

Circuit soldering assignment



**ASSIGN
BUSTER**

Wright Univeristy BME/ISE 1110L Section Fundamentals of Biomedical and Industrial Engineering Circuit Soldering Submitted By: Submitted Date ()
Circuit Soldering

Soldering of circuits requires that several considerations are taken into account before any soldering can begin. The first consideration is the absorption of water. During soldering, the temperature can cause blistering between the conductor and the substrate. Hence, it is important to dry the materials before soldering can begin. The temperatures of the materials must be considered as they have different temperatures. This helps in hindering melting of these materials. After soldering, it is important to clean the circuits to get rid of flux deposits. It is also vital to fold out areas that are not to be soldered if possible to specifically limit the area of soldering to that that is required. They can also be covered (Linsley 46).

Methods through which circuit soldering is achieved include manual soldering whereby, a skilled person uses his hand to solder joints that have flaws and to solder connections. In this method, it is vital to limit the time of contact of the soldering iron. Another method is reflow soldering where, solder is put at the joints before actual soldering. It is put at the joints as a paste or a preform. The solder is then melted through heating with gas, or through resistance (Linsley 48).

There are various tools used in circuit soldering. They include an electric soldering iron, and a soldering gun. A soldering gun is a trigger- controlled soldering iron. On being triggered, it takes just 10 seconds for the bit to attain 3150C. The soldering gun bits can be changed and are supposed to be tinned. Hence, it can be said that a soldering gun is a type of a soldering iron. Soldering irons themselves are made up of a handle that is insulated

from heat. The handle holds a heating component of 15 to 25 Watts. It is in this component that the bit is slotted in. The bits come in various kinds like the copper ones that are easy to clean using a file. There also are the ironclad bits. These bits are not supposed to be cleaned as the copper bits. They are cleaned by rubbing under high temperature using a damp sponge (Linsley 47).

Tinning has been mentioned, the question is, how is it done? Tinning is done through cleaning the bit, the soldering iron is then inserted and heated, cored solder is then applied with the excess been wiped off using a wet sponge (Linsley 47).

Work Cited

Linsley, Trevor. *Electronic Servicing and Repairs*. New York: Routledge, 2014.