fiscal year is 371. The welding program annual supply budget allocation for the past four years has been $5,600.

Based of this years budget of $5,600 the amount of $5000 (over 89%) is set aside for the purchasing the industrial gasses for the welding shop usage. It is also important to note that the gases purchased with the $5000 do not sufficiently cover the needs for the full year, additional funds from VTEA are needed to supply the gases for the remaining needs. It is practically impossible to provide accessories, consumables and other materials, and to maintain the existing 76 welding and shop equipment pieces with the remaining budget of $600.

Providing these numbers, to assert what is the real supply budget allocation committed for each program enrolled student become a simple math exercise. The findings are as follows: We have a weekly budget spending discretion of $140 from which $125 is the average amount spend for the industrial gasses and the rest of $15 for welding supplies and accessories to accommodate a maximum of 144 weekly students.

The question is how was this program able to survive up to this point?

The use of the VTEA grant funding is essential; not only to replace obsolete and unsafe welding and shop equipment, but to provide desperately needed supplies, accessories, base metals, gasses and other materials that our program vitally needs. My concern is with the future availability of these funds and the propriety of using these funds to substitute our program budget supply needs. The grant’s intent has been and is to be used as a vehicle for technological improvement for the program, which implicitly benefits the student’s educational quality. With the price increases for metals (between 200%-300% this year), consumables, base metals and accessories, the job of providing for the welding program becomes an unfeasible task to accomplish, with such tight monetary constraints.

Donations from local companies within the industry also are essential for the survival of this program. Due to the strong tie to local companies, the program is able receive various support through material donations, while the program provides a qualified workforce for the local industry.

The entire program’s difficulties and its needs have been expressed to the Advisory Committee and constitute continuous discussion.

The revision of the ways the program is funded, taking in the consideration not only the district and college needs but also the needs of this program, is highly recommended.

Welding Instructor