Welding Equipment & Consumables

US Industry Study with Forecasts for 2015 & 2020

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Growth will be fueled in part by an increasing number of welding applications, such as ultrasonic welding for joining dissimilar materials or the welding of nonferrous metals in aerospace equipment.

**US demand to rise 6.4% annually through 2015**

Demand in the US for welding equipment and consumables is forecast to increase 6.4 percent annually to $7.1 billion in 2015. Gains will be driven by continued recovery from the economic recession experienced between late 2007 and 2009 in major manufacturing and construction markets. Growth will also be fueled by the increasing number of applications in which various types of welding can be used, such as ultrasonic welding for joining dissimilar materials or the welding of nonferrous metals in aerospace equipment. Although arc, resistance and oxyfuel welding dominate the market, electron beam, friction-stir, laser, and ultrasonic welding methods have found use in aerospace, electronics and packaging applications. The most popular welding methods are used in mature market segments, and demand for them is subject to the cyclical nature of individual markets, although the diversity and number of markets in which welding is used mitigates the effects of this in the welding industry overall.

**Arc & resistance welding systems to remain dominant**

The welding equipment segment is dominated by arc and resistance welding systems, which accounted for a combined 70 percent of equipment demand in 2010. These will remain the dominant welding techniques, in part due to their successful integration with modern automation techniques that improve weld deposit rates and alleviate the shortage of skilled welders.

Welding consumables include electrodes, filler metal and industrial welding gases used in oxyfuel welding applications, and shielding gases used primarily in arc welding applications. Consumption of these products is primarily dependent on the amount of arc and oxyfuel welding activity, though arc welding is the dominant market driver. Demand for consumables, which will benefit from both economic recovery and the ubiquity of arc welding processes, will increase 6.3 percent annually and approach $2.2 billion in 2015.

Welding electrodes and filler metal accounted for 73 percent of all consumables in 2010, with oxyfuel and shielding gases accounting for the rest. Solid wire electrodes are the largest product category for electrodes and filler metal in dollar terms. However, emergent consumable products such as flux- and metal-cored electrodes are the most rapidly growing product segment, having gained increased acceptance in the general marketplace. Among the gases, oxygen and acetylene are dominant in metal joining and cutting. Argon is by far the most commonly used shielding gas, followed by carbon dioxide.

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Demand for welding equipment in the US approached $3.6 billion in 2010, having increased at a 2.4 percent annual rate from 2000. However, demand has remained flat. There were increases in intervening years, but the sharp economic downturn in the US in 2009 negated increases in welding equipment demand, which carried over into the limited recovery experienced in 2010. Gains in welding equipment demand will average 6.5 percent annually and reach $4.9 billion in 2015. They will be supported by continued recovery in manufacturing and construction markets, which declined as the result of economic recession between 2007 and 2009, and continued gains in power generation and energy markets. Expectedly, growth in consumables will mirror gains in welding equipment.

Arc welding equipment leads demand, having accounted for 41 percent of total welding equipment demand in 2010. Overall, the market share of arc welding equipment has been climbing based on the versatility of the process across all sectors of the economy that use welding. Economic recovery will drive robust growth of 7.3 percent per annum through 2105, when demand for arc welding equipment will reach $2.1 billion.

Second in market share is resistance welding, which accounted for 29 percent of welding equipment demand in 2010. This welding method has typically accounted for between 28 and 30 percent of welding equipment demand since 2000. Resistance welding is used predominantly in industries where thin sections or layers of materials are joined, such as the motor vehicle, aerospace, appliance and many other industries. The process will remain a mainstay in metal joining.

TABLE V-1

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ARCON Welding LLC
2203 Northwood Drive, Building 10
Salisbury, MD 21801
410-572-6000
http://www.arconweld.com

Annual Sales: under $5 million (estimated)
Employment: 10 (estimated)
Key Products: welding equipment and accessories for manual metal arc, tungsten inert gas, flux-cored arc, metal inert gas and other welding applications

ARCON Welding is a producer of welding machines and accessories. The privately held company mainly serves customers operating in rough or harsh environments, including shipyards, mines, offshore oil rigs, construction sites, paper mills, power plants and fertilizer manufacturing facilities.

The Company’s welding equipment includes portable machines for manual metal arc (MMA), tungsten inert gas (TIG), flux-cored arc welding (FCAW), metal inert gas (MIG) and other welding applications. In general, ARCON Welding Equipment’s welders are made with fiberglass cases and are designed to offer constant power. Certain models incorporate COMMAND ARC, a MIG transfer mode that is used to sense arc voltage. When the arc length reaches 12 volts, COMMAND ARC releases a pulse of current and voltage to expel the molten tip of the wire across the arc onto the work, thereby minimizing spatter and eliminating short-circuiting associated with conventional metal transfer activities.

“In 2010, nitrogen demand in welding applications approached 1.3 billion cubic feet valued at $5 million. Growth in demand will be driven by gains in fabricated metal product shipments. Consequently, nitrogen demand will reach 1.4 billion cubic feet valued at $6 million in 2015. Growth by volume will average a relatively slow 1.5 percent per year for this period, reflecting the limited use of nitrogen in welding mixtures.”

--Section VI, pg. 141
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### Welding Equipment & Consumables

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