

Retarder (finishing system component). Dope thinner that contains certain additives that slow its rate of evaporation enough to prevent dope blushing.

Retread. The replacement of the tread rubber on an aircraft tire.

Retreating blade. The blade on a helicopter rotor whose tip is moving in the direction opposite to that in which the helicopter is moving.

Retreating blade stall. The stall of a helicopter rotor disc that occurs near the tip of the retreating blade. A retreating blade stall occurs when the flight airspeed is high and the retreating blade airspeed is low. This results in a high angle of attack, causing the stall.

Return manifold. The portion of a fluid power system through which the fluid is returned to the reservoir.

Reverse polarity welding. DC-electric arc welding in which the electrode is positive with respect to the work.

Rib thread. A series of circumferential grooves cut into the tread of a tire. This tread pattern provides superior traction and directional stability on hard-surfaced runways.

Ribbon direction. The direction in a piece of honeycomb material that is parallel to the length of the strips of material that make up the core.

Rigid conduit. Aluminum alloy tubing used to house electrical wires in areas where they are subject to mechanical damage.

Rigidity in space. The characteristic of a gyroscope that prevents its axis of rotation tilting as the earth rotates. This characteristic is used for attitude gyro instruments.

Rime ice. A rough ice that forms on aircraft flying through visible moisture, such as a cloud, when the temperature is below freezing. Rime ice disturbs the smooth airflow as well as adding weight.

Rivet cutters. Special cutting pliers that resemble diagonal cutters except that the jaws are ground in such a way that they cut the rivet shank, or stem, off square.

Rivet set. A tool used to drive aircraft solid rivets. It is a piece of hardened steel with a recess the shape of the rivet head in one end. The other end fits into the rivet gun.

RMI. Radio magnetic indicator.

Rocking shaft. A shaft used in the mechanism of a pressure measuring instrument to change the direction of movement by 90° and to amplify the amount of movement.

Roll (aircraft maneuver). Rotation of an aircraft about its longitudinal axis.

Roots-type air compressor. A positive-displacement air pump that uses two intermeshing figure-8-shaped rotors to move the air.

Rosette weld. A method of securing one metal tube inside another by welding. Small holes are drilled in the outer tube and the inner tube is welded to it around the circumference of the holes.

Rotary actuator. A fluid power actuator whose output is rotational. A hydraulic motor is a rotary actuator.

Roving. A lightly twisted roll or strand of fibers.

RPM. Revolutions per minute.

Ruddervators. The two movable surfaces on a V-tail empennage. When these two surfaces are moved together with the in-and-out movement of the control yoke, they act as elevators, and when they are moved differentially with the rudder pedals, they act as the rudder.

Saddle gusset. A piece of plywood glued to an aircraft structural member. The saddle gusset has a cutout to hold a backing block or strip tightly against the skin to allow a nailing strip to be used to apply pressure to a glued joint in the skin.

Sailplane. A high-performance glider.

Sandwich material. A type of composite structural material in which a core material is bonded between face sheets of metal or resin-impregnated fabric.

Satin-weave fabric. Fabric in which the warp threads pass under one fill thread and over several others. Satin-weave fabrics are used when the lay-up must be made over complex shapes.

Scarf joint. A joint in a wood structure in which the ends to be joined are cut in a long taper, normally about 12:1, and fastened together by gluing. A glued scarf joint makes a strong splice because the joint is made along the side of the wood fibers rather than along their ends.