**Welding**

**Stick**
- Stick is called SMAW. (Shielded Metal Arc Welding)
- There are different rods used during stick such as 6010, 6011, and 7018
- The differences between the rods are tensile strength, size, chemical coatings, and what they’re used for
- 7018 is used for structural welding and crack resistant welding
- 6011 is used for general welding applications
- 6010 is used for basic pipe and plate welding
- The flux coating is used to keep the electrode from being contaminated

**Mig**
- Mig welding is called GMAW (Gas Metal Arc Welding)
- There are multiple metal transfer modes for this type of welding and they are: short circuit, globular, spray transfer, and pulse spray transfer
- Short circuit is used for lower voltage welding
- Globular is used on carbon steel only
- High voltage and argon gas is used in spray metal transfer
- Pulse Spray is used when one drop of molten metal is needed per pulse.

**Tig**
- Tig welding is called GTAW (Gas Tungsten Arc Welding)
- Electrode types for tig are pure tungsten, 2% thoriated, 2% ceriated, and 1.5% lanthanated
- Tig welding is used for metals other than steel. It can be used on steel but it’s the best welding for other metals
- There are many different effects of the gas mixtures produced in this process such as filler metal deposition rate and efficiency, splatter control and post weld cleaning, bead profile and overwelding, out of position weldability, welding fume generation rates, weld metal mechanical properties

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Websites Used

https://www.thefabricator.com/article/arcwelding/7-effects-of-shielding-gas

https://gowelding.org/welding/mig-gmaw/gasses/