

## ALUMINUM HEAT TREAT TERMINOLOGY

<b>Solution Heat Treatment</b>	Heating an alloy to a suitable temperature and holding at temperature long enough to cause one or more alloying constituents to enter solid solution.
<b>Quench</b>	Cooling an alloy, rapidly enough to hold alloying constituents in solution.
<b>Age Hardening</b>	Precipitation of hardening constituents either at room temperature (natural aging) or elevated temperature (artificial aging).
<b>Eutectic Melting</b>	When solution heat treating, raising the temperature to or above the melting temperature of the alloying constituents in an aluminum alloy; reduces ductility toughness, and fatigue strength.
<b>Hydrogen Blistering</b>	Absorption of hydrogen in liquated aluminum generally caused by exceeding the solidus temperature during solution heat treatment; precipitation of hydrogen within the aluminum alloy completely forces the grains apart forming blisters or fissures.
<b>Grain Boundary</b>	A defect in a part surface representing the boundary between two grains. The lattice has a different orientation on either side of the grain boundary.
<b>Drop Bottom Furnace</b>	A furnace design where parts are quenched in a tank that is located beneath the heating chamber. The parts to be quenched move in a vertical direction.
<b>Horizontal Quench Furnace</b>	A furnace design where parts are quenched in a tank that is located to the side of the heating chamber. The parts to be quenched move in a horizontal direction.
<b>Annealing</b>	A heat treatment that alters that properties of a material to increase its ductility and reduce its hardness.
<b>Stress Relieve</b>	A thermal cycle to relieve residual stresses