WELD THE FUTURE OF YOUNG FILIPINOS FOR INDUSTRIAL 4.0

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As everybody knows that welding is one of the recent industrial job essentially for repair, maintenance, manufacturing and constructional engineering works. Welding processes depend more on the use of human judgment to ensure quality of welded products, thus require welders to have higher technical capabilities. Considering that the welding process is knowledge-based, innovation is a vital element for the growth of the industry. As far as time is concerned welding has been multi-discipline activity requiring activation of prior knowledge from various disciplines and incorporating the most advanced tools of various basic and applied sciences. Welding consists of fusion or uniting of two or more pieces of materials by the application of heat and pressure. Just like students, they are both weld and honed on many aspects of learning and incorporating the skills that will make them competent in the growing industrial market 4.0.

Eventually, in a worldwide perspective welding is considered as an in demand fabrication technology in industrial 4.0 which used extensively in the construction of buildings and bridges and in the metal craft, aircraft, ship yard and the like. In technical education, welding has emerged as an multidisciplinary disciplinary processes requiring synthesis of knowledge from various disciplines and incorporating the most advanced tools of various basic and applied sciences. Shielded Metal Arc Welding (SMAW) from diverse disciplines such as arc and plasma physics, thermodynamics, high-temperature chemistry, materials science, transport phenomena, mathematical modeling, computer science, robotics, economics, and a variety of engineering fields including mechanical,
chemical, and electrical engineering are currently making new contributions in industrial 4.0.

However, welding as a fusion process has its own pros and cons. Welding is an affordable way of fusing metal parts in terms of material usage and fabrication costs. On the other hand some of the draw backs are that, most welding operations are performed manually and are expensive in terms of labor cost; many welding operations are considered skilled trades, and the labor to perform these operations may be infrequent.

As stated by Groover, 2002 most welding processes, involving the use of high energy, are inherently dangerous and the welded joint can suffer from certain quality defects that reduce the strength of the joint. Formal training is available in senior high schools today and students may find it difficult to understand welding symbols. However, if they will become more familiar in system of codes or shorthand this will tells them the different information about the weld that needs to be done, these welding symbols will be easier to read. The symbols will tell them the type of weld to do, the size of the weld he should do and other information about how he will process it or finish the job.

References: